



2024 – 2025
Competency Exam Manual

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COMPETENCY EXAMINATION # 1

Title: Global Practice Assessment 1: Mid-year Progress toward Competency
Course: CCPM 538 – Comprehensive Care and Practice Management III/General Dentistry
Timing: D3
Category: Formative
Contact: Nisha Ganesh, DDS, MAED
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General Description

Description of Assessment

a. Intent

- i. The Maryland Competency Statements articulate the UMSOD faculty's expectations a graduate should possess at the time of graduation.
(http://www.dental.umaryland.edu/media/sod/academic-affairs/Competencies-and-Competency-Examinations_2014.pdf)
- ii. Discipline-specific competency exams assess these expectations within the scope of general dentistry. **The GPA is a summative assessment of overall competency, not simply individual competencies, to measure the student's readiness to enter the practice of general dentistry. For the D3 student the GPA is a summative assessment of the initial acquisition of competency to enter the practice of general dentistry.**

b. Objective

- i. To monitor the development of students' clinical skills and performance by input from inter-disciplinary faculty involved in the students' daily patient care activity in the pre-doctoral teaching clinics. The development of the following core attributes are components of a highly proficient clinician:
 1. Professionalism
 2. Overall assessment ability
 3. Technical performance
 4. Interpersonal qualities
- ii. Student self-assessment (associated with fall GPAs, #2 and #4)
- iii. A secondary aim of the GPA is to provide counseling and remediation to students with deficiencies in core attributes.

c. Assessment

- i. The GPA Faculty Review Board will convene at specific scheduled intervals to evaluate each student and to review the progress and/or final certification of the D3/D4 students.
 1. The Faculty Review Board will consist of, at a minimum:
 - a. GP directors and assistant directors
 - b. Periodontics faculty
 - c. Prosthodontics faculty
 2. Additional faculty from other clinical disciplines may be included.
- ii. 4 specified intervals:

1. GPA #1: Fall semester, D3 year (mid-year progress toward competency).
2. GPA #2: Spring semester, D3 year (end year progress toward competency).
 - a. Includes a student self-assessment on Blackboard.
 - i. Note: This is a Pass/Fail exercise that must be completed by a given date. Each day it is late, 10% from the overall course grade will be deducted.
3. GPA #3: Fall semester, D4 year (mid-year progress toward competency).
4. GPA #4: Spring semester, D4 year (end year final certification of competency)
 - a. Includes a student self-assessment on Blackboard.
 - i. Note: This is a Pass/Fail exercise that must be completed by a given date. Each day it is late, 10% from the overall course grade will be deducted.

It will be the GP Director(s) responsibility to ensure that the GPA is recorded, reviewed with the student, and that the custom remediation plan, if recommended by the GPA Review Board, is implemented. Following remediation, reevaluation will occur.

Prerequisites

Completion of D1, D2

Enrollment in CCPM538

Criteria for Evaluation

GPA Clinic Report Card (*Superior, Acceptable, Needs Improvement, Unacceptable*)

- **Professionalism**
 - Professional appearance and demeanor
 - Time-management skills
 - Overall work ethic
 - Compliance with clinic protocols/Infection Control
- **Assessment**
 - Management of medical/dental history
 - Diagnostic capability
 - Ability to formulate comprehensive treatment plan
 - Self-assessment ability
- **Technical Performance**
 - Knowledge of procedures and materials
 - Ability to work independently
 - Clinical skills/procedural know-how
 - Quality of treatment provided
 - Productivity and efficiency
 - Pain control/patient management
 - Ergonomics
- **Interpersonal Qualities**
 - Communication and patient rapport
 - Collaboration/teamwork
 - Leadership skills
 - Interaction with support staff
- **Student Self-Assessment (GPA #2 and #4)**
 - *Professionalism*
 - *Assessment*
 - *Technical Performance*

- *Interpersonal Qualities*

Setting

Classroom: Faculty review and evaluation

(Students are not present during the faculty review session)

Type of Competency Examination

Demonstration-clinical performance patient based (Faculty review and evaluation GPA)

Time Allotted

Split Clinical Floors:

- General Practice 1 -4: 2 hours (65 students reviewed)
- General Practice 5 - 8: 2 hours (65 students reviewed)

Remediation Required Under the Following Circumstances

Students receive one faculty review board review. If any area of the GPA competency is deemed unsuccessful, they are remediated, and then subsequently re-evaluated.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision-making processes involved in patient
- 3a. Communicate effectively with other professionals regarding the care of patients
- 3c. Communicate with a diverse population of patients
- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 4b. Provide appropriate prevention, intervention, and educational strategies.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 7a. Manage acute pain and dental anxiety.
- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.
- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patients and restore oral health.
- 7d. Restore missing or defective tooth structure to proper form, function, and esthetics, and promote soft and hard tissue health.

- 7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related periradicular pathology and restore oral health.
- 7g. Manage odontogenic infections.
- 7h. Prevent, recognize, and manage medical emergencies that occur in the dental practice.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.
- 7m. Prevent, diagnose and manage developmental or acquired occlusal abnormalities and restore oral health.
- 7p. Evaluate outcomes of comprehensive dental care.
- 7q. Provide care for a diverse population of patients including infants, children, adolescents, adults, and geriatric and special needs patients.

Grading Information and Remediation

Examiner

GP Directors, Periodontics Supervisor, Prosthodontics Supervisor, faculty with student contacts in the GP

Grading

The GPA will comprise 25% of the final course grade

PASS	100 points	Grades of “S” or “A” in all categories
	85 points	Grades of “S” or “A” in all categories, including an “N” grade
	70 points	Up to 2 grades of “N” in any category
FAIL	55 points	3 or more grades of “N” in any category
	40 points	Any grade of “U” in any category

Critical Errors

See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

GPA Competency Remediation

It will be the responsibility of the course directors to ensure that the GPA results are recorded, and that the results are made available to the students.

1. If a student earns **85 or 100 points**, they have successfully passed the GPA competency and no further action is needed
2. If a student earns **70 points**, they have passed the GPA competency, however, the student will be required to set up a meeting with their GP director to counsel them on their identified areas of concern.
3. If a student earns **55 points or below**, then the student has NOT successfully passed the GPA competency.
 - a. This student will be required to set up a meeting with the course directors as well as their GP director and they will be given a customized plan for remediation of the identified deficiencies.
 - b. There will be set time frame in which the student must complete the remediation plan. They can reattempt any component of the remediation within the set time frame.
 - ii. If the competency is attempted, but NOT successfully remediated, the student will have failed this portion of the course and will receive an “E” as their final grade for the course. The student may be offered remediation of the course pending the approval of the Progression Committee at the end of the year.
 - iii. If the student does NOT attempt the remediation, they will receive an F in the course for that semester.
 - iv. If the student successfully completes the remediation plan, the student will earn 70 points for the GPA competency portion of the course.

Global Practice Assessment Rubric

Professionalism

	Professional Appearance and Demeanor	Time Management Skills	Work Ethic	Compliance with Clinic Protocols/Infection Control
Superior	Student is consistently wearing appropriate clinic attire and abiding by SOD Policy for Clinic attire and appearance (See Clinic Manual)	Student is on time for clinic and block. Student is aware of and works within the time available in the clinic session (to the best of their ability).	Student demonstrates a commitment to learning and making the most out of their clinical experiences. Student is committed to quality patient care and does not shirk their responsibility because it requires more time or energy.	Student consistently wears appropriate PPE and follows Universal Precautions and SOD Policy.
Acceptable	Most of the time the student is wearing appropriate clinic attire.	Most of the time, Student is on time for clinic and block. The student is usually aware of and works within the time available in the clinic session (to the best of their ability). Occasionally they lose track of time and run late.	Most of the time, Student demonstrates a commitment to learning and making the most out of their clinical experiences.	Most of the time, the student wears appropriate PPE
Needs Improvement	The student requires reminders to wear appropriate clinic attire.	The student has multiple instances of presenting late for clinic or block and running late in the clinic session.	The student is not giving all their energy and attention to their clinical education and clinical responsibilities. This is evidenced by missing deadlines, not keeping up with patient records, not completing all steps in an appointment.	The student requires multiple, repeated reminders on protocol and PPE.
Unacceptable	Student is repeatedly not following School policy for clinic attire and appearance.	Often the student is not on time in clinic.	The student is not in clinic regularly. More often than not the student is not meeting all expectations of an appointment and	The student requires multiple, repeated reminders on protocol and PPE.

Assessment

	Management of Medical/Dental History	Diagnostic Ability	Ability to Formulate a Comprehensive Treatment Plan	Self-Assessment Ability
Superior	<p>Student has collected all the medical and dental history information as defined by the forms in axiUm (no missing data).</p> <p>The student demonstrates understanding of the diseases, disorders, and conditions with which the patient presents.</p> <p>The student can match the medication with the corresponding disease/disorder/condition for that patient.</p> <p>The student knows the type and mechanism of action of the medications, especially the drugs which have known dental side effects or considerations.</p> <p>The student knows which resources to use to find this information (LexiComp in axiUm)</p>	<p>The student is able to accurately (within the limits of their current knowledge and experience) collate all the patient's:</p> <ul style="list-style-type: none"> • Symptoms • Signs • clinical findings (hard tissue and soft tissue) • periodontal exam data • radiographic data • other diagnostic data (models) • results from diagnostic test <p>and formulate appropriate problems list and diagnoses.</p> <p>The student is able to identify when more information is needed to adequately assess the patient.</p> <p>During a procedure, the student is able to evaluate the clinical status of the tooth/treatment and make the appropriate judgment for next steps.</p> <p>When a treatment/procedure is not progressing normally, the student is able to identify the deviation from normal and identify how adapt to the variation (within</p>	<p>The student is able to utilize all the clinical data to formulate a fully phased and sequenced comprehensive treatment plan for the patient.</p> <p>The student incorporates the chief concern in the plan.</p> <p>When applicable, the student includes different treatment options.</p> <p>The student explain why each treatment/treatment option is indicated or not indicated.</p> <p>The student includes appropriate referrals for care that is beyond the scope of the general dentist.</p>	<p>The student is able to accurately evaluate their</p> <ul style="list-style-type: none"> --current knowledge --current skill level --confidence level <p>without the input from a faculty member.</p>

		the limits of their current experience, skills, and knowledge).		
Acceptable	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role, not to complete the diagnostic process.	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role, not to complete the treatment plan.	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role.
Needs Improvement	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is necessary to manage/treat the patient to the standard of care.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is necessary to manage/treat the patient to the standard of care.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is necessary to manage/treat the patient to the standard of care.
Unacceptable	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	Most of the time (<80%) the student cannot fulfill the superior criteria.	Most of the time (<80%) the student cannot fulfill the superior criteria.	Most of the time (<80%) the student cannot fulfill the superior criteria.

Technical Performance

	Knowledge of Procedure	Ability to Work Independently	Clinical Skills/Procedural Knowledge	Quality of Treatment	Productivity and Efficiency	Patient Management/Pain Control	Ergonomics
Superior	<p>The student is familiar with the materials available for treatment.</p> <p>The student is able to determine when a material is less than acceptable for use in the patient (expiry date, physical color, consistency, contours).</p>	<p>Once a student is given a "start" or clearance to begin treatment, the student is able to proceed with the treatment planned for that appointment/session for the patient until the next checkpoint on their own, within the limits of their current knowledge and skills.</p>	<p>The student is familiar with and prepared for ahead of time, the steps and specific details of a dental procedure or appointment type (i.e, a Screening Appointment, a Data Collection/TPW appointment, a treatment planning appointment, etc.)</p> <p>(within the limits of their current knowledge)</p> <p>The student can have support documents, checklists, and other guides at the appointment.</p>	<p>The treatment provided by the student exceeds or is equal to the standard of care for that discipline and appointment type.</p>	<p>The student routinely achieves the goals of the appointment/procedure/treatment plan in the designated timeframe. The pace of the appointment/session/course of care for the patient is reasonable and consistent with the standard of care (within the limits of the novice student skills and knowledge).</p>	<p>The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block).</p> <p>The student is familiar with the standard of care for pain management for each appointment type and procedure.</p> <p>The student is aware of the patient's response to treatment -- comfort, discomfort, sensitivity, pain. The student responds to the patient in a timely and appropriate manner-- providing a break, additional anesthesia (when appropriate), and discusses with the patient what they will feel, what they should not feel (example, pressure, but. not sharp pain).</p> <p>The student follows the SOD policy for anesthesia administration and seeks faculty guidance when indicated.</p>	<p>The student is aware of the appropriate provider and patient positioning for a given procedure.</p> <p>The student utilizes a finger rest (when appropriate) and indirect vision (when appropriate).</p>
Acceptable	<p>The student can do most of the things in the superior category, the majority of the time</p>	<p>Most of the time (>80% of the time) the student is able to work independently, as described in the superior category.</p>	<p>The student can do most of the things in the superior category, the majority of the time (~80% of the time)</p>	<p>The quality of care is equal to the minimum clinical acceptability.</p>	<p>The student can do most of the things in the superior category, the majority of the time (~80% of the time)</p>	<p>The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block).</p>	<p>The student can do most of the things in the superior category, the majority of the time (~80% of the time)</p>

	(~80% of the time)					The student meets the superior criteria, but they may require faculty guidance to successfully manage the patient (this does not include "extreme or out of the ordinary situations/patients")	
Needs Improvement	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	The quality of care is less than the minimum standard of care. With faculty intervention, the standard of care can be achieved in the same appointment or within a reasonable timeframe.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block). More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.
Unacceptable	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category. The treatment stagnates without further input from the faculty or any other individual (another student, resident, or staff person)	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	The quality of care is below the standard of care and requires an additional appointment (s) to remediate the situation.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category. The student administers anesthesia without a start and beyond the SOD policy of 2 cartridges without faculty permission.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category. In addition, the lack of appropriate ergonomics compromises patient safety, provider safety, assistant safety, and/or the quality of the treatment and the outcome.

Interpersonal Qualities

	Communication and Patient Rapport	Collaboration/Teamwork	Leadership Skills	Interaction with Support Staff
Superior	The student communicates clearly and at a level appropriate to the patient.	The student can work with other team members in a manner that is effective and contributes positively to the care of the patient	In a team setting, the lead student provider can direct the	The student can speak respectfully and effectively with support staff.

	<p>The student takes the appropriate time to discuss the plan for the appointment/treatment before and during the appointment.</p> <p>The student is able to effectively talk with the faculty to convey the pertinent details.</p>	<p>and outcome of the appointment.</p> <p>These team members can include a staff person, another student, resident, or faculty.</p>	<p>team members appropriately.</p> <p>The student also knows when to step back if necessary for the care of the patient.</p>	<p>They follow directions from the support staff without insubordination.</p>
Acceptable	The student can meet the superior with minor input or guidance from the faculty.	The student can meet the superior with minor input or guidance from the faculty.	The student can meet the superior with minor input or guidance from the faculty.	n/a
Needs Improvement	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>
Unacceptable	Most of the time (>80% of the time) the student cannot achieve the standards described in the	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	Most of the time (>80% of the time) the student cannot achieve the	Most of the time (>80% of the time) the student cannot achieve the

	<p>superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>
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COMPETENCY EXAMINATION # 2

Title: Global Practice Assessment 2: End of Year Progress toward Competency
Course: CCPM 538 – Comprehensive Care and Practice Management III/General Dentistry
Timing: D3
Category: Formative
Contact: Nisha Ganesh, DDS, MAEd
nganesh@umaryland.edu

General Description

Description of Assessment

a. Intent

- i. The Maryland Competency Statements articulate the UMSOD faculty's expectations a graduate should possess at the time of graduation.
(http://www.dental.umaryland.edu/media/sod/academic-affairs/Competencies-and-Competency-Examinations_2014.pdf)
- ii. Discipline-specific competency exams assess these expectations within the scope of general dentistry. **The GPA is a summative assessment of overall competency, not simply individual competencies, in order to measure the student's readiness to enter the practice of general dentistry. For the D3 student the GPA is a summative assessment of the initial acquisition of competency to enter the practice of general dentistry.**

b. Objective

- i. To monitor the development of students' clinical skills and performance by input from inter-disciplinary faculty involved in the students' daily patient care activity in the pre-doctoral teaching clinics. The development of the following core attributes are components of a highly proficient clinician:
 1. Professionalism
 2. Overall assessment ability
 3. Technical performance
 4. Interpersonal qualities
- ii. Student self-assessment (associated with fall GPAs, #2 and #4)
- iii. A secondary aim of the GPA is to provide counseling and remediation to students with deficiencies in core attributes.

c. Assessment

- i. The GPA Faculty Review Board will convene at specific scheduled intervals to evaluate each student and to review the progress and/or final certification of the D3/D4 students.
 1. The Faculty Review Board will consist of, at a minimum:
 - a. GP directors and assistant directors
 - b. Periodontics faculty
 - c. Prosthodontics faculty
 2. Additional faculty from other clinical disciplines may be included.

ii. 4 specified intervals:

1. GPA #1: Fall semester, D3 year (mid-year progress toward competency)
2. GPA #2: Spring semester, D3 year (end year progress toward competency)
 - a. Includes a student self-assessment on Blackboard.
 - i. Note: This is a Pass/Fail exercise that must be completed by a given date. Each day it is late, 10% from the overall course grade will be deducted.
3. GPA #3: Fall semester, D4 year (mid-year progress toward competency)
4. GPA #4: Spring semester, D4 year (end year final certification of competency)
 - a. Includes a student self-assessment on Blackboard.
 - i. Note: This is a Pass/Fail exercise that must be completed by a given date. Each day it is late, 10% from the overall course grade will be deducted.

It will be the GP Director(s) responsibility to ensure that the GPA is recorded, reviewed with the student, and that the custom remediation plan, if recommended by the GPA Review Board, is implemented. Following remediation, reevaluation will occur.

Prerequisites

Completion of D1, D2

Enrollment in CCPM538

Criteria for Evaluation

GPA Clinic Report Card (*Superior, Acceptable, Needs Improvement, Unacceptable*)

- **Professionalism**
 - Professional appearance and demeanor
 - Time-management skills
 - Overall work ethic
 - Compliance with clinic protocols/Infection Control
- **Assessment**
 - Management of medical/dental history
 - Diagnostic capability
 - Ability to formulate comprehensive treatment plan.
 - Self-assessment ability
- **Technical Performance**
 - Knowledge of procedures and materials
 - Ability to work independently.
 - Clinical skills/procedural know-how
 - Quality of treatment provided.
 - Productivity and efficiency
 - Pain control/patient management
 - Ergonomics
- **Interpersonal Qualities**
 - Communication and patient rapport
 - Collaboration/teamwork
 - Leadership skills
 - Interaction with support staff
- **Student Self-Assessment (GPA #2 and #4)**
 - *Professionalism*
 - *Assessment*
 - *Technical Performance*

- *Interpersonal Qualities*

Setting

Classroom: Faculty review and evaluation

(Students are not present during the faculty review session)

Type of Competency Examination

Demonstration-clinical performance patient based (Faculty review and evaluation GPA)

Time Allotted

Split Clinical Floors:

- General Practice 1 -4: 2 hours (65 students reviewed)
- General Practice 5 - 8: 2 hours (65 students reviewed)

Remediation Required Under the Following Circumstances

Students receive one faculty review board review. If any area of the GPA competency is deemed unsuccessful, they are remediated, and then subsequently re-evaluated.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision-making processes involved in patient.
- 3a. Communicate effectively with other professionals regarding the care of patients.
- 3c. Communicate with a diverse population of patients.
- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 4b. Provide appropriate prevention, intervention, and educational strategies.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 7a. Manage acute pain and dental anxiety.
- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.
- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patients and restore oral health.
- 7d. Restore missing or defective tooth structure to proper form, function, and esthetics, and promote soft and hard tissue health.

- 7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related periradicular pathology and restore oral health.
- 7g. Manage odontogenic infections.
- 7h. Prevent, recognize, and manage medical emergencies that occur in the dental practice.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.
- 7m. Prevent, diagnose and manage developmental or acquired occlusal abnormalities and restore oral health.
- 7p. Evaluate outcomes of comprehensive dental care.
- 7q. Provide care for a diverse population of patients including infants, children, adolescents, adults, and geriatric and special needs patients.

Grading Information and Remediation

Examiner

GP Directors, Periodontics Supervisor, Prosthodontics Supervisor, faculty with student contacts in the GP

Grading

The GPA will comprise 25% of the final course grade.

PASS	100 points	Grades of "S" or "A" in all categories
	85 points	Grades of "S" or "A" in all categories, including an "N" grade
	70 points	Up to 2 grades of "N" in any category
FAIL	55 points	3 or more grades of "N" in any category
	40 points	Any grade of "U" in any category

Critical Errors

See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

GPA Competency Remediation

It will be the responsibility of the course directors to ensure that the GPA results are recorded, and that the results are made available to the students.

1. If a student earns **85 or 100 points**, they have successfully passed the GPA competency and no further action is needed.
2. If a student earns **70 points**, they have passed the GPA competency, however, the student will be required to set up a meeting with their GP director to counsel them on their identified areas of concern.
3. If a student earns **55 points or below**, then the student has NOT successfully passed the GPA competency.
 - a. This student will be required to set up a meeting with the course directors as well as their GP director and they will be given a customized plan for remediation of the identified deficiencies.
 - b. There will be set time frame in which the student must complete the remediation plan. They can reattempt any component of the remediation within the set time frame.
 - ii. If the competency is attempted, but NOT successfully remediated, the student will have failed this portion of the course and will receive an “E” as their final grade for the course. The student may be offered remediation of the course pending the approval of the Progression Committee at the end of the year.
 - iii. If the student does NOT attempt the remediation, they will receive an F in the course for that semester.
 - iv. If the student successfully completes the remediation plan, the student will earn 70 points for the GPA competency portion of the course.

Global Practice Assessment Rubric

Professionalism

	Professional Appearance and Demeanor	Time Management Skills	Work Ethic	Compliance with Clinic Protocols/Infection Control
Superior	Student is consistently wearing appropriate clinic attire and abiding by SOD Policy for Clinic attire and appearance (See Clinic Manual)	<p>Student is on time for clinic and block.</p> <p>Student is aware of and works within the time available in the clinic session (to the best of their ability).</p>	<p>Student demonstrates a commitment to learning and making the most out of their clinical experiences.</p> <p>Student is committed to quality patient care and does not shirk their responsibility because it requires more time or energy.</p>	Student consistently wears appropriate PPE and follows Universal Precautions and SOD Policy.
Acceptable	Most of the time the student is wearing appropriate clinic attire.	<p>Most of the time, Student is on time for clinic and block.</p> <p>The student is usually aware of and works within the time available in the clinic session (to the best of their ability). Occasionally they lose track of time and run late.</p>	Most of the time, Student demonstrates a commitment to learning and making the most out of their clinical experiences.	Most of the time, the student wears appropriate PPE
Needs Improvement	The student requires reminders to wear appropriate clinic attire.	The student has multiple instances of presenting late for clinic or block and running late in the clinic session.	The student is not giving all their energy and attention to their clinical education and clinical responsibilities. This is evidenced by missing deadlines, not keeping up with patient records, not completing all steps in an appointment.	The student requires multiple, repeated reminders on protocol and PPE.
Unacceptable	Student is repeatedly not following School policy for clinic attire and appearance.	Often the student is not on time in clinic.	The student is not in clinic regularly. More often than not the student is not meeting all expectations of an appointment and	The student requires multiple, repeated reminders on protocol and PPE.

Assessment

	Management of Medical/Dental History	Diagnostic Ability	Ability to Formulate a Comprehensive Treatment Plan	Self-Assessment Ability
Superior	<p>Student has collected all the medical and dental history information as defined by the forms in axiUm (no missing data).</p> <p>The student demonstrates understanding of the diseases, disorders, and conditions with which the patient presents.</p> <p>The student can match the medication with the corresponding disease/disorder/condition for that patient.</p> <p>The student knows the type and mechanism of action of the medications, especially the drugs which have known dental side effects or considerations.</p> <p>The student knows which resources to use to find this information (LexiComp in axiUm)</p>	<p>The student is able to accurately (within the limits of their current knowledge and experience) collate all the patient's:</p> <ul style="list-style-type: none"> • Symptoms • Signs • clinical findings (hard tissue and soft tissue) • periodontal exam data • radiographic data • other diagnostic data (models) • results from diagnostic test <p>and formulate appropriate problems list and diagnoses.</p> <p>The student is able to identify when more information is needed to adequately assess the patient.</p> <p>During a procedure, the student is able to evaluate the clinical status of the tooth/treatment and make the appropriate judgment for next steps.</p>	<p>The student is able to utilize all the clinical data to formulate a fully phased and sequenced comprehensive treatment plan for the patient.</p> <p>The student incorporates the chief concern in the plan.</p> <p>When applicable, the student includes different treatment options.</p> <p>The student explain why each treatment/treatment option is indicated or not indicated.</p> <p>The student includes appropriate referrals for care that is beyond the scope of the general dentist.</p>	<p>The student is able to accurately evaluate their</p> <ul style="list-style-type: none"> --current knowledge --current skill level --confidence level <p>without the input from a faculty member.</p>

		When a treatment/procedure is not progressing normally, the student is able to identify the deviation from normal and identify how adapt to the variation (within the limits of their current experience, skills, and knowledge).		
Acceptable	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role, not to complete the diagnostic process.	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role, not to complete the treatment plan.	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role.
Needs Improvement	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is necessary to manage/treat the patient to the standard of care.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is necessary to manage/treat the patient to the standard of care.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is necessary to manage/treat the patient to

				the standard of care.
Unacceptable	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	Most of the time (<80%) the student cannot fulfill the superior criteria.	Most of the time (<80%) the student cannot fulfill the superior criteria.	Most of the time (<80%) the student cannot fulfill the superior criteria.

Technical Performance

	Knowledge of Procedure	Ability to Work Independently	Clinical Skills/Procedural Knowledge	Quality of Treatment	Productivity and Efficiency	Patient Management/Pain Control	Ergonomics
Superior	<p>The student is familiar with the materials available for treatment.</p> <p>The student is able to determine when a material is less than acceptable for use in the patient (expiry date, physical color, consistency, contours).</p>	Once a student is given a "start" or clearance to begin treatment, the student is able to proceed with the treatment planned for that appointment/session for the patient until the next checkpoint on their own, within the limits of their current knowledge and skills.	<p>The student is familiar with and prepared for ahead of time, the steps and specific details of a dental procedure or appointment type (i.e., a Screening Appointment, a Data Collection/TPW appointment, a treatment planning appointment, etc.)</p> <p>(within the limits of their current knowledge)</p> <p>The student can have support documents, checklists, and other guides at the appointment.</p>	The treatment provided by the student exceeds or is equal to the standard of care for that discipline and appointment type.	The student routinely achieves the goals of the appointment/procedure/treatment plan in the designated timeframe. The pace of the appointment/session/course of care for the patient is reasonable and consistent with the standard of care (within the limits of the novice student skills and knowledge).	<p>The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block).</p> <p>The student is familiar with the standard of care for pain management for each appointment type and procedure.</p> <p>The student is aware of the patient's response to treatment -- comfort, discomfort, sensitivity, pain. The student responds to the patient in a timely and appropriate manner-- providing a break, additional anesthesia (when appropriate), and discusses with the patient what they will feel, what they should not feel (example, pressure, but not sharp pain).</p> <p>The student follows the SOD policy for anesthesia administration and seeks faculty guidance when indicated.</p>	<p>The student is aware of the appropriate provider and patient positioning for a given procedure.</p> <p>The student utilizes a finger rest (when appropriate) and indirect vision (when appropriate).</p>

Acceptable	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	Most of the time (>80% of the time) the student is able to work independently, as described in the superior category.	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	The quality of care is equal to the minimum clinical acceptability .	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block). The student meets the superior criteria, but they may require faculty guidance to successfully manage the patient (this does not include "extreme or out of the ordinary situations/patients")	The student can do most of the things in the superior category, the majority of the time (~80% of the time)
Needs Improvement	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	The quality of care is less than the minimum standard of care. With faculty intervention, the standard of care can be achieved in the same appointment or within a reasonable timeframe.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block). More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.
Unacceptable	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category. The treatment stagnates without further input from the faculty or any other individual (another student, resident, or staff person)	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	The quality of care is below the standard of care and requires an additional appointment (s) to remediate the situation.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category. The student administers anesthesia without a start and beyond the SOD policy of 2 cartridges without faculty permission.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category. In addition, the lack of appropriate ergonomics compromises patient safety, provider safety, assistant safety, and/or the quality of the treatment and the outcome.

Interpersonal Qualities

	Communication and Patient Rapport	Collaboration/Teamwork	Leadership Skills	Interaction with Support Staff
Superior	<p>The student communicates clearly and at a level appropriate to the patient.</p> <p>The student takes the appropriate time to discuss the plan for the appointment/treatment before and during the appointment.</p> <p>The student is able to effectively talk with the faculty to convey the pertinent details.</p>	<p>The student can work with other team members in a manner that is effective and contributes positively to the care of the patient and outcome of the appointment.</p> <p>These team members can include a staff person, another student, resident, or faculty.</p>	<p>In a team setting, the lead student provider can direct the team members appropriately.</p> <p>The student also knows when to step back if necessary for the care of the patient.</p>	<p>The student can speak respectfully and effectively with support staff. They follow directions from the support staff without insubordination.</p>
Acceptable	<p>The student can meet the superior with minor input or guidance from the faculty.</p>	<p>The student can meet the superior with minor input or guidance from the faculty.</p>	<p>The student can meet the superior with minor input or guidance from the faculty.</p>	n/a
Needs Improvement	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>

Unacceptable	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>
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COMPETENCY EXAMINATION # 3

Title: OSCE Examination
Course: CCPM 548: Comprehensive Care and Practice Management IV/ General Dentistry
Timing: D4
Category: Summative
Contact: Dr. Nisha Ganesh
nganesh@umaryland.edu

Dr. Sami Abu Alhuda
salhuda@umaryland.edu

Dr. Eve Desai
Edesai@umaryland.edu

General Description

Description of Assessment

Multiple choice, written prescription, written medical consult.

Prerequisites

Completion of third year.

Criteria for Evaluation

See grading rubric for guidance of criteria for the QM exam.

Setting

Clinic- Practical Exam

Classroom- Written Examination

Type of Competency Examination

OSCE

Computer based written (QuestionMark) (case-based, on the academic class calendar)

Time Allotted

240 minutes- written exam

Remediation Required Under the Following Circumstances

One (1) attempt and failure.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision-making processes involved in patient care.
- 2a. Utilize and apply ethical and legal reasoning in the provision of dental care.
- 2b. Practice within the scope of competency and know how to refer to professional colleagues indicated.
- 3a. Communicate effectively with other professionals regarding the care of patients
- 3b. Utilize principles of behavioral sciences for maintaining patient's oral health.
- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 5d. Apply principles of risk management, including informed consent and appropriate record keeping in patient care.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6c. Order, obtain, and interpret appropriate radiographic/digital images.
- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.
- 7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.
- 7h. Prevent, recognize, and manage medical emergencies that occur in the dental practice.
- 7n. Recognize and refer patient abuse and/or neglect.
- 7o. Recognize and refer substance abuse.

Grading Information and Remediation

Examiner

OSCE coordinators

Grading

Pass or fail. An overall grade of 70% and passing all sections (Multiple choice, written prescription, written medical consult.)

Critical Errors

See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

One failure of any of the sections of the exam requires remediation.

Failure of the medical consult and prescription consist of remediation PowerPoint followed by another scenario from which to repeat the exercise.

Medical Consult Rubric:

CLINICAL SKILL	HONORS	PASS	FAIL
MEDICAL CONSULT	All critical categories are included. Consult is written legibly and in an orderly and clear and concise fashion without bullet points. Student remembers to thank the physician.	Performance completed at a clinically acceptable level of proficiency, achieved independently through critical thinking and utilization of scientific knowledge. One or two component(s) not addressed in medical consult, but not a critical area of concern, as indicated below"	Additional preparation is needed to master the task at a clinically acceptable professional level. Multiple areas of patient concern and critical errors are missing from the consult.

AREAS OF CONCERN

Chief Complaint

BP (if applicable)

Planned Dental Treatment

Pertinent Laboratory Values

List of current medications

Local with epi (if applicable)

Contraindications to proposed treatment

Indications

Need for premed (if applicable)

Any other areas for concern from the patient's medical history

MEDICAL CONSULT

NAME _____

Pass____ Fail____ Honors _____

Rubric for Prescription- Required Elements

Rx: (Medication Name and Amount)

Sig: Instructions for administration of the medication.

Disp: Total amount of medication to dispense

Did the student prescribe the correct medication given the scenario presented? P/F

COMPETENCY EXAMINATION # 4

Title: Global Practice Assessment 3: Mid-year Progress toward Competency
Course: CCPM 548 – Comprehensive Care and Practice Management IV/General Dentistry
Timing: D4
Category: Formative
Contact: Nisha Ganesh, DDS, MAEd
nganesh@umaryland.edu

General Description

Description of Assessment

a. Intent

- i. The Maryland Competency Statements articulate the UMSOD faculty's expectations a graduate should possess at the time of graduation.

(http://www.dental.umaryland.edu/media/sod/academic-affairs/Competencies-and-Competency-Examinations_2014.pdf)

- ii. Discipline-specific competency exams assess these expectations within the scope of general dentistry. **The GPA is a summative assessment of overall competency, not simply individual competencies, in order to measure the student's readiness to enter the practice of general dentistry.**

b. Objective

- i. To monitor the development of students' clinical skills and performance by input from inter-disciplinary faculty involved in the students' daily patient care activity in the pre-doctoral teaching clinics. The development of the following core attributes are components of a highly proficient clinician:
 1. Professionalism
 2. Overall assessment ability
 3. Technical performance
 4. Interpersonal qualities
- ii. Student self-assessment (associated with fall GPAs, #2 and #4)
- iii. A secondary aim of the GPA is to provide counseling and remediation to students with deficiencies in core attributes.

c. Assessment

- i. The GPA Faculty Review Board will convene at specific scheduled intervals to evaluate each student and to review the progress and/or final certification of the D3/D4 students.
 1. The Faculty Review Board will consist of, at a minimum:
 - a. GP directors and assistant directors
 - b. Periodontics faculty
 - c. Prosthodontics faculty
 2. Additional faculty from other clinical disciplines may be included.

ii. 4 specified intervals:

1. GPA #1: Fall semester, D3 year (mid-year progress toward competency)
2. GPA #2: Spring semester, D3 year (end year progress toward competency)
 - a. Includes a student self-assessment on Blackboard.
 - i. Note: This is a Pass/Fail exercise that must be completed by a given date.
Each day it is late, 10% from the overall course grade will be deducted.
3. GPA #3: Fall semester, D4 year (mid-year progress toward competency)
4. GPA #4: Spring semester, D4 year (end year final certification of competency)
 - a. Includes a student self-assessment on Blackboard.
 - i. Note: This is a Pass/Fail exercise that must be completed by a given date.
Each day it is late, 10% from the overall course grade will be deducted.

It will be the GP Director(s) responsibility to ensure that the GPA is recorded, reviewed with the student, and that the custom remediation plan, if recommended by the GPA Review Board, is implemented. Following remediation, reevaluation will occur.

Prerequisites

Completion of D1, D2, D3

Enrollment in CCPM548

Criteria for Evaluation

GPA Clinic Report Card (*Superior, Acceptable, Needs Improvement, Unacceptable*)

- **Professionalism**
 - Professional appearance and demeanor
 - Time-management skills
 - Overall work ethic
 - Compliance with clinic protocols/Infection Control
- **Assessment**
 - Management of medical/dental history
 - Diagnostic capability
 - Ability to formulate comprehensive treatment plan
 - Self-assessment ability
- **Technical Performance**
 - Knowledge of procedures and materials
 - Ability to work independently.
 - Clinical skills/procedural know-how
 - Quality of treatment provided.
 - Productivity and efficiency
 - Pain control/patient management
 - Ergonomics
- **Interpersonal Qualities**
 - Communication and patient rapport
 - Collaboration/teamwork
 - Leadership skills
 - Interaction with support staff
- **Student Self-Assessment (GPA #2 and #4)**
 - *Professionalism*
 - *Assessment*

- *Technical Performance*
- *Interpersonal Qualities*

Setting

Classroom: Faculty review and evaluation
(Students are not present during the faculty review session)

Type of Competency Examination

Demonstration-clinical performance patient based (Faculty review and evaluation GPA)

Time Allotted

Split Clinical Floors:

- General Practice 1 -4: 2 hours (65 students reviewed)
- General Practice 5 - 8: 2 hours (65 students reviewed)

Remediation Required Under the Following Circumstances

Students receive one faculty review board review. If any area of the GPA competency is deemed unsuccessful, they are remediated, and then subsequently re-evaluated.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision-making processes involved in patient.
- 3a. Communicate effectively with other professionals regarding the care of patients.
- 3c. Communicate with a diverse population of patients.
- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 4b. Provide appropriate prevention, intervention, and educational strategies.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 7a. Manage acute pain and dental anxiety.
- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.
- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patients and restore oral health.

- 7d. Restore missing or defective tooth structure to proper form, function, and esthetics, and promote soft and hard tissue health.
- 7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related periradicular pathology and restore oral health.
- 7g. Manage odontogenic infections.
- 7h. Prevent, recognize, and manage medical emergencies that occur in the dental practice.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.
- 7m. Prevent, diagnose and manage developmental or acquired occlusal abnormalities and restore oral health.
- 7p. Evaluate outcomes of comprehensive dental care.
- 7q. Provide care for a diverse population of patients including infants, children, adolescents, adults, and geriatric and special needs patients.

Grading Information and Remediation

Examiner

GP Directors, Periodontics Supervisor, Prosthodontics Supervisor, faculty with student contacts in the GP

Grading

The GPA will comprise 25% of the final course grade.

PASS	100 points	Grades of "S" or "A" in all categories
	85 points	Grades of "S" or "A" in all categories, including an "N" grade
	70 points	Up to 2 grades of "N" in any category
FAIL	55 points	3 or more grades of "N" in any category
	40 points	Any grade of "U" in any category

Critical Errors

See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

GPA Competency Remediation

It will be the responsibility of the course directors to ensure that the GPA results are recorded, and that the results are made available to the students.

1. If a student earns **85 or 100 points**, they have successfully passed the GPA competency and no further action is needed.
2. If a student earns **70 points**, they have passed the GPA competency, however, the student will be required to set up a meeting with their GP director to counsel them on their identified areas of concern.
3. If a student earns **55 points or below**, then the student has NOT successfully passed the GPA competency.
 - a. This student will be required to set up a meeting with the course director as well as their GP director and they will be given a customized plan for remediation of the identified deficiencies.
 - b. There will be set time frame in which the student must complete the remediation plan. They can reattempt any component of the remediation within the set time frame.
 - ii. If the competency is attempted, but NOT successfully remediated, the student will have failed this portion of the course and will receive an “E” as their final grade for the course. The student may be offered remediation of the course pending the approval of the Progression Committee at the end of the year.
 - iii. If the student does NOT attempt the remediation, they will receive an F in the course for that semester.
 - iv. If the student successfully completes the remediation plan, the student will earn 70 points for the GPA competency portion of the course.

Global Practice Assessment Rubric

Professionalism

	Professional Appearance and Demeanor	Time Management Skills	Work Ethic	Compliance with Clinic Protocols/Infection Control
Superior	Student is consistently wearing appropriate clinic attire and abiding by SOD Policy for Clinic attire and appearance (See Clinic Manual)	<p>Student is on time for clinic and block.</p> <p>Student is aware of and works within the time available in the clinic session (to the best of their ability).</p>	<p>Student demonstrates a commitment to learning and making the most out of their clinical experiences.</p> <p>Student is committed to quality patient care and does not shirk their responsibility because it requires more time or energy.</p>	Student consistently wears appropriate PPE and follows Universal Precautions and SOD Policy.
Acceptable	Most of the time the student is wearing appropriate clinic attire.	<p>Most of the time, Student is on time for clinic and block.</p> <p>The student is usually aware of and works within the time available in the clinic session (to the best of their ability). Occasionally they lose track of time and run late.</p>	Most of the time, Student demonstrates a commitment to learning and making the most out of their clinical experiences.	Most of the time, the student wears appropriate PPE
Needs Improvement	The student requires reminders to wear appropriate clinic attire.	The student has multiple instances of presenting late for clinic or block and running late in the clinic session.	The student is not giving all their energy and attention to their clinical education and clinical responsibilities. This is evidenced by missing deadlines, not keeping up with patient records, not completing all steps in an appointment.	The student requires multiple, repeated reminders on protocol and PPE.

Unacceptable	Student is repeatedly not following School policy for clinic attire and appearance.	Often the student is not on time in clinic.	The student is not in clinic regularly. More often than not the student is not meeting all expectations of an appointment and	The student requires multiple, repeated reminders on protocol and PPE.
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Assessment

	Management of Medical/Dental History	Diagnostic Ability	Ability to Formulate a Comprehensive Treatment Plan	Self-Assessment Ability
Superior	<p>Student has collected all the medical and dental history information as defined by the forms in axiUm (no missing data).</p> <p>The student demonstrates understanding of the diseases, disorders, and conditions with which the patient presents.</p> <p>The student can match the medication with the corresponding disease/disorder/condition for that patient.</p> <p>The student knows the type and mechanism of action of the medications, especially the drugs which have known dental side effects or considerations.</p> <p>The student knows which resources to use to find this information (LexiComp in axiUm)</p>	<p>The student is able to accurately (within the limits of their current knowledge and experience) collate all the patient's:</p> <ul style="list-style-type: none"> • Symptoms • Signs • clinical findings (hard tissue and soft tissue) • periodontal exam data • radiographic data • other diagnostic data (models) • results from diagnostic test <p>and formulate appropriate problems list and diagnoses. The student is able to identify when more information is needed to adequately assess the patient.</p> <p>During a procedure, the student is able to evaluate the clinical status of the tooth/treatment and make the appropriate judgment for next steps.</p>	<p>The student is able to utilize all the clinical data to formulate a fully phased and sequenced comprehensive treatment plan for the patient.</p> <p>The student incorporates the chief concern in the plan.</p> <p>When applicable, the student includes different treatment options.</p> <p>The student explain why each treatment/treatment option is indicated or not indicated.</p> <p>The student includes appropriate referrals for care that is beyond the scope of the general dentist.</p>	<p>The student is able to accurately evaluate their</p> <ul style="list-style-type: none"> --current knowledge --current skill level --confidence level <p>without the input from a faculty member.</p>

		When a treatment/procedure is not progressing normally, the student is able to identify the deviation from normal and identify how adapt to the variation (within the limits of their current experience, skills, and knowledge).		
Acceptable	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role, not to complete the diagnostic process.	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role, not to complete the treatment plan.	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role.
Needs Improvement	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is necessary to manage/treat the patient to the standard of care.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is necessary to manage/treat the patient to the standard of care.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is necessary to manage/treat the patient to the standard of care.
Unacceptable	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	Most of the time (<80%) the student cannot fulfill the superior criteria.	Most of the time (<80%) the student cannot fulfill the superior criteria.	Most of the time (<80%) the student cannot fulfill the superior criteria.

Technical Performance

	Knowledge of Procedure	Ability to Work Independently	Clinical Skills/Procedural Knowledge	Quality of Treatment	Productivity and Efficiency	Patient Management/Pain Control	Ergonomics
Superior	<p>The student is familiar with the materials available for treatment.</p> <p>The student is able to determine when a material is less than acceptable for use in the patient (expiry date, physical color, consistency, contours).</p>	Once a student is given a "start" or clearance to begin treatment, the student is able to proceed with the treatment planned for that appointment/session for the patient until the next checkpoint on their own, within the limits of their current knowledge and skills.	<p>The student is familiar with and prepared for ahead of time, the steps and specific details of a dental procedure or appointment type (i.e, a Screening Appointment, a Data Collection/TPW appointment, a treatment planning appointment, etc.)</p> <p>(within the limits of their current knowledge)</p> <p>The student can have support documents, checklists, and other guides at the appointment.</p>	The treatment provided by the student exceeds or is equal to the standard of care for that discipline and appointment type.	The student routinely achieves the goals of the appointment/procedure/treatment plan in the designated timeframe. The pace of the appointment/session/course of care for the patient is reasonable and consistent with the standard of care (within the limits of the novice student skills and knowledge).	<p>The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block).</p> <p>The student is familiar with the standard of care for pain management for each appointment type and procedure.</p> <p>The student is aware of the patient's response to treatment -- comfort, discomfort, sensitivity, pain. The student responds to the patient in a timely and appropriate manner-- providing a break, additional anesthesia (when appropriate), and discusses with the patient what they will feel, what they should not feel (example, pressure, but, not sharp pain).</p> <p>The student follows the SOD policy for anesthesia administration and seeks faculty guidance when indicated.</p>	<p>The student is aware of the appropriate provider and patient positioning for a given procedure.</p> <p>The student utilizes a finger rest (when appropriate) and indirect vision (when appropriate).</p>
Acceptable	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	Most of the time (>80% of the time) the student is able to work independently, as described in the superior category.	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	The quality of care is equal to the minimum clinical acceptability.	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	<p>The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block).</p> <p>The student meets the superior criteria, but</p>	The student can do most of the things in the superior category, the majority of the time (~80% of the time)

						they may require faculty guidance to successfully manage the patient (this does not include "extreme or out of the ordinary situations/patients")	
Needs Improvement	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	The quality of care is less than the minimum standard of care. With faculty intervention, the standard of care can be achieved in the same appointment or within a reasonable timeframe.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	<p>The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block).</p> <p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p>	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.
Unacceptable	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>The treatment stagnates without further input from the faculty or any other individual (another student, resident, or staff person)</p>	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	The quality of care is below the standard of care and requires an additional appointment (s) to remediate the situation.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>The student administers anesthesia without a start and beyond the SOD policy of 2 cartridges without faculty permission.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>In addition, the lack of appropriate ergonomics compromises patient safety, provider safety, assistant safety, and/or the quality of the treatment and the outcome.</p>

Interpersonal Qualities

	Communication and Patient Rapport	Collaboration/Teamwork	Leadership Skills	Interaction with Support Staff
Superior	<p>The student communicates clearly and at a level appropriate to the patient.</p> <p>The student takes the appropriate time to discuss the plan for the appointment/treatment before and during the appointment.</p> <p>The student is able to effectively talk with the faculty to convey the pertinent details.</p>	<p>The student can work with other team members in a manner that is effective and contributes positively to the care of the patient and outcome of the appointment.</p> <p>These team members can include a staff person, another student, resident, or faculty.</p>	<p>In a team setting, the lead student provider can direct the team members appropriately.</p> <p>The student also knows when to step back if necessary for the care of the patient.</p>	<p>The student can speak respectfully and effectively with support staff. They follow directions from the support staff without insubordination.</p>
Acceptable	<p>The student can meet the superior with minor input or guidance from the faculty.</p>	<p>The student can meet the superior with minor input or guidance from the faculty.</p>	<p>The student can meet the superior with minor input or guidance from the faculty.</p>	n/a
Needs Improvement	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>

Unacceptable	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>
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COMPETENCY EXAMINATION # 5

Title: Global Practice Assessment 4: Final Certification of Competency
Course: CCPM 548 – Comprehensive Care and Practice Management IV/General Dentistry
Timing: D4
Category: Summative
Contact: Nisha Ganesh, DDS, MAEd
nganesh@umaryland.edu

General Description

Description of Assessment

a. Intent

- i. The Maryland Competency Statements articulate the UMSOD faculty's expectations a graduate should possess at the time of graduation.

(http://www.dental.umaryland.edu/media/sod/academic-affairs/Competencies-and-Competency-Examinations_2014.pdf)

- ii. Discipline-specific competency exams assess these expectations within the scope of general dentistry. **The GPA is a summative assessment of overall competency, not simply individual competencies, in order to measure the student's readiness to enter the practice of general dentistry.**

b. Objective

- i. To monitor the development of students' clinical skills and performance by input from interdisciplinary faculty involved in the students' daily patient care activity in the pre-doctoral teaching clinics. The development of the following core attributes are components of a highly proficient clinician:
 1. Professionalism
 2. Overall assessment ability
 3. Technical performance
 4. Interpersonal qualities
- ii. Student self-assessment (associated with fall GPAs, #2 and #4)
- iii. A secondary aim of the GPA is to provide counseling and remediation to students with deficiencies in core attributes.

c. Assessment

- i. The GPA Faculty Review Board will convene at specific scheduled intervals to evaluate each student and to review the progress and/or final certification of the D3/D4 students.

1. The Faculty Review Board will consist of, at a minimum:
 - a. GP directors and assistant directors
 - b. Periodontics faculty
 - c. Prosthodontics faculty
2. Additional faculty from other clinical disciplines may be included.

ii. 4 specified intervals:

1. GPA #1: Fall semester, D3 year (mid-year progress toward competency)
2. GPA #2: Spring semester, D3 year (end year progress toward competency)
 - a. Includes a student self-assessment on Blackboard.
 - i. Note: This is a Pass/Fail exercise that must be completed by a given date. Each day it is late, 10% from the overall course grade will be deducted.
3. GPA #3: Fall semester, D4 year (mid-year progress toward competency)
4. GPA #4: Spring semester, D4 year (end year final certification of competency)
 - a. Includes a student self-assessment on Blackboard.
 - i. Note: This is a Pass/Fail exercise that must be completed by a given date. Each day it is late, 10% from the overall course grade will be deducted.

It will be the GP Director(s) responsibility to ensure that the GPA is recorded, reviewed with the student, and that the custom remediation plan, if recommended by the GPA Review Board, is implemented. Following remediation, reevaluation will occur.

Prerequisites

Completion of D1, D2, D3

Enrollment in CCPM548

Criteria for Evaluation

GPA Clinic Report Card (*Superior, Acceptable, Needs Improvement, Unacceptable*)

- **Professionalism**
 - Professional appearance and demeanor
 - Time-management skills
 - Overall work ethic
 - Compliance with clinic protocols/Infection Control
- **Assessment**
 - Management of medical/dental history
 - Diagnostic capability
 - Ability to formulate comprehensive treatment plan.
 - Self-assessment ability
- **Technical Performance**
 - Knowledge of procedures and materials
 - Ability to work independently.
 - Clinical skills/procedural know-how
 - Quality of treatment provided.
 - Productivity and efficiency
 - Pain control/patient management
 - Ergonomics
- **Interpersonal Qualities**
 - Communication and patient rapport
 - Collaboration/teamwork
 - Leadership skills
 - Interaction with support staff
- **Student Self-Assessment (GPA #2 and #4)**
 - *Professionalism*
 - *Assessment*
 - *Technical Performance*

- *Interpersonal Qualities*

Setting

Classroom: Faculty review and evaluation

(Students are not present during the faculty review session)

Type of Competency Examination

Demonstration-clinical performance patient based (Faculty review and evaluation GPA)

Time Allotted

Split Clinical Floors:

- General Practice 1 -4: 2 hours (65 students reviewed)
- General Practice 5 - 8: 2 hours (65 students reviewed)

Remediation Required Under the Following Circumstances

Students receive one faculty review board review. If any area of the GPA competency is deemed unsuccessful, they are remediated, and then subsequently re-evaluated.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision-making processes involved in patient.
- 3a. Communicate effectively with other professionals regarding the care of patients.
- 3c. Communicate with a diverse population of patients.
- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 4b. Provide appropriate prevention, intervention, and educational strategies.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 7a. Manage acute pain and dental anxiety.
- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.
- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patients and restore oral health.

- 7d. Restore missing or defective tooth structure to proper form, function, and esthetics, and promote soft and hard tissue health.
- 7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related periradicular pathology and restore oral health.
- 7g. Manage odontogenic infections.
- 7h. Prevent, recognize, and manage medical emergencies that occur in the dental practice.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.
- 7m. Prevent, diagnose and manage developmental or acquired occlusal abnormalities and restore oral health.
- 7p. Evaluate outcomes of comprehensive dental care.
- 7q. Provide care for a diverse population of patients including infants, children, adolescents, adults, and geriatric and special needs patients.

Grading Information and Remediation

Examiner

GP Directors, Periodontics Supervisor, Prosthodontics Supervisor, faculty with student contacts in the GP

Grading

The GPA will comprise 25% of the final course grade.

PASS	100 points	Grades of "S" or "A" in all categories
	85 points	Grades of "S" or "A" in all categories, including an "N" grade
	70 points	Up to 2 grades of "N" in any category
FAIL	55 points	3 or more grades of "N" in any category
	40 points	Any grade of "U" in any category

Critical Errors

See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

GPA Competency Remediation

It will be the responsibility of the course directors to ensure that the GPA results are recorded, and that the results are made available to the students.

1. If a student earns **85 or 100 points**, they have successfully passed the GPA competency and no further action is needed.
2. If a student earns **70 points**, they have passed the GPA competency, however, the student will be required to set up a meeting with their GP director to counsel them on their identified areas of concern.
3. If a student earns **55 points or below**, then the student has NOT successfully passed the GPA competency.
 - a. This student will be required to set up a meeting with one or both of the course directors as well as their GP director and they will be given a customized plan for remediation of the identified deficiencies.
 - b. There will be set time frame in which the student must complete the remediation plan. They can reattempt any component of the remediation within the set time frame.
 - ii. If the competency is attempted, but NOT successfully remediated, the student will have failed this portion of the course and will receive an “E” as their final grade for the course. The student may be offered remediation of the course pending the approval of the Progression Committee at the end of the year.
 - iii. If the student does NOT attempt the remediation, they will receive an F in the course for that semester.
 - iv. If the student successfully completes the remediation plan, the student will earn 70 points for the GPA competency portion of the course.

Global Practice Assessment Rubric

Professionalism

	Professional Appearance and Demeanor	Time Management Skills	Work Ethic	Compliance with Clinic Protocols/Infection Control
Superior	Student is consistently wearing appropriate clinic attire and abiding by SOD Policy for Clinic attire and appearance (See Clinic Manual)	<p>Student is on time for clinic and block.</p> <p>Student is aware of and works within the time available in the clinic session (to the best of their ability).</p>	<p>Student demonstrates a commitment to learning and making the most out of their clinical experiences.</p> <p>Student is committed to quality patient care and does not shirk their responsibility because it requires more time or energy.</p>	Student consistently wears appropriate PPE and follows Universal Precautions and SOD Policy.
Acceptable	Most of the time the student is wearing appropriate clinic attire.	<p>Most of the time, Student is on time for clinic and block.</p> <p>The student is usually aware of and works within the time available in the clinic session (to the best of their ability). Occasionally they lose track of time and run late.</p>	Most of the time, Student demonstrates a commitment to learning and making the most out of their clinical experiences.	Most of the time, the student wears appropriate PPE
Needs Improvement	The student requires reminders to wear appropriate clinic attire.	The student has multiple instances of presenting late for clinic or block and running late in the clinic session.	The student is not giving all their energy and attention to their clinical education and clinical responsibilities. This is evidenced by missing deadlines, not keeping up with patient records, not completing all steps in an appointment.	The student requires multiple, repeated reminders on protocol and PPE.

Unacceptable	Student is repeatedly not following School policy for clinic attire and appearance.	Often the student is not on time in clinic.	The student is not in clinic regularly. More often than not the student is not meeting all expectations of an appointment and	The student requires multiple, repeated reminders on protocol and PPE.
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Assessment

	Management of Medical/Dental History	Diagnostic Ability	Ability to Formulate a Comprehensive Treatment Plan	Self-Assessment Ability
Superior	<p>Student has collected all the medical and dental history information as defined by the forms in axiUm (no missing data).</p> <p>The student demonstrates understanding of the diseases, disorders, and conditions with which the patient presents.</p> <p>The student can match the medication with the corresponding disease/disorder/condition for that patient.</p> <p>The student knows the type and mechanism of action of the medications, especially the drugs which have known dental side effects or considerations.</p> <p>The student knows which resources to use to find this information (LexiComp in axiUm)</p>	<p>The student is able to accurately (within the limits of their current knowledge and experience) collate all the patient's:</p> <ul style="list-style-type: none"> • Symptoms • Signs • clinical findings (hard tissue and soft tissue) • periodontal exam data • radiographic data • other diagnostic data (models) • results from diagnostic test <p>and formulate appropriate problems list and diagnoses. The student is able to identify when more information is needed to adequately assess the patient.</p>	<p>The student is able to utilize all the clinical data to formulate a fully phased and sequenced comprehensive treatment plan for the patient.</p> <p>The student incorporates the chief concern in the plan.</p> <p>When applicable, the student includes different treatment options.</p> <p>The student explain why each treatment/treatment option is indicated or not indicated.</p> <p>The student includes appropriate referrals for care that is beyond the scope of the general dentist.</p>	<p>The student is able to accurately evaluate their</p> <ul style="list-style-type: none"> --current knowledge --current skill level --confidence level <p>without the input from a faculty member.</p>

		<p>During a procedure, the student is able to evaluate the clinical status of the tooth/treatment and make the appropriate judgment for next steps.</p> <p>When a treatment/procedure is not progressing normally, the student is able to identify the deviation from normal and identify how adapt to the variation (within the limits of their current experience, skills, and knowledge).</p>		
Acceptable	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role, not to complete the diagnostic process.	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role, not to complete the treatment plan.	The student can perform the superior criteria most of the time (~80% of the time) Sometimes the student might need assistance in more complex scenarios, but the faculty guidance serves a support role.
Needs Improvement	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is	More than half of the time the student is not able to perform the criteria in the superior category. Faculty intervention is	More than half of the time the student is not able to perform the criteria in

		necessary to manage/treat the patient to the standard of care.	necessary to manage/treat the patient to the standard of care.	the superior category. Faculty intervention is necessary to manage/treat the patient to the standard of care.
Unacceptable	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	Most of the time (<80%) the student cannot fulfill the superior criteria.	Most of the time (<80%) the student cannot fulfill the superior criteria.	Most of the time (<80%) the student cannot fulfill the superior criteria.

Technical Performance

	Knowledge of Procedure	Ability to Work Independently	Clinical Skills/Procedural Knowledge	Quality of Treatment	Productivity and Efficiency	Patient Management/Pain Control	Ergonomics
Superior	<p>The student is familiar with the materials available for treatment.</p> <p>The student is able to determine when a material is less than acceptable for use in the patient (expiry date, physical color, consistency, contours).</p>	Once a student is given a "start" or clearance to begin treatment, the student is able to proceed with the treatment planned for that appointment/session for the patient until the next checkpoint on their own, within the limits of their current knowledge and skills.	<p>The student is familiar with and prepared for ahead of time, the steps and specific details of a dental procedure or appointment type (i.e., a Screening Appointment, a Data Collection/TPW appointment, a treatment planning appointment, etc.)</p> <p>(within the limits of their current knowledge)</p> <p>The student can have support documents, checklists, and other guides at the appointment.</p>	The treatment provided by the student exceeds or is equal to the standard of care for that discipline and appointment type.	The student routinely achieves the goals of the appointment/procedure/treatment plan in the designated timeframe. The pace of the appointment/session/course of care for the patient is reasonable and consistent with the standard of care (within the limits of the novice student skills and knowledge).	<p>The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block).</p> <p>The student is familiar with the standard of care for pain management for each appointment type and procedure.</p> <p>The student is aware of the patient's response to treatment -- comfort, discomfort, sensitivity, pain. The student responds to the patient in a timely and appropriate manner-- providing a break, additional anesthesia (when appropriate), and discusses with the patient what they will feel, what they should not feel (example, pressure, but. not sharp pain).</p>	<p>The student is aware of the appropriate provider and patient positioning for a given procedure.</p> <p>The student utilizes a finger rest (when appropriate) and indirect vision (when appropriate).</p>

						The student follows the SOD policy for anesthesia administration and seeks faculty guidance when indicated.	
Acceptable	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	Most of the time (>80% of the time) the student is able to work independently, as described in the superior category.	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	The quality of care is equal to the minimum clinical acceptability.	The student can do most of the things in the superior category, the majority of the time (~80% of the time)	<p>The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block).</p> <p>The student meets the superior criteria, but they may require faculty guidance to successfully manage the patient (this does not include "extreme or out of the ordinary situations/patients")</p>	The student can do most of the things in the superior category, the majority of the time (~80% of the time)
Needs Improvement	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	The quality of care is less than the minimum standard of care. With faculty intervention, the standard of care can be achieved in the same appointment or within a reasonable timeframe.	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.	<p>The student obtains a "start" and appropriately describes the type of pain control (anesthesia) and technique (infiltration vs. block).</p> <p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p>	More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.
Unacceptable	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>The treatment stagnates without further input from the faculty or any other individual (another student, resident, or staff person)</p>	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	The quality of care is below the standard of care and requires an additional appointment(s) to remediate the situation.	Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>The student administers anesthesia without a start and beyond the SOD policy of 2 cartridges without faculty permission.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>In addition, the lack of appropriate ergonomics compromises patient safety, provider safety, assistant safety, and/or the quality of the treatment and the outcome.</p>

Interpersonal Qualities

	Communication and Patient Rapport	Collaboration/Teamwork	Leadership Skills	Interaction with Support Staff
Superior	<p>The student communicates clearly and at a level appropriate to the patient.</p> <p>The student takes the appropriate time to discuss the plan for the appointment/treatment before and during the appointment.</p> <p>The student is able to effectively talk with the faculty to convey the pertinent details.</p>	<p>The student can work with other team members in a manner that is effective and contributes positively to the care of the patient and outcome of the appointment.</p> <p>These team members can include a staff person, another student, resident, or faculty.</p>	<p>In a team setting, the lead student provider can direct the team members appropriately.</p> <p>The student also knows when to step back if necessary for the care of the patient.</p>	<p>The student can speak respectfully and effectively with support staff. They follow directions from the support staff without insubordination.</p>
Acceptable	<p>The student can meet the superior with minor input or guidance from the faculty.</p>	<p>The student can meet the superior with minor input or guidance from the faculty.</p>	<p>The student can meet the superior with minor input or guidance from the faculty.</p>	n/a
Needs Improvement	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>More than half the time the student cannot fulfill or accomplish the standards listed in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>

Unacceptable	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>	<p>Most of the time (>80% of the time) the student cannot achieve the standards described in the superior category.</p> <p>Faculty intervention is required to maintain the standard of care for the patient during an appointment or within the overall course of care of the treatment at the SOD.</p>
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SCG COMPETENCY EXAMINATION #6

Title: Special Care and Geriatrics: Patient based clinical competency exam

Course: CCPM 548- Comprehensive Care and Practice Management

Timing: D4

Category: Summative

Contact: Dr. Adila Baig abaig@umaryland.edu

General Description

Description of Assessment:

The dental student shall be able to demonstrate the ability to review and assess the SCHN or Geriatric patient's medical history, social history, past dental history, and oral health status and be able to concisely present patient information to the faculty.

Critical information needed in the presentation should include, but not limited to: identification of the patient's medical history including current health status, medications, allergies and current blood pressure; Patients' social history including who patient resides with and knowledge of who performs patients dental home care; Patient's dental history including any complications from previous visits as well as the setting of previous dental visits; Patient management including behavior modifications, reasons for them being in SCG Clinic and appropriate communication with patient and/or caregiver; Comprehensive treatment planning including appropriate radiographs; professionalism including following appropriate infection control and visit form.

Prerequisites

Completion of D3, including GERI 532, SPTC 531

Criteria for Evaluation

See grading rubric for criteria for evaluation

Setting

Special Care and Geriatrics Clinic

Type of Competency Examination

Demonstration- clinical performance

Presentation- Oral

Time Allotted

1 Clinical session

Remediation Required under the Following Circumstance

Two (2) attempts and failure

Maryland Competency Statements

1b. Utilize critical thinking and scientific knowledge in decision-making processes involved in patient

3a. Communicate effectively with other professionals regarding the care of patients

3c. Communicate with a diverse population of patients

6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.

Grading

The competency is graded Pass/Fail

Examiners

Dr. Adila Baig

Dr. Sydnee Chavis

Dr. Leigh Ryan

Dr. Deborah Miller

Dr. John Taylor

Critical Errors

1. Failure to present patient's pertinent health history to faculty, did not update medical history.
2. Not familiar with patient's medications.
3. Unable to properly take blood pressure.
4. Unable to recognize medical health issues that warrant further investigation.
5. Unable to correlate the patient's medical history with modifications in dental treatment.
6. Unable to answer faculty queries regarding patients' medical history.
7. Failure to demonstrate respect to patient and/or treats patient in a demeaning manner.
8. Failure to document treatment in electronic patient records.

SCG Competency Exam Rubric

New patient comprehensive exam	Pass	Fail*
Medical history	Presents acceptable clinical knowledge of patient's current medical condition and medical status; demonstrates review of patient's medical history with patient and/or caregiver; accurate presentation of patient's current medications, allergies; demonstration of updated current medical status and updated current medications in ERx; presented relevant medications and current medical issues requiring medical consult prior to dental treatment	Lack of knowledge of patient's current medical condition and medical status; did not review patient's current medical history, current medications, known allergies; did not demonstrate updated medical status or updated medications in ERx; did not present current medical issues requiring medical consult prior to dental treatment
Blood pressure	Accurate blood pressure	Inaccurate blood pressure
Social history	Was able to identify patient's place of residence, names of care givers and/or family members and how to contact them; identifies who provides consent for the patient; identifies who provides the patient's oral care at home; for patients with mobility issues identifies transportation issues and solutions	Was unable to identify patient's place of residence or names of care givers and/or family members; could not identify how to contact guardian for the patient this visit; unable to identify who provides consent for the patient; did not identify who provides the patient's oral care at home; or for patients with mobility issues did not identify transportation issues and solutions
Dental history	Identifies patient's past dental history and current status of diagnostic radiographs; identifies any past complications or poor outcomes from previous dental visits; identify any special considerations needed for past dental visits to include oral sedation, IV sedation, GA and others)	Provided an incomplete patient's past dental history; did not know the current status of diagnostic radiographs; could not identify any past complications or poor outcomes from previous dental visits; was unable to identify any special considerations needed for past dental visits to include oral sedation, IV sedation, GA and others)
Patient management	Identify specific disability or limitations that required the patient to be at this clinic; reviewed patient notes as it related to past dental treatment, patient behavior and	Was unable to identify specific disability or limitations that required the patient to be at this clinic; did not review patient notes as it related to past dental

	<p>patient management concerns by previous provider(s); identify any special considerations or contraindications to oral treatment planned; demonstrated the ability to communicate with the patient and/or guardian at an appropriate level of understanding; Demonstrates respect to the patient and/or guardian during the dental visit; demonstrates patient management at a clinically acceptable level</p>	<p>treatment, patient behavior and patient management concerns by previous provider(s); if needed was unable to identify any special considerations or contraindications to oral treatment planned; was unable to communicate with the patient and/or guardian at an appropriate level of understanding; Demonstrates a lack of respect to the patient and/or guardian during the dental visit; treats the patient in a demeaning manner; when evaluated was unable to demonstrate patient management at a clinically acceptable level</p>
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*Critical Error

COMPETENCY EXAMINATION # 7

Title: Soft Tissue Examination Competency

Course: DSCP 538: Oral Medicine and Diagnostic Sciences/ Diagnostic Sciences

Timing: D3

Category: Summative

Contact: Dr. Dana Weikel
Dweikel1@umaryland.edu

Dr. Timothy Meiller
Tfmeiller@umaryland.edu

General Description

Description of Assessment

The Soft Tissue Examination Competency is administered during the third year. Competency #7 is required to pass DSCP 538. The deadline to complete Comp #7 is by the end of the D3 academic year. The competency is to be undertaken on a live patient. The student is expected to demonstrate a satisfactory clinical technique to evaluate the hard and soft tissues within the oral and maxillofacial region that include: proper patient positioning; adequate field of view illumination; appropriate instrumentation (gauze, mirror, etc.); and appropriate soft tissue manipulation (bi-digital/bi-manual) and retraction. Moreover, the student is expected to demonstrate knowledge of normal anatomic structures and non-pathologic variations, and to be able to distinguish any oral pathosis that may be present. During the assessment, the student may be questioned about the clinicopathologic aspects of any apparent lesions encountered, be able to offer a possible diagnosis, and provide whether there is a possible relationship to the patient's prevailing medical condition.

Prerequisites

- In order to challenge Comp #7, students must have completed the following pre-requisites:
 1. passed Year II OMED 521 (Oral Medicine)
 2. passed OPAT 528 (Oral Pathology)
 3. watched the Year III DSCP 538 (Oral Medicine and Diagnostic Sciences) "EXTRA-ORAL EXAMINATION VIDEO"
 4. watched the Year III DSCP 538 (Oral Medicine and Diagnostic Sciences) "INTRA-ORAL EXAMINATION VIDEO"
- Any missing or incomplete pre-requisites will receive a "U" grade for Comp #7 and your grade will not be accepted. If you receive a "U" grade for ANY of the grading sections of comp #7 you will receive a failing grade and be required to re-take the exam. Re-take exams are only permitted once ALL of the pre-requisites have been completed.

Criteria for Evaluation

The student should be able demonstrate a satisfactory technique to assess the hard and soft tissue structures of the oral and maxillofacial region, demonstrate a comprehensive knowledge of these normal anatomic structures and their variants, demonstrate the ability to recognize any readily apparent pathologic lesions, and be familiar with the lesional clinical and possible radiographic features. Furthermore, the student is expected to be able to offer any differential diagnosis of any apparent common lesion and possible correlation with the patient's prevailing medical history. Answers to questions with regard to anatomic structures and their variants, as well as pathologic lesions, particularly if relevant to the patient's prevailing medical history, are taken from material presented in Year I and Year II. See rubric and grading form.

Setting

Clinic

Type of Competency Examination

Demonstration-clinical performance patient-based (student self-scheduled)

Time Allotted

1 clinic session

Remediation Required Under the Following Circumstances

Three (3) attempts and failures

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 5d. Apply principles of risk management, including informed consent and appropriate record keeping in patient care.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.

Grading Information and Remediation

Examiners

Dana Weikel

John K. Brooks

Karen A. Garber

Gregory D. Winter

Clark Rogers

Christopher K. Yoo

Timothy F. Meiller

Louis G. DePaola

Ahmed S. Sultan

Nisha Ganesh

GP Directors

Grading

The examination is Pass/Fail. See rubric and grading form. Grades are entered from the axiUm electronic grading form.

Critical Errors

See rubric and competency examination form. Any critical error will result in automatic failure of the competency exam, which **will require that the student re-challenge the competency exam on a different patient.**

Description of Remediation

Students who fail the competency will be provided with the reason and to be given 3 additional opportunities to retake the examination. One-on-one counseling to correct any deficiencies will be provided. The student is expected to repeat the competency at another Block Assignment.

Rubric for DSCP 538-Soft tissue competency examination: Critical elements

Displays the ability to assess the hard and soft tissues of the oral and maxillofacial region.	Pass: Perform satisfactory techniques for clinical examination of the oral and maxillofacial region, including proper patient positioning, adequate field of view, appropriate instrumentation (gauze, mirror, etc.), and appropriate tissue manipulation (bi-digital/bi-manual) and retraction.	Fail: Inability to demonstrate adequate techniques to assess the hard and soft tissues of the oral and maxillofacial region.
Demonstrates a comprehensive knowledge of the normal anatomic structures and their variants of the oral and maxillofacial region.	Pass: Is able to identify and name various clinically normal (and their variants) soft and hard tissues of the oral and maxillofacial region.	Fail: Cannot provide the name of a normal anatomic structure of the oral and maxillofacial region nor be able to distinguish a normal anatomic structure from a pathologic lesion.
Demonstrates the ability to recognize readily apparent hard or soft tissue pathologic lesions of the oral and maxillofacial region, be familiar with its clinical and possible radiographic features, and offer any needed clinical management.	Pass: Is able to find any readily apparent hard or soft tissue pathosis of the oral and maxillofacial region, displays a general lesional knowledge (descriptors, health concerns, behavior, possible etiology, treatment), and provides any further clinical measures to be undertaken (biopsy, referral, etc.).	Fail: Cannot identify any readily apparent hard or soft tissue pathosis of the oral and maxillofacial region, displays a fundamental lack of understanding of the lesional features, or fails to provide any appropriate follow-up recommendations.
Demonstrates the ability to offer a differential diagnosis of any apparent common pathologic finding.	Pass: Is able to provide the diagnosis of any apparent common pathologic finding.	Fail: Inability to provide a possible diagnosis of any apparent common pathologic finding.
Demonstrates critical thinking and scientific knowledge of oral and maxillofacial manifestations of systemic disease.	Pass: Demonstrates the ability to correlate any apparent hard or soft tissue lesion with the patient's prevailing medical status.	Fail: Is unfamiliar with any association of a hard or soft tissue pathosis with the patient's prevailing medical status.

Pre-req 1: Extra-oral examination video

Pre-req 2: Intra-oral examination video

Lymph node examination

TMJ, muscles of mastication exam

Systematic/comprehensive intra-oral exam

Constant movement of operator light

Retraction of tongue with gauze

Mirror retract to look lingual coffin

COMPETENCY EXAMINATION # 8

Title: Biopsy Competency Exam
Course: DSCP 548: Oral Medicine and Diagnostic Sciences/ Diagnostic Sciences
Timing: D4
Category: Summative
Contact: Dr. John Basile
jbasile@umaryland.edu

General Description

Description of Assessment

Student will convene with faculty in front of the microscope and discuss the pertinent histopathologic features of the biopsy sample being examined, followed by an oral examination by the faculty examiner.

Prerequisites

Students must have passed:

- DSCP538
- D3 Oral Medicine Block
- Student participation in a biopsy procedure and delivery of the tissue to the pathology lab

Criteria for Evaluation

Knowledge of the histopathological features of the lesion, as diagnosed in the pathology report, as well as the causes of the condition, possible treatments, and patient management. The competency objectives are:

- To demonstrate how to evaluate a pathology specimen
- Identify individual cells and structures in the light microscope
- Correlate the microscopic findings with clinical appearance and prognosis
- Understand the role of the oral pathologists as part of the oral health care team

See grading rubric for criteria for evaluation.

Setting

Clinic

Type of Competency Examination

Presentation oral to faculty member (student self-scheduled)

Presentation oral (case-based) to faculty member (student self-scheduled)

Time Allotted

1 clinic session

Remediation Required Under the Following Circumstances

Three (3) attempts and failures

Maryland Competency Statements

- 1b. Utilization of critical thinking and scientific knowledge in decision-making processes involved in patient care.
- 3a. Communicate effectively with other professionals regarding the care of patients.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.

Grading Information and Remediation

Examiner

Dr. John Basile

Dr. Rania Younis

Grading

Grading is honors/pass/fail, based upon the rubric and:

- Prior preparation, having read the pathology report for the patient ahead of time
- Knowledge of the lesion being diagnosed and discussed
- Ability to understand the pathogenesis and microscopic features of the lesion

See grading rubric for detailed description of criteria.

Critical Errors

See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

Failure of three exams requires a one-on-one meeting with departmental faculty to review areas identified as unsuccessful on the failed exams.

Rubric for DSCP548- Biopsy Competency Examination

	Honors	Pass	Fail *
			* A critical failure in any area results in failure of the competency
Demonstrates knowledge of the patients medical history, including chief complaint and past dental history leading to referral for biopsy	Understands the importance of the medical history, including current medications, on the development of the lesion being examined, and how the patient's chief complaint is related to the diagnosis.	Demonstrates general understanding of how the lesion would present clinically and why it eventually lead to a biopsy, and how the patient's medical history could influence its development and diagnosis.	Is unaware of the patient's medical history and therefore unable to correctly interpret initial signs and symptoms or accurately diagnose and interpret the results of the biopsy.
Demonstrates an understanding of when a biopsy is indicated and how tissues are processed	Demonstrates an excellent understanding of when a biopsy needs to be taken and the role of the pathology lab in this process.	Demonstrates general understanding of when to biopsy a lesion and how to do so, But does not know the purpose of fixation or how tissues are processed into slides.	Does not know how to recognize pathology (versus normal tissue) nor understands the purpose or function of the pathology lab.
Demonstrates the ability to formulate a differential diagnosis based upon clinical and radiographic information, utilizing critical thinking and scientific and biomedical knowledge	Demonstrates an excellent understanding of the principles of developing differential diagnoses based upon clinical information or other materials submitted along with the biopsy (including radiographs and photos).	Demonstrates general understanding of the importance of clinical information and makes an attempt to develop a rudimentary differential diagnosis (though may fail to consider common diagnoses in favor of rarer lesions).	Fails to recognize the significance or importance of clinical information and develops an inaccurate differential diagnosis that does not include the actual diagnosis (usually because the student has not read the biopsy report prior to the competency).
Demonstrates the ability to interpret histopathological findings on a biopsy slide and clearly and concisely communicate those findings to the pathologist.	Comes prepared to the appointment and displays an excellent understanding of the pathogenesis of the lesion being discussed (particularly for reactive or inflammatory lesions).	Demonstrates general understanding of the pathogenesis of the lesion being examined under the microscope, though may have difficulty recalling the cells mediating the process or the mechanisms involved.	Arrives at the competency poorly prepared to discuss the diagnosis; cannot recall basic pathological principles.

☐ Honors ☐ Pass ☐ Fail/ ☐ First attempt; ☐ Second attempt; ☐ Third attempt

Comments: _____

Instructor Name (printed) _____
 Instructor signature _____

COMPETENCY EXAMINATION # 9

Title: Urgent Care Competency Exam
Course: DSUR 548: Clinical Oral Maxillofacial Surgery/ Oral and Maxillofacial Surgery
Timing: D4
Category: Summative
Contact: Dr. Behzad Mostoufi
Bmostoufi@umaryland.edu

General Description

Description of Assessment

The dental student shall be able to demonstrate the ability to appropriately manage a patient with a dental emergency in regards to the assessment and appropriate management of medical and dental history, examination, appropriate diagnostic testing, final diagnosis, documentation, and effective interaction and communication with the patients. Students are required to complete this competency independently without peer, staff, or faculty assistance.

Prerequisites

Students must have passed DSUR 538
Assessed and treated 10 urgent care patients

Criteria for Evaluation

See the grading rubric.

The faculty will grade each of the 10 criteria as honors / pass / fail. Honors imply that the criteria were performed and completed independently and with an exceptional clinical level of proficiency. There shall be no critical errors and it shall be clear that the student used critical thinking. Pass implies that the criteria were performed and completed independently to an acceptable level of proficiency without critical errors. Fail implies that there was a critical error when performing the tasks. Failure of any of the 10 criteria will require that the student does another competency exam on a different patient after the faculty reviews and explains the critical errors. If the student fails a second attempt of the competency, they will be required to see 5 more urgent care patients successfully before being allowed to attempt another urgent care competency.

The faculty will assess and record the difficulty level of the case. At minimum, the student is required to pass one moderately difficult to difficult case experience. The difficulty of the case experience will be determined by the faculty using the following guidelines:

Simple case experience:

- Medical history of little or of no significance to the dental visit.
- Straightforward diagnosis needing little to no diagnostic testing.

Moderately difficult experience:

- Medical history containing a medication or medical issue that may be of significance to the dental visit.
And / Or
- A diagnosis needing some diagnostic testing to confirm a diagnosis.

Difficult Experience:

- Medical history containing ~~a~~ multiple medications and/ or a medical issue that may be of significance to the dental visit.
And / Or
- A diagnosis needing diagnostic testing to confirm a diagnosis. The diagnosis in this case is not an easily apparent issue or the case contains multiple diagnoses.

Setting

Clinic or Webex meeting in which the student presents a Powerpoint of urgent care case

Type of Competency Examination

Presentation oral (case-based) to faculty member (student self-scheduled)

Time Allotted

30 minute

Remediation Required Under the Following Circumstances

Two (2) attempts and failures

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 7a. Manage acute pain and dental anxiety.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related periradicular pathology and restore oral health.
- 7h. Prevent, diagnose, and manage medical emergencies that occur in the dental practice.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.

Grading Information and Remediation

Examiner

Dr. Mostoufi
Dr. Logmanni
Dr. Garber
Dr. Rogers
Dr. Malik
Dr. Layton
Dr. Bher

Grading

See grading rubric for detailed description of criteria.

The rubric will be used in Urgent care Clinic Block Rotation, a clinical based competency assessment by the Urgent care faculty. Faculty will assess 10 phases of treatment during the Urgent care appointment. The student will present to an urgent care faculty at three stages (after obtaining chief complaint and medical history, after examining patient, and after diagnostic testing to present differential and final diagnosis and plan for treatment), and again after treatment is performed if the patient is not referred to another clinic. The Urgent care faculty will review the medical history with the patient as well as examine the patient to ensure the accuracy of the student's performance. The urgent care faculty will ask questions related to patient management and diagnosis.

Critical Errors

See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

If the student fails the exam he is given another opportunity to select another patient and challenge a new competency. Failure of two exams requires student to perform at least five more Urgent Care Assessments and Treatment before he/she may challenge the competency exam again.

Urgent Care Competency Exam

Students are required to complete this competency independently without peer, staff, or faculty assistance.

Student Name: _____ Student ID #: _____

Pt. Chart #: _____ Date: _____

Clinical Criteria	Levels of Performance			Critical Errors*
	<u>HONORS</u> PERFORMANCE COMPLETED at a clinically exceptional level of proficiency through critical thinking and without critical errors	<u>PASS</u> PERFORMANCE COMPLETED at an acceptable level of proficiency without critical errors	<u>FAIL</u> Additional preparation needed to master task at a clinically acceptable professional level	
Chief complaint.				- Not able to identify and address the patients prime reason for seeking treatment.
Informed consent obtained.				-Not having the consent signed by the patient. -Not informing the patient of all options and possible complications of proposed treatment or no treatment. -Consent for minor not given by legal guardian. -Allowing a minor to sign for themselves.
Medical history and medications.				-Failure to obtain a full medical history or list of medications. -Failure to recognize a medical issue or medication that requires a medical consult before treatment.
Intra- and extra-oral examinations.				-Failure to recognize abnormalities/lesions present. -Failure to complete a full oral cancer screening examination.
Radiographs.				-Failure to request the proper diagnostic radiographs.
Diagnostic tests				-No diagnostic tests run to identify the source of dental pain.
Utilize critical thinking and scientific knowledge in identifying differential and final diagnoses for the dental emergency				-Failure to match the pain characteristics that brought the patient to the clinic with the source of the pain.

Proper referral for treatment or treatment, including management of acute pain and dental anxiety.				-Treating the wrong tooth/issue. -Referring the patient to the wrong clinic.
Documentation.				Failure to document the case in the chart. -Failure to document all diagnostic tests and Treatment given. -Failure to sign and date the entry.
				*Any critical error results in failure of the competency exam
Overall interpersonal skills, and professionalism				

Type of case: ☐ Moderately difficult ☐ Difficult

☐ Honors ☐ Pass ☐ Fail / ☐ First attempt ☐ Second attempt ☐ Third attempt

Comments:

Instructor's Name (printed): _____

Instructor's Signature: _____

COMPETENCY EXAMINATION # 10

Title: Multiple teeth Exodontia & Alveoloplasty Competency
Course: DSUR 548: Clinical Oral Maxillofacial Surgery/ Oral and Maxillofacial Surgery
Timing: D4
Category: Summative
Contact: Dr. Dwayne Everett
deverett@umaryland.edu

General Description

Description of Assessment

The student selects a patient requiring extraction of at least three adjacent teeth. S/he presents patient to examiner in CPC format- chief complaint, PMH, physical findings. S/he then presents treatment plan, discuss instrumentation and armamentarium, and obtains informed consent. S/he performs a flap (may be an envelope flap), extraction of the teeth requiring removal, alveoloplasty (at minimum the use of a bone file), and interrupted sutures must be placed. S/he then provides proper post-operative medications and instructions to the patient.

Prerequisites

- Successful completion of DSUR 522, 538
- Successful completion of 10 oral surgical procedures that you may get assistance in completing by a faculty member or resident if needed.
- Successful completion of Five graded (pass /fail) surgical procedures that you may not get assistance in completing by a faculty member or resident in order to pass.
 - Four post op follow-up procedures must be completed.

Criteria for Evaluation

Pre-surgical Assessment of Patient

The student selects a patient requiring all of the following:

- Extraction of at least three adjacent teeth
- Laying a full thickness gingival flap
- Alveoloplasty using a bone file, ronguer, and or surgical bur
- Placing sutures

The student presents the patients' medical history, psychological and social history to clinical faculty in CPC format- chief complaint, PMH, physical findings.

The student also presents to clinical faculty the planned treatment discussing instrumentation and armamentarium needed.

The student obtains written informed consent from the patient

Performance of Surgery

The student then may now perform a full thickness flap (may be an envelope flap), extraction of the teeth requiring removal, alveoloplasty (at minimum the use of a bone file), and interrupted sutures safely and without faculty intervention.

Post-Operative Care and Instructions

The student then provides post-operative medications and instructions to the patient.

Setting

Clinic

Type of Competency Examination

Demonstration-clinical performance patient-based (student self-scheduled)

Time Allotted

1 clinic session, followed by post-op examination

Remediation Required Under the Following Circumstances

Two (2) attempts and failures.

Maryland Competency Statements

- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 5d. Apply principles of risk management, including informed consent and appropriate record keeping in patient care.
- 5e. Comply with state and federal regulations related to OSHA and HIPAA, catastrophe preparedness, patient confidentiality, infection control, hazard communications, radiation safety, and medical waste disposal.
- 6a. Assess a patient's medical, psychological and social history as it relates to dental treatment
- 7a. Manage acute pain and dental anxiety.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related periradicular pathology and restore oral health.
- 7j. Perform minor alveolar and mucogingival surgery.
- 7k. Perform an exam of the hard and soft tissues of the head and neck

Grading Information and Remediation

Examiner

Everett
Mostoufi
Agrawal
Malik
Layton
Logmanni

Grading

Clinical faculty grade each presentation using the attached form. Students are assigned a grade of H/P/F. Students must pass all sections. Automatic failure in the examination occurs if the student does not provide a safe and effective plan for treatment, or there is necessity for faculty intervention. Students who do not pass are counseled individually about the reasons for failure.

Critical Errors

See grading rubric for detailed description of critical errors. Critical errors result in automatic failure.

Description of Remediation

If the student fails the exam she/he is given another opportunity to select another patient and challenge a new competency. Failure of two exams requires student to perform at least five more surgical procedures before he/she can again challenge a competency exam. Faculty will review with the student areas identified as problematic on the failed exams.

**MULTIPLE EXTRACTION & ALVEOLOPLASTY
CLINICAL PERFORMANCE EXAMINATION**

Instructor: Check index card for completion of prerequisites before filling out this form.

STUDENT _____ INSTRUCTOR: _____

PATIENT NAME _____ CHART # _____

DESCRIPTION OF DENTAL PROCEDURE _____

1. Presurgical Assessment of Patient:

Including: Past and Present Medical and Significant Social History, Vital Signs, Assessment of Medical Problems, Present Medications, Habits, (including use of drugs, tobacco and alcohol), Indicated Precautions, Patient Consultations, Proposed Surgical Procedure and Proposed Anesthetic Technique.

HONORS PASS FAIL

2. Performance of Surgery:

Including: Patient Management, Patient Positioning, Performance of Anesthetic Technique, Use of Instrumentation, Flap Design and Execution, Performance of Extractions and Alveoloplasty, Closure of Surgical Wound, and Maintenance of Surgical Clean Environment.

HONORS PASS FAIL

3. Postoperative Care and Instructions:

Including: Patient Instructions, Prescription (appropriate drugs and dosage), Follow-up Instructions, Adequacy of Chart Entry.

HONORS PASS FAIL

INSTRUCTOR SIGNATURE: _____ DATE: _____

REASON FOR TERMINATION OF EXAMINATION _____

INSTRUCTOR SIGNATURE _____ DATE _____

OVS PROCEDURE CARD

STUDENT NAME: _____ PROVIDER: _____

<u>Procedure :</u>		<u>Pt. Name & ID #</u>	<u>Date</u>	<u>Faculty Signature</u>
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

01.11083 (4/09)

OMS PROCEDURE CARD

STUDENT NAME: _____ PROVIDER: _____

<u>Graded cases</u>		<u>Pt. Name & ID #</u>	<u>Date</u>	<u>Faculty Signature</u>		
1				H	P	F
2				H	P	F
3				H	P	F
4				H	P	F
5				H	P	F

Multiple Competency: Must be 3 adjacent teeth with flap/alveoplasty and sutures.

Pre-Surgical assessment of Patient	Follow-up Appointments / Faculty Signature
H P F	1) H P F
Performance of Surgery:	2) H P F
H P F	3) H P F
Post-Operative Care and Instructions:	4) H P F
H P F	

Faculty Signature: _____

01.11083 (4/09)

PLEASE TURN IN YOUR
CARD TO ROOM 1324.

COMPETENCY EXAMINATION # 11

Title: Nitrous Oxide Competency Exam
Course: DSUR 548: Clinical Oral-Maxillofacial Surgery/ Oral and Maxillofacial Surgery
Timing: D4
Category: Summative
Contact: Dr. Dwayne Everett
Deverett@umaryland.edu

General Description

Description of Assessment

The student identifies a patient requesting or requiring nitrous oxide and performs oral surgery while administering nitrous oxide.

Pre-requisites

- Successful completion of DSUR 522
- Successful completion of DSUR 538
- Successful completion of Nitrous oxide block assignment- Certification for the administration of nitrous oxide by successfully completing preclinical instruction in

inhalation sedation is provided during Yr II nitrous block.

Nitrous Oxide block assignment procedure consists of:

- A. Students are to review the 8-9 videos on nitrous contraindications, equipment set up, nasal hood, patient set up, administering nitrous, documentation.
 - B. Students then take a 10-15 question quiz on the information from the videos
 - C. Students then are asked to set the nitrous equipment up to ensure they know and understand how to properly set up and administer nitrous oxide.
 - D. Students are then given oral quiz on how to handle different scenarios when administering nitrous.
 - E. Students are then qualified to administer nitrous for the first time on a patient instead of another student. With the understanding that faculty covering is aware and, in a position, to supervise closely.
 - F. After completion of the administration of Nitrous to this patient the student can be signed off as completing Nitrous Block assignment.
- Nitrous oxide experience- Completion of at least 1 nitrous oxide sedation administration procedures in any of the clinics in the school overseen by a faculty member.

Description of Nitrous oxide competency examination:

- The dental student identifies the patient requiring Nitrous Oxide and reviews medical history to identify any contraindications for administration of nitrous Oxide.
- The student presents the patient's medical history to clinical faculty in CPC format- (chief complaint, PMH, Physical findings).
- The student also presents to clinical faculty the planned treatment discussing instrumentation and armamentarium needed.
- The student obtains written informed consent from patient.
- The student takes BP before procedure.
- The student performs oral surgery procedure while administering Nitrous Oxide
- The student then provides post -operative medications and instructions to the patient.
- The student then takes BP again after sedation with Nitrous Oxide.
- The student properly documents the procedure in the patients chart including pre and post procedure blood pressure, 100% O2 for a minimum of 5 minutes prior to administering Nitrous Oxide, the % of Nitrous Oxide the patient was titrated too, and the administration of 100% O2 at the end of the procedure.

Student administers nitrous oxide to patient of his selection in Oral surgery clinic that requires exodontia. He presents patient to examiner in CPC format- chief complaint, PMH, physical findings. He then presents treatment plan, discusses instrumentation and armamentarium, takes vital signs before and after procedure, performs the procedure while administering nitrous oxide, provides proper post-op meds and instructions to patient, and properly documents the procedure in the patient's chart.

Type of examination:

Presentation oral (case-based) to faculty member (student self-scheduled)

Supervision of faculty to ensure proper nitrous oxide monitoring, and review of documentation in the chart.

Examiner

Mostoufi
Everett

Agrawal
Malik
Logmanni
Layton
Garber
Rogers

Grading: Clinical faculty grades each presentation using the attached form. Students are assigned a grade of H/P/F. Automatic failure in the examination occurs if the student does not provide a safe and effective plan for treatment, or there is necessity for faculty intervention. Students who do not pass the case presentation conference are counseled individually about the reasons for failure.

Criteria for evaluation: See attached sheet

Remediation: If the student fails the exam, he is given another opportunity to select another patient and challenge a new competency. Failure of two exams requires student to review nitrous seminar and answer a oral case based exam before he can again challenge a competency exam.

Competencies assessed:

- Assess a patient's medical, psychological and social history as it relates to dental treatment (Maryland Competency #7)
- Perform an exam of the hard and soft tissues of the head and neck (Maryland Competency #10)
- prescribe and administer pharmacologic agents for acute pain or dental anxiety; (Maryland Competency #15).

Contact person: Dr. Dwayne Everett

Procedure Card – N2O Sedation

Student name: _____

Provider #: _____

Procedure		Patient name and ID #	Date	Faculty Signature
1. N ₂ O Block Assignment				
2. N ₂ O Experience				
3. N ₂ O Competency				

Patient selection: (circle appropriate)

Honors Pass Fail

Sedation Performance: (circle appropriate)

Honors Pass Fail

COMPETENCY EXAMINATION # 12

Title: Oral Surgery Case Presentation Competency Examination
Course: DSUR 548: Clinical Oral-Maxillofacial Surgery/ Oral and Maxillofacial Surgery
Timing: D4
Category: Summative
Contact: Dr. Dwayne Everett
Deverett@umaryland.edu

General Description

Description of Assessment Case presentations are given in form of a power point 5-10 minutes in length. It is intended to be a critical analysis of the student's overall management of a patient, complicated medical history that effects treatment, or a complication that occurred during a surgical procedure and how it was handled. The presentation must cover a patient that was treated in the OMFS clinic.

Prerequisites

Successful completion of DSUR 522 and DSUR 538

Criteria for Evaluation

The student is expected to present the case in form of a power point and evaluate the case they are presenting, considering acceptable alternatives to the treatment rendered. In addition, the student has to defend the choices made for treatment. Students are assessed as to their ability to organize and clearly present case related data and critically evaluate the data and treatment provided. The student must also demonstrate thorough knowledge and understanding of both the didactic and clinical factors related to the case presented.

See grading rubric for criteria for evaluation.

Setting

Clinic operator, oral surgery clinic

Type of Competency Examination

Presentation oral (case-based) to faculty member (student self-scheduled)

Time Allotted

20 minutes

Remediation Required Under the Following Circumstances

Two (2) attempts and failures

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 2a. Utilize and apply ethical and legal reasoning in the provision of dental care.
- 3c. Communicate with a diverse population of patients.
- 6a. Assess a patient's medical, psychological and social history as it relates to dental treatment.
- 7a. Manage acute pain and dental anxiety.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related periradicular pathology and restore oral health.
- 7g. Manage and treat odontogenic infections.
- 7k. Perform an exam of the hard and soft tissues of the head and neck
- 7j. Perform minor alveolar and mucogingival surgery.

Grading Information and Remediation

Examiner

Dr. Mostoufi
Dr. Everett
Dr. Hashimoto
Dr. Agrawal
Dr. Malik
Dr. Logmanni
Dr. Layton
Dr. Garber
Dr. Rogers

Grading

Clinical faculty grades each presentation pass/ fail using the attached form. Automatic failure in the examination occurs if the student does not provide adequate or proper information on the case that they are presenting as determined by the clinical faculty.

Critical Errors

See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

Students who do not pass the case presentation conference are counseled individually about the reasons for failure. They can challenge the exam again as soon as they have completed an acceptable case.

Grading Form for Student Presentations

STUDENT

NAME: _____ **DATE:** _____ **BOX#:** _____

PATIENT

NAME: _____ **AXIUM#:** _____

The student should cover the following areas in the case presentation of the patient:

1. Medical History:	PASS	FAIL	CRITICAL ERRORS*
Utilizing critical thinking and scientific knowledge, reviews medications and their implications including potential for problems with dental anesthetics, vasoconstrictors, stress, surgery, etc.			-The student did not recognize a medication that may cause a complication when treating a patient.
Utilizing critical thinking and scientific knowledge, reviews patient's medical, psychological and social history as it relates to dental treatment			-The student did not recognize a medical issue that may cause a complication when treating a patient
Reviews findings of intra and extra-oral exam			-The student did not recognize hard or soft tissue dental findings
On-going medical problems and implications as above.			-The student did not recognize a medical issue that may cause a complication when treating a patient
2. Local Anesthesia/Sedation:			
Utilizing critical thinking and scientific knowledge, explains selection of local anesthesia agent. Provides assessment of management of patient's pain and anxiety.			-The student did not recognize the need to restrict the use of vasoconstrictors is local anesthetic.

Techniques to be used and familiarity with anatomy and innervation of structures involved.			-The student did not recognize the proper anesthesia techniques that must be used to anesthetize the area for planned oral surgery
Dosage of local anesthetic for this patient and awareness of any constraints.			-The student did not know the maximum dose of the different local anesthetics
3. Procedure Selection:			
Selection of surgical procedure(s) performed at this appointment and alternatives to that procedure, includes diagnostics leading to rational for surgical extraction.			-The student could not provide the proper diagnostic testing and examination that provided a diagnosis leading to the need for extraction.
Description of procedure performed including instrumentation used and indications for use.			-Use of the wrong instrumentation for the procedure described.
Potential problems or complications with the procedure.			-Could not identify possible complications for the procedure the patient was to receive.
Discussion of any problems or complications encountered and how they were resolved.			-When complications occur the student could not identify alternative treatments to resolve the problems.
4. Post Operative Instructions:			
Appropriate instructions given			-Written and verbal post op instructions were not provided or documented
Appropriate medications and dosages prescribed and rationale provided for each medication, including consideration of abuse potential			-Medications were prescribed that could interact with other medications being

			administered to the patient. -Over prescribing dosage or amount of narcotic medication.
5. Patient Disposition/ Outcomes of Treatment			
Dismissed?			
Follow-up?			Did not recognize the need for a follow up appointment. When needed, no follow up appointment was planned or documented
If further surgery or other procedures, when?			If further surgery is needed there is no recognition or documentation
			* Critical Error: failure in any of the above categories results in failure of the assessment.
6. Organization of the presentation.			

Please assign the student from one to twenty points for each category. Include in the last category a grade for organization of the presentation. Was it well organized and presented in a logical and rational manner?

INSTRUCTOR'S NAME (PRINT): _____

SIGNATURE: _____

COMPETENCY EXAMINATION #13

Title: Diagnostic Competency Exam
Course: Endo 538: Endodontics
Timing: D3
Category: Formative
Contact: Dr. Ricardo Bernardes
rbernardes@umaryland.edu

General Description

Description of Assessment

This is a patient-based oral examination. The student gathers information by completing a clinical and radiographic endodontic examination and recording the findings in the patient's electronic dental record. After assessing the findings accurate pulpal and periapical endodontic diagnoses can be made using the most current American Association of Endodontists (AAE) terminology. The first patient is examined as a ***diagnostic experience*** to help the student become familiar with current AAE terminology. The ***diagnostic experience*** may be completed any time in the D3 year before the competency examination and completed on as many patients as needed to prepare for the competency examination. The procedure code for the ***Endo Diagnostic Experience*** is **D0120.5**. For the ***diagnostic competency***, a second patient is examined. After assessing the findings accurate pulpal and periapical endodontic diagnoses can be made using the most current American Association of Endodontists (AAE) terminology. The procedure code for the ***Endo Diagnostic Competency*** is **D0120.4**. The ***diagnostic experience*** and ***diagnostic competency*** are assessed using the same ten questions listed below.

Prerequisites

Successful completion of all the following:

- a. Endo 521 (D2 year)
- b. Completion of the diagnosis exercise in the ENDO 538 course (D3 year)
- c. Diagnostic experience (D3 year)

Criteria for Evaluation

- a. Correct pulpal diagnosis provided.
- b. Correct periapical diagnosis provided.
- c. Correct, current AAE terminology used.
- d. Correctly answered clinical judgment questions.

Setting

Predoctoral endodontics clinic

Type of Competency Examination

Patient-based

Time Allotted

30 minutes

Remediation Required Under the Following Circumstances

Failure to attain a minimum score of 70 = C after one (1) or more attempts.

Maryland Competency Statements

- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 6c. Order, obtain, and interpret appropriate radiographic/digital images.
- 7f. Prevent, diagnose, manage, and treat pulpal disease, and related periapical pathology and restore oral health.

Grading Information and Remediation**Examiners**

Designated, calibrated full-time endodontics faculty

Grading

The examination is graded in Axium with the S-A-N-U scale utilized at the University of Maryland School of Dentistry. The diagnostic competency grade is worth 30% of the final grade for the ENDO 538 course, which is reported to academic affairs as a letter grade

The diagnostic competency examination has ten (10) questions worth ten (10) points each. There is only one correct answer for each question. Partial credit for a question is not given. A total score of 70 must be achieved to pass the competency examination. Points are awarded accordingly:

	Examination Questions	Correct answer S/A	Incorrect answer N/U
1	Which is the correct pulpal diagnosis for this patient?	10	0
2	Correct terminology used for pulpal diagnosis? (Y/N)	10	0
3	Which is the correct periapical diagnosis?	10	0
4	Correct terminology used for periapical diagnosis? (Y/N)	10	0
5	Based upon the (correct) diagnoses, which endodontic treatment plan is <u>recommended</u> for this patient?	10	0
6	Which is your next step if you cannot reproduce the patient's chief complaint?	10	0
7	Which is your next step if the clinical findings do not support your radiographic interpretation?	10	0
8	Based upon the (correct) diagnoses, is one-visit endodontics recommended for this patient?	10	0
9	Based on the (correct) diagnoses, is this patient at risk for post-operative pain and/or swelling?	10	0
10	Which is the expected healing outcome based on the (correct) pulpal and periapical diagnoses? (Proper AAE terminology must be used in answering this question to attain credit.)	10	0

FINAL GRADE EQUIVALENTS		
Axiom Grade	Numerical Grade	Letter Grade
S (superior)	90 or 100	A
A (acceptable)	80	B
N (needs improvement)	70	C
U (unacceptable)	60 or below	F

Critical Errors

Each question in the *diagnostic competency* examination is equally weighted with no critical errors identified.

Description of Remediation

The *diagnostic competency* is remediated with designated, calibrated endodontic faculty only. A student may remediate the examination until a passing grade is achieved. At the discretion of the faculty examiner, a student may be assigned additional short exercises by the course director if two (2) examination failures occur. These short exercises are designed to ensure the student's understanding of the material before re-examination. A student may request a different faculty examiner for any reason, at any time. There is no penalty for requesting a different faculty examiner. The final grade on any remediated diagnostic competency examination is capped at 70 points regardless of the number of questions answered correctly.

COMPETENCY EXAMINATION #14

Title: Informed Consent
Course: Endo 548 Clinical Endodontics
Timing: D4
Category: Summative
Contact: Dr. Frederico Martinho
(fmartinho@umaryland.edu;
Dr. Patricia Tordik
(ptordik@umaryland.edu)

General Description

Description of Assessment

The *informed consent competency* examination is an electronic evaluation based on an endodontic faculty member listening to a student consent to a patient for nonsurgical root canal treatment. Consent is not merely a patient signature whether captured electronically, or on a piece of paper. The student must incorporate all components of the informed consent process including describing all treatment options and expected outcomes, and disclosing known risks and benefits to the patient, including costs, if not previously discussed with the patient. Of utmost importance is allowing the patient to ask questions, and answering all questions or seeking the opinion of experts if the answer is unknown to the provider. The goal is for the patient to have an opportunity to participate in their own healthcare decisions. The first patient is examined as an *informed consent experience*. The *informed consent experience* may be completed anytime before the competency examination and completed on as many patients as needed to prepare for the competency examination. The procedure code for the *Endo Informed Consent Experience* is **D0120.7**. For the *informed consent competency*, a second patient is examined. The procedure code for the *Endo Informed Consent Competency* is **D0120.6**. The *informed consent experience* and *informed consent competency* are assessed using the same ten questions listed below.

Prerequisites

Successful completion of all the following:

- a. Endo 538
- b. At least one nonsurgical root canal treatment experience
- c. Informed consent experience

Criteria for Evaluation

Criteria for evaluation are contained in the *Informed Consent* competency examination rubric.

Setting

The setting for the *informed consent competency* examination is the predoctoral endodontics clinic. It is preferred that this competency be challenged during the simple case competency. Students working in the predoctoral endodontics clinic are never permitted to consent another student's or resident's patient for treatment, including when challenging the *informed consent competency* examination. No exceptions will be granted to this rule. The *informed consent competency* is never to be performed under endodontic resident supervision nor are residents permitted to grade the competency. If a student seeks a resident and the resident grades the competency examination, the competency will be converted to an experience and the competency examination grade will be voided. **Students: NEVER ask a resident to grade your competency examination!**

Type of Competency Examination

Demonstration of clinical performance

Time Allotted

One (1) clinic session

Remediation Required Under the Following Circumstances

Failure to attain a minimum score of 70 = C after one (1) or more attempts.

Maryland Competency Statements

5d. Apply principles of risk management, including informed consent and appropriate record-keeping in patient care.

Grading Information and Remediation

Examiners

Designated full-time, calibrated endodontic faculty.

Grading

The examination is graded in Axium with the S-A-N-U scale utilized at the University of Maryland School of Dentistry. The final ENDO 548 grade is reported to academic affairs as a letter grade.

The examination contains ten (10) questions worth ten (10) points each. There is only one correct answer for each question. Partial credit for a question is not given. A total score of 70 must be achieved to pass the competency examination. Points are awarded according to the following rubric:

	Examination Questions	Correct answer	Incorrect answer
1	Was the endodontic diagnosis explained to the patient using layman's terms?	10	0
2	Were only applicable treatment options presented to the patient? (Patient cannot consent to malpractice)	10	0
3	Were the risks and benefits of each treatment option presented to the patient? (In the event of a procedural error and/or complication, referral to PG Endo, adjunct procedures, finances, and referral process must be explained to the patient)	10	0
4	Was all necessary adjunct treatment was explained to the patient? (periodontal treatment, crown lengthening, endodontic surgery, post space, or extraction if the tooth is found to be cracked)	10	0
5	Was the prognosis of the proposed treatment plan explained?	10	0
6	Was the patient provided opportunity to ask questions?	10	0
7	Were all questions answered by the student or faculty to	10	0

	the patient's satisfaction?		
8	Were questions regarding fees appropriately addressed by the administration, if applicable, prior to the completing the consent process?	10	0
9	Did the student acted professionally and minimize distractions including cell phones, "selfies", or other unanticipated distractions?	10	0
10	Does the dental record entry reflect that the informed consent process is complete including all required signatures?	10	0

GRADE EQUIVALENTS		
Axiom Grade	Numerical Grade	Letter Grade
S (superior)	90 or 100	A
A (acceptable)	80	B
N (needs improvement)	70	C
U (unacceptable)	<70	F

Critical Errors

Each question in the *Informed Consent* competency examination is equally weighted with no critical errors identified.

Description of Remediation

The *Informed Consent* competency is remediated with designated endodontic faculty only. A student may remediate the examination with designated endodontic faculty until a passing grade is achieved. At the discretion of the faculty examiner, a student may be assigned additional short exercises by the course director if two (2) examination failures occur. These short exercises are designed to ensure the student's understanding of the material before re-examination. A student may request a different faculty examiner for any reason, at any time.

There is no penalty for requesting a different faculty examiner.

The final grade on any remediated ***Informed Consent*** competency examination is capped at 70 points regardless of the number of questions answered correctly.

COMPETENCY EXAMINATION #15

Title: Simple Case
Course: Endo 548 Clinical Endodontics
Timing: D4
Category: Summative
Contact: Dr. Frederico Martinho (fmartinho@umaryland.edu);
Dr. Patricia Tordik (ptordik@umaryland.edu)

General Description

Description of Assessment

The student must work independently utilizing critical thinking and foundational scientific knowledge to make treatment decisions for root canal treatment in a clinical, patient-based setting. Case selection is completed by first assessing treatment difficulty using the American Association of Endodontists (AAE) Case Difficulty Assessment app (EndoCase) or form. After scoring difficulty level, the student presents the results to a fulltime endodontic faculty member for review. If approved, the student may then appoint the patient for treatment in the predoctoral endodontics clinic and challenge the competency examination.

Prerequisites

- Successful completion of the Endo 538 course
- Successful completion of both the simple case and multi-canal case clinical experiences (Exceptions can be made only by a fulltime endodontic faculty member on a case-by case basis to allow a student to challenge the competency prior to completion of the multi-canal experience.)

Criteria for Evaluation

Criteria for evaluation are contained in the *Simple Case* competency examination rubric.

Setting

The setting for the *Simple Case* competency is the predoctoral endodontics clinic. It is recommended that the *Informed Consent*, *Simple Case*, and *Endodontic Recall* competency examinations all be completed on the same patient. The *Simple Case* competency may never be

performed under endodontic resident supervision nor are residents permitted to grade the competency. If a student seeks a resident and the resident grades the competency examination, the competency will be converted to an experience and the competency examination grade will be voided. **Students: NEVER ask a resident to grade your competency examination!**

Type of Competency Examination

Demonstration of clinical performance

Time Allotted

One (1) or more clinic sessions

Remediation Required Under the Following Circumstances

One (1) or more attempt(s) and failure(s)

Maryland Competency Statements

1b. Utilize critical thinking and scientific knowledge in decision-making processes involved in patient care.

7f. Prevent, diagnose , manage and treat pulpal disease, and related periapical pathology and restore health.

7g. Manage odontogenic infections.

Grading Information and Remediation

Examiner

Designated fulltime endodontic faculty

Grading

A qualitative grade is determined based on successful patient management. When challenging a *Simple Case* competency examination, the student must also demonstrate knowledge of proper diagnostic terminology and the informed consent process. The *Simple Case* competency grade is reported to the course director and academic affairs after converting the Axiom grade to a letter grade. The grading rubrics for general questions and treatment specific questions follow.

General Questions		
Criteria	Pass	Fail
Patient History Review	Appropriately reviews and interprets patient's chief complaint, medical, dental, and social history	Fails to appropriately review and interpret patient's chief complaint, medical, dental, and social history
Preparedness	Displays knowledge of planned procedure; anticipates and organizes appropriate armamentarium	Does not display knowledge of planned procedure; does not anticipate and/or organize appropriate armamentarium
*Informed Consent	Provides the following required elements for documentation of the informed consent discussion: (1) the nature of the procedure, (2) the risks and benefits and the procedure, (3) reasonable alternatives, (4) risks and benefits of alternatives, and assesses the patient's understanding of elements 1 through 4, including allowing for and answering all questions	Fails to provide the following required elements for documentation of the informed consent discussion: (1) the nature of the procedure, (2) the risks and benefits and the procedure, (3) reasonable alternatives, (4) risks and benefits of alternatives; fails to assess the patient's understanding of elements 1 through 4, including not allowing for, or answering all questions
Infection Control	Maintains infection control standards according to UMD protocols, including but not limited to personal protective equipment (PPE), dental unit set-up/breakdown, sharps, and biohazard disposal	Fails to maintain infection control standards according to UMD protocols, including but not limited to personal protective equipment (PPE), dental unit set-up/breakdown, sharps, and biohazard disposal
Communication with Faculty, Staff and Student Assistants	Effectively conveys and exchanges information with faculty and staff; appropriately interacts with and directs members of the oral healthcare team, including predoctoral student assistants	Fails to effectively convey and exchange information with faculty and staff; inappropriately interacts with and directs members of the oral healthcare team, including student assistants. Seeks advice from, or elicits help performing any aspect of the procedure from a predoctoral student assistant
Professionalism	Complies with the UMD SOD Professionalism Policy	Fails to comply with the UMD SOD Professionalism Policy
Patient Management	Provides person-centered care including timely identification and prioritization of urgent dental needs; initiates treatment in the appropriate order; begins treatment only with an instructor "start" and follows instructions; effectively manages patient behavior; communicates in a non-judgmental manner including active listening	Fails to provide person-centered care including timely identification and prioritization of urgent dental needs; fails to initiate treatment in the appropriate order; begins treatment without an instructor "start" and/or does not follow instructions; ineffectively manages patient behavior; does not communicate well with the patient; does not listen to the patient
Record/Chart Documentation	Maintains contemporaneous dental records with appropriate faculty approvals, including but not limited to notes, appropriate coding, review of options and fees associated with treatment	Fails to maintain contemporaneous dental records with appropriate faculty approvals, including but not limited to notes, appropriate coding, review of options and fees associated with treatment
Faculty Intervention (including for anesthesia)	No faculty Intervention	ANY faculty intervention
Student Self-Assessment	Assessed accurately, missed one minor, multiple minor, or one major error	Missed multiple major or one critical error

TREATMENT SPECIFIC QUESTIONS				
Criteria	Superior (3)	Acceptable (2)	Needs Improvement (1)	Unacceptable (0)
Clinical Examination	<ul style="list-style-type: none"> No Errors Patient properly assessed 	<ul style="list-style-type: none"> One or more minor error(s) in interpretation or execution of clinical examination 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of clinical examination Vital signs not taken or incorrectly recorded Chief Complaint, extraoral exam, intraoral exam, PMH, and/or PDH not reviewed 	<ul style="list-style-type: none"> Critical error in interpretation or execution of diagnostic tests: Missed signs of sepsis or severe infection* Other (Specified by Faculty only)*
Diagnosis/Terminology	<ul style="list-style-type: none"> No Errors Correct pulpal and periapical diagnoses made Correct terminology used 	<ul style="list-style-type: none"> One or more minor error(s) in interpretation or execution of diagnostic tests: EPT, temperature, percussion, palpation, mobility, transillumination, and/or periodontal assessment Pulpal and periapical diagnosis not made at each appointment 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of diagnostic tests/terminology Incorrect pulpal and/or periapical diagnosis made 	<ul style="list-style-type: none"> Critical error in interpretation or execution of diagnostic terminology: Incorrect diagnosis led to improper treatment plan including wrong tooth treated * Other (Specified by Faculty only)*
Rubber Dam Isolation	<ul style="list-style-type: none"> No Errors Rubber dam correctly applied Suitable retainer (clamp) chosen and placed No saliva or irrigant leakage around margins 	<ul style="list-style-type: none"> One or more minor error(s) in interpretation or execution of rubber dam isolation Initial errors that were subsequently corrected: retainer (clamp) selection, hole placement, extent of rubber dam over nose and chin 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of rubber dam isolation Retainer (clamp) not secured with floss Errors that compromised good isolation that were NOT corrected until instructor advisement: retainer (clamp) selection, hole placement, extent of rubber dam over nose and chin, saliva leakage around teeth, rubber dam tears 	<ul style="list-style-type: none"> Critical error in interpretation or execution of rubber dam isolation: Failure to use a rubber dam for any reason* Wrong tooth isolated and treated* Patient aspirated retainer (clamp)* Other (Specified by Faculty only)*
Access Preparation	<ul style="list-style-type: none"> No Errors All caries and previous restorations removed Proper outline form All canal orifices located-straight line access Pulp chamber completely unroofed Pulpal floor not gouged No perforations 	<ul style="list-style-type: none"> One or more minor error(s) in interpretation or execution of ideal access and locating canal(s) Access opening extends ≤ 1 mm beyond ideal outline form Access opening does not allow straight-line access to one or more canal orifices Access opening does not allow for removal of pulp horns 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of ideal access and locating canal(s) Access opening extends >1 mm beyond ideal outline form, but is >1 mm from incisal edge Access opening leaves unsupported tooth structure prone to fracture Failure to locate all canal orifices Caries not excavated 	<ul style="list-style-type: none"> Critical error in interpretation or execution of ideal access and locating canal(s): Perforation that results in unfavorable prognosis or tooth extraction* Other (Specified by Faculty only)*
Working Length Determination	<ul style="list-style-type: none"> No Errors Proper use of Electronic Apex Locator (EAL) Patency/WL radiograph exposed 	<ul style="list-style-type: none"> One or more minor error(s) in interpretation or execution of working length determination 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of working length determination 	<ul style="list-style-type: none"> Critical error in interpretation or execution of working length determination: Working length not verified by

		<ul style="list-style-type: none"> Minor error(s) in interpretation or execution of apex locator use Working length within ± 1 mm of correct 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of apex locator use Working length $> \pm 1.0$ mm of correct Patency or working length not verified by both the apex locator and radiograph 	<ul style="list-style-type: none"> either radiograph or apex locator* Other (Specified by Faculty only)*
Radiographic Recording/Interpretation	<ul style="list-style-type: none"> No Errors Adherence to ALARA principle No more than one-two templates utilized 	<ul style="list-style-type: none"> One or more minor error(s) in interpretation or execution of radiographic recording or interpretation 1-2 radiograph retake(s) 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of radiographic recording or interpretation Instructor intervention after 2 failed attempts to take a diagnostic radiograph 	<ul style="list-style-type: none"> Critical error in radiographic recording or interpretation: >2 templates for radiographs used without a valid reason (switching instructor mid-treatment is not a valid reason for excess radiographs)* No radiographic images taken * Other (Specified by Faculty only)*
Root Canal Instrumentation	<ul style="list-style-type: none"> No Errors Canal walls smooth and minimally tapered Master apical file (MAF) sized appropriately Length and canal curvature maintained No procedural errors including ledges, transportations, zips, apical or root perforations 	<ul style="list-style-type: none"> One or more minor error(s) in interpretation or execution of root canal preparation Student is prepared and successfully instruments canal(s) but has some technique questions Procedural error(s) including canal transportation or separated instrument that <u>does not affect the prognosis</u> 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of root canal preparation Student requires extensive review of root canal instrumentation and/or instructor intervenes to demonstrate technique Procedural error(s) including perforation, transportation, separated instrument that render the prognosis questionable Failure to use proper irrigation protocol Improper use of hand or rotary files 	<ul style="list-style-type: none"> Critical error in interpretation or execution of root canal preparation: Sodium hypochlorite accident* Over instrumentation harming surrounding anatomy * Procedural error(s) including perforation, transportation, separated instrument that render the prognosis unfavorable* Calcium hydroxide overfill resulting in tissue necrosis or paresthesia* Irrigation not used* Other (Specified by Faculty only)*
Master Point Fit	<ul style="list-style-type: none"> No Errors Master cone exhibits tug back at apical third Master cone fits to ± 0.5 mm 	<ul style="list-style-type: none"> One or more minor error(s) in interpretation or execution of master point fit Master point fit within ± 1 mm of correct 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of master point fit Master point fit $> \pm 1.0$ mm of correct 	<ul style="list-style-type: none"> No critical errors yet identified Other (Specified by Faculty only)*
Obturation	<ul style="list-style-type: none"> No Errors Gutta percha extends to correct working length Excess gutta percha and sealer removed from pulp chamber Final radiograph recorded after removal of rubber dam isolation (including retainer/clamp) Access properly temporized including orifice 	<ul style="list-style-type: none"> One or more minor error(s) in interpretation or execution of obturation concepts or techniques Obturation length within ± 1 mm of correct Sealer extends ≤ 2 mm beyond radiographic apex ≥ 1 void(s) in coronal obturation 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of obturation concepts or techniques Obturation $> \pm 1.0$ mm of correct Sealer extends > 2 mm, but < 5 mm beyond radiographic apex ≥ 1 void(s) in middle or apical obturation requiring retreatment 	<ul style="list-style-type: none"> Critical error in interpretation or execution of obturation: Extrusion of obturation material that causes harm to the patient, impinges on critical anatomical structures, or requires surgical intervention* Failure to use sealer*

	<ul style="list-style-type: none"> barriers if applicable No voids 	<ul style="list-style-type: none"> Obturation material not removed from pulp chamber 	<ul style="list-style-type: none"> Final radiograph taken with rubber dam in place and/or tooth not temporized 	<ul style="list-style-type: none"> Other (Specified by Faculty only)*
Adequate Pain/Anxiety Control	<ul style="list-style-type: none"> No Errors Patient empathy exhibited and everything possible was done to give the patient a pain-free, pleasant experience Profound local anesthesia provided including pulpal anesthesia, when indicated 	<ul style="list-style-type: none"> Minor error(s) in interpretation or execution of patient pain/anxiety management Pain/anxiety managed with minor faculty assistance 	<ul style="list-style-type: none"> One or more major errors in interpretation or execution of patient pain/anxiety management Treatment started before patient was anesthetized Pain/anxiety managed with significant faculty assistance-example includes student did not confirm pulpal anesthesia 	<ul style="list-style-type: none"> Critical error in interpretation or execution of patient pain/anxiety management: Pain/anxiety willfully ignored, unmanaged or mismanaged by student*

The Axium grade card contains ten (10) general questions graded as Pass/Fail and ten (10) treatment specific questions graded using the S-A-N-U scale as follows:

ENDODONTICS TREATMENT COMPETENCY AXIUM GRADECARD

General Questions

1. Patient History Review	2-Pass	0-Fail
Comment if Fail:		
2. Preparedness	2-Pass	0-Fail
Comment if Fail:		
3. Informed Consent	2-Pass	0-Fail
Comment if Fail:		
4. Infection Control	2-Pass	0-Fail
Comment if Fail:		
5. Communication	2-Pass	0-Fail
Comment if Fail:		
6. Professionalism	2-Pass	0-Fail
Comment if Fail:		
7. Patient Management	2-Pass	0-Fail
Comment if Fail:		
8. Record/Chart Documentation	2-Pass	0-Fail
Comment if Fail:		
9. Faculty Intervention	2-Pass	0-Fail
Comment if Fail:		
10. Student Self-Assessment	2-Pass	0-Fail
Comment if Fail:		

Treatment Specific Questions

1. Clinical Examination
<ul style="list-style-type: none"> S = 3-No Error A = 2-Minor Error(s) N = 1-Major Error(s) U = 0-Critical Error 99- non-Applicable
Comment if major or critical error:
2. Diagnosis/Terminology
<ul style="list-style-type: none"> S = 3-No Error A = 2-Minor Error(s)

- N = 1-Major Error(s)
 - U = 0-Critical Error
 - 99- non-Applicable
- Comment if major or critical error:

- 3. Rubber Dam Isolation**
- S = 3-No Error
 - A = 2-Minor Error(s)
 - N = 1-Major Error(s)
 - U = 0-Critical Error
 - 99- non-Applicable
- Comment if major or critical error:

- 4. Access Preparation**
- S = 3-No Error
 - A = 2-Minor Error(s)
 - N = 1-Major Error(s)
 - U = 0-Critical Error
 - 99- non-Applicable
- Comment if major or critical error:

- 5. Working Length Determination**
- S = 3-No Error
 - A = 2-Minor Error(s)
 - N = 1-Major Error(s)
 - U = 0-Critical Error
 - 99- non-Applicable
- Comment if major or critical error:

- 6. Radiographic Recording/Interpretation**
- S = 3-No Error
 - A = 2-Minor Error(s)
 - N = 1-Major Error(s)
 - U = 0-Critical Error
 - 99- non-Applicable
- Comment if major or critical error:

- 7. Root Canal Instrumentation**

- S = 3-No Error
- A = 2-Minor Error(s)
- N = 1-Major Error(s)
- U = 0-Critical Error
- 99- non-Applicable

Comment if major or critical error:

8. Master Point Fit

- S = 3-No Error
- A = 2-Minor Error(s)
- N = 1-Major Error(s)
- U = 0-Critical Error
- 99- non-Applicable

Comment if major or critical error:

9. Obturation

- S = 3-No Error
- A = 2-Minor Error(s)
- N = 1-Major Error(s)
- U = 0-Critical Error
- 99- non-Applicable

Comment if major or critical error:

10. Adequate Pain/Anxiety Control

- S = 3-No Error
- A = 2-Minor Error(s)
- N = 1-Major Error(s)
- U = 0-Critical Error
- 99- non-Applicable

Comment if major or critical error:

Each Simple Case competency is graded on a 100-point scale. A maximum of twenty (20) points can be earned from the **General Questions** performance evaluation. A maximum of eighty (80) points can be earned from the **Treatment Specific Questions** performance evaluation. Each point earned in the **Treatment Specific Questions** performance evaluation is multiplied by 2.67, for a maximum of eight (8) points per question.

In addition to the grading scheme described above, the following criteria must also be satisfied for a case to be considered a competency:

- All **General Questions** must receive a PASS grade.
- Zero faculty intervention including anesthesia.
- Grades are calculated according to the formula:

[Total Raw Score (Treatment Specific Questions) x 2.67] + Total Raw Score (General Questions) = Final Numeric Grade

$$(A \times 2.67) + B = C$$

Table 1. Sample grades based on the formula.

Total Raw Score (A)	A x 2.67	Maximum B	Final Numeric Grade (C)	Final Letter Grade	Axiom Grade
30	80	20	100	A	S
29	77.43	20	97.43	A	S
28	74.76	20	94.76	A	S
27	72.09	20	92.09	A	S
26	69.42	20	89.42	B	A
25	66.75	20	86.75	B	A
24	64.08	20	84.08	B	A
23	61.41	20	81.41	B	A
22	58.74	20	78.74	C	N
21	56.07	20	76.07	C	N
20	53.40	20	73.40	C	N
19	51.30	20	71.30	C	N
18	48.06	20	68.06	F	U

Critical Errors

The **Simple Case** competency examination grading rubric contains a description of critical errors

which are highlighted and noted with an asterisk*. Committing one (1) or more critical errors results in automatic competency failure. A score of “U”/zero (0) in any of the treatment specific questions will result in an automatic grade reduction, which equates to 69/100 total points achievable = a grade of “F” (failure). Subsequent “U”/zero (0) scores will further reduce the grade. If the simple case can be completed, the student may receive credit for their work as an experience. Whether or not critical error(s) result in experience credit is dependent upon the clinical scenario and is at the discretion of the attending endodontic faculty member.

Description of Remediation

The *Simple Case* competency is remediated with designated endodontic faculty only. A student may remediate the examination with designated endodontic faculty until a passing grade is achieved. At the discretion of the faculty examiner, a student may be assigned additional short exercises by the course director if two (2) examination failures occur. These short exercises will be designed only to ensure student understanding of the material prior to re-examination. A student may request a different faculty examiner for any reason at any time. There is no penalty for requesting a different faculty examiner. The final grade on any remediated *Simple Case* competency examination is capped at 70 points regardless of subsequent performance.

COMPETENCY EXAMINATION #16

Title: Endodontics Recall Competency Examination
Course: Endo 548: Clinical Endodontics
Timing: D4
Category: Summative
Contact: Dr. Martinho (fmartinho@umaryland.edu);
Dr. Tordik (ptordik@umaryland.edu)

General Description

Description of Assessment

To determine the effectiveness of nonsurgical root canal treatment through assessment of treatment outcomes.

Prerequisites

- Students must have passed Endo 538
- Successful completion of the *Endodontics Recall* clinical experience

Criteria for Evaluation

Criteria for evaluation are contained in the *Endodontics Recall* competency examination rubric.

Setting

The preferred setting for the *Endodontics Recall* competency is the predoctoral endodontics clinic, however due to time constraints, designated fulltime endodontic faculty may grant permission for a student to examine the patient in the postgraduate endodontics clinic under faculty supervision or in the general practice clinic under faculty supervision. The *Endodontics Recall* competency is never to be performed under endodontic resident supervision nor are residents permitted to grade the competency. If a student seeks a resident and the resident grades the competency examination, the competency will be converted to an experience and the competency examination grade will be voided. **Students: NEVER ask a resident to grade your competency examination!**

Type of Competency Examination

Demonstration of clinical performance

Time Allotted

One (1) clinic session

Remediation Required Under the Following Circumstances

Failure to attain a minimum score of 70 = C after one (1) or more attempts.

Maryland Competency Statements

- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 4b. Provide appropriate prevention, intervention, and educational strategies
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related periapical pathology and restore oral health.

Grading Information and Remediation

Examiners

Designated fulltime endodontic faculty.

Grading

Qualitative Grade based on *Endodontics Recall* competency examination grading rubric.

The examination is graded in Axium with the S-A-N-U scale utilized at the University of Maryland School of Dentistry. The grade is reported to the course director and academic affairs after converting the Axium grade to a letter grade. The conversion from the S-A-N-U scale to numerical and letter grades is as follows:

GRADE EQUIVALENTS		
Axium Grade	Numerical Grade	Letter Grade
S (superior)	90 or 100	A
A (acceptable)	80	B
N (needs improvement)	70	C
U (unacceptable)	<70	F

The *Endodontics Recall* competency examination contains is comprised of ten (10) questions worth ten (10) points each. There is only one correct answer for each question. Partial credit for a question is not given. A total score of 70 must be achieved to pass the competency examination. Points are awarded according to the following rubric:

	Examination Questions	Correct answer (Y)	Incorrect answer (N)
1	Which is the correct pulpal diagnosis for this patient?	10	0
2	Correct terminology used for pulpal diagnosis?	10	0
3	Which is the correct periapical diagnosis?	10	0
4	Correct terminology used for periapical diagnosis?	10	0
5	Based upon the (correct) diagnoses, which endodontic treatment plan is <u>recommended</u> for this patient?	10	0
6	Which is your next step if you cannot reproduce the patient's chief complaint?	10	0
7	Clinical examination is complete with all applicable testing reported (pulp sensitivity tests, periodontal probings, mobility, percussion, palpation, transillumination)	10	0
8	Appropriate number of radiographs of diagnostic quality were taken to complete the assessment?	10	0

9	Which is your next step if the root canal treated tooth does not have a final restoration in place?	10	0
10	Which term best describes the present condition of the original endodontic pathosis? (Proper AAE terminology must be used in answering this question to attain credit: healed, healing, not healed.)	10	0

Critical Errors

Each question in the *Endodontics Recall* competency examination is weighted equivalently.

Description of Remediation

The *Endodontics Recall* competency is remediated with designated endodontic faculty only. A student may remediate the examination with designated endodontic faculty until a passing grade is achieved. At the discretion of the faculty examiner, a student may be assigned additional short exercises by the course director if two (2) examination failures occur. These short exercises will be designed only to ensure student understanding of the material prior to re-examination. A student may request a different faculty examiner for any reason at any time. There is no penalty for requesting a different faculty examiner.

The final grade on any remediated *Endodontics Recall* competency examination is capped at 70 points regardless of the number of questions answered correctly. The grade will be recorded in Axium as “N” and reported to the course director as a “70”.

COMPETENCY EXAMINATION # 17

2024_2025

Title: Computer Case-based Competency Exam
Course: IMPL 538: Implant Prosthodontics/ Prosthodontics
Timing: D3
Category: Summative
Contact: Dr. Guadalupe Garcia Fay
GGarcia@umaryland.edu

General Description

Description of Assessment

This competency exam is a formal didactic examination to assess the knowledge, skills and values required to achieve proper treatment planning and delivery of an implant supported prosthesis that maintains oral function and overall oral health care.

The competency will be a computerized Case-Based exam. It would consist of 3-4 clinical case-based scenarios and 2-3 implant laboratory related videos with its corresponding 35 multiple choice questions. The scenarios may present a patient case or clinical scenario while the patient is undergoing implant therapy- that may include pre-surgical work-up or implant restorative needs. The scenarios may include a brief introduction to medical history, dental history, extra-oral/intra-oral photos, radiographs, CBCT, clinical photos and laboratory scenarios. It would test basic didactic material in implant prosthodontics including but not limited to fixed single unit implant restorations, fixed implant supported multiple restorations and implant supported mandibular overdentures. It would include scenarios testing the basic concepts of the various digital workflows for static and dynamic guided surgery. It would also test the knowledge of 3D printing of surgical guides for pilot, partial and fully guided surgery. It would review diagnosis and treatment planning presentations, patient case scenarios, clinical records, radiology assessment, guidelines for restoration of dental implants, implant restorative selection, implant abutment selection, provisionalization concepts and related implant journal literature. It will test the digital workflow and delivery concepts of the various implant restorative designs for single, multiple and overdenture implant supported restorations including 3D printing and milling of the restorations. This competency must be passed after successful completion of Implants 538.

Prerequisites

- Completion of REST 528

- Successful Completion IMPL 538 exams 1 and 2 and completion of the four simulation lab implant exercises

Criteria for Evaluation

- Demonstrates understanding of Implant Pre-surgical Treatment Planning Considerations
- Demonstrates understanding of Implant Restorative Treatment Planning Options
- Demonstrates ability to analyze Fixed Implant Supported Restorative Designs, including implant supported overdentures

Setting

Classroom

Type of Competency Examination

Exam-written (case-based)

Time Allotted

60 minutes

Remediation Required Under the Following Circumstances

One (1) failure of the examination requires remediation.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care and treatment planning
- 7d. Restore missing or defective tooth structure to proper form, function and esthetics, and promote soft and hard tissue health
- 7e. Replace missing teeth and surrounding oral tissues to proper form, function and esthetics, and promote soft and hard tissue health

Grading Information and Remediation

Grading

Grading is numeric. The student must obtain a grade of 70% or above to pass the competency in the spring time.

Description of Remediation

Students that are not successful in their examination will be instructed/counseled with the course director regarding correction of deficiencies. One exam review session and one study review session must be completed prior to retaking of the exam. Students scoring less than 70% will be given additional opportunities to remediate by re-examination until a passing score is achieved.

Grading Rubric

Implants 538 Computerized Case-Based Competency Examination Rubric

Demonstrates understanding of Implant Pre-surgical Treatment Planning Considerations	Pass: Displays a good understanding of anatomy and restorative needs prior to implant placement. Is able to understand need for radiographic templates/surgical guides, CBCT evaluation.	Fail: Displays some understanding of treatment planning considerations prior to implant surgery. Is able to evaluate the case, however, does not recognize the importance of CBCT and surgical guides.	Incomplete: Displays limited understanding of pre-surgical considerations prior to implant surgery, anatomy, CBCT evaluation.
Demonstrates understanding of Implant Restorative Treatment Planning Options	Pass: Displays a good understanding of restorative treatment planning options for partially edentulous and edentulous scenarios. Is able to accurately evaluate inter arch space, occlusion, esthetics, other restorative needs and sequencing of treatment.	Fail: Displays some understanding of treatment planning implant restorations, however, does not accurately recognize the need for proper sequencing of treatment.	Incomplete: Displays limited understanding of implant restorative treatment planning options and sequencing of procedures.
Demonstrates understanding of the Interactive Implant Planning Digital Workflow and Prosthodontic Component	Pass: Displays a good understanding of the prosthodontic restorative design during implant planning and placement. Is able to understand the plan is prosthetically driven. Is able to apply the concepts of 3D printing surgical guides for static surgery including dynamic surgical	Fail: Displays some understanding of the interactive implant planning digital workflows for both static and dynamic surgery, however, does not accurately recognize the need for proper sequencing of treatment..	Incomplete: Displays limited understanding of the interactive implant planning digital workflows for both static and dynamic surgery options and sequencing of

	workflows and sequencing of procedures.		procedures.
Demonstrates ability to analyze Implant Supported Restorative Designs, including overdentures	Pass: Displays a good understanding of evaluation of implant angulation and prosthetic designs for partial and full edentulous scenarios. Is able to accurately evaluate prosthetic space, provisionalization, materials, abutment and overdenture indications.	Fail: Displays some understanding of the various prosthetic designs for partial and full edentulous scenarios, however, does not accurately evaluate prosthetic space, provisionalization, materials, abutment and overdenture indications.	Incomplete: Displays limited understanding of implant supported restorative designs in both partial and full edentulous scenarios.
Demonstrates understanding of the Restorative Digital Workflow, Digital Impressions and Materials Component	Pass: Displays a good understanding of evaluation of implant supported prosthesis designs for partial and full edentulous scenarios. Is able to accurately evaluate a digital impression scan and restorative design including the material selection, 3D printing or milling of the restorations.	Fail: Displays some understanding of the implant supported prosthesis designs for partial and full edentulous scenarios, however, does not accurately evaluate a digital impression scan and restorative design including the material selection, 3D printing or milling of the restorations.	Incomplete: Displays limited understanding of the implant supported prosthesis designs in both partial and full edentulous scenarios, accurate evaluation of a digital impression scan and restorative design including the material selection.

Demonstrates ability to analyze the Delivery Sequence of Implant Supported Restorations	Pass: Displays a good understanding of evaluation of the delivery sequence for partial and full edentulous scenarios. Is able to accurately evaluate prosthesis fit, radiographic assessment, occlusion, phonetics, esthetics, abutment torque and proper seal of the final restorations.	Fail: Displays some understanding of the various prosthetic designs for partial and full edentulous scenarios, however, does not accurately evaluate prosthesis fit, radiographic assessment, occlusion, phonetics, esthetics, abutment torque and proper seal of the final restorations.	Incomplete: Displays limited understanding of the various prosthetic designs for partial and full edentulous scenarios, evaluate prosthesis fit, radiographic assessment, occlusion, phonetics, esthetics, abutment torque and proper finalization of the restorations.
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COMPETENCY EXAMINATION # 18

Title: Orthodontics Evaluation Competency
Course: ORTH 538: Orthodontics/ Orthodontics and Pediatric Dentistry
Timing: D3
Category: Summative
Contact: Dr. Flavio Copello
fcopello@umaryland.edu

General Description

Description of Assessment

This competency is administered during the spring semester as a case based examination. Several cases are presented with various malocclusions skeletal and dental. Diagnostic and preliminary treatment questions are asked regarding the cases presented

Prerequisites

Completion of ORTH 522

Enrollment in Ortho 538

Criteria for Evaluation

The following criteria will be used to evaluate students essay responses.

- Angle classification molars and canines
- Facial Analysis
- Crowding or Spacing
- Presence or absence of crossbites anterior and posterior
- Recognize when to treat and when to refer to a specialist (Orthodontist).
- Overjet
- Overbite
- Missing teeth from clinical photos
- From the Panoramic radiograph
 - Dental age
 - Presence of supernumeraries
 - Missing teeth (congenitally missing)
 - Impacted teeth.
- From the lateral cephalometric radiograph and basic measurements given
 - Recognize if the malocclusion is skeletal or dental.

Achieve 70% or higher to pass. Exam is P/F.

Setting

Classroom

Type of Competency Examination

Computer based written (Questionmark) (case-based; on the academic class calendar)

Time Allotted

60 minutes

Remediation Required Under the Following Circumstances

Two (2) attempt and failure

Maryland Competency Statements

6c. Order, obtain, and interpret appropriate radiographic/digital images

7m. Prevent, diagnose and manage developmental or acquired occlusal abnormalities and restore oral health

Grading Information and Remediation**Grading**

Competency is P/F. The competency exam is scored as a percentage of correct answers ranging from 0 -100%. Passing grade is 70%.

Critical Errors

Students must earn a score of 70% in order to pass this competency examination.

Description of Remediation

If a student fails, the first attempt there will be a review with the student to identify areas that are problematic; student then retakes the examination. If there is a second failure, the student must remediate with a faculty member identifying areas that are problematic. The student then challenges an oral reexam.

COMPETENCY EXAMINATION # 19

Title: Oral Health Promotion & Disease Control Competency Examination PEDS
Course: 538: Pediatric Dentistry III/ Orthodontics and Pediatric Dentistry D3
Timing: D3
Category: Summative
Contact: Dr. Martina Majstorovic (mmajstorovic@umaryland.edu)/course director
Dr. Carolina Rojas (crojas@umaryland.edu)/ course co-director

General Description

Description of Assessment

This competency is web-based (Questionmark), simulated clinical cases/scenarios with 15 questions in multiple choice in a 15-minute time frame and is administered in the spring semester. Students have up to three (3) opportunities to challenge this competency. Based on the preliminary feedback after the first attempt, students can decide if they want to use the remaining attempts. Grading will be based on the order of assessments submitted. If the previous attempt is above the passing grade, the later attempt(s) will not be graded. **Students must pass this competency in order to pass PEDS 538.**

Prerequisites

Students must complete one (1) pediatric dentistry block rotation before challenging this competency examination.

Criteria for Evaluation

This competency exam evaluates the student:

1. Understanding of the etiology of the caries process and development and is able to identify the key factors contributed to the disease process and to construct a proper preventive plan for pediatric patients including, but not limited to, prescription of fluoride supplements and topical fluorides, diet consulting, oral hygiene instruction, frequency of recall.
2. Ability to identify, evaluate and document the medical/dental /social /dietary/psychological history, home care and clinical determination of caries risk in the pediatric patients.
3. Understanding of the rationale, indications and procedures, including armamentarium and materials for each preventive strategy (for example, sealants) and is able to provide age-appropriate anticipatory guidance and counseling to pediatric patients at different life stages.
4. Understanding of the rationale and the ability to formulate proper global (comprehensive) treatment plans based on individual patient's needs and caries risk assessment.

See grading rubric.

Setting

Classroom

Type of Competency Examination

Exam-written (case-based)

Time Allotted

40 minutes

Remediation Required Under the Following Circumstances

Two (2) attempts and failures

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 4b. Provide appropriate prevention, intervention, and educational strategies.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patients and restore oral health.

Grading Information and Remediation

Grading

The competency exam is scored as a percentage of correct answers ranging from 0 - 100%.

Passing grade is 70%.

Grading Rubric

Grade	Description
SUPERIOR (90% and above)	The student demonstrates excellent or outstanding understanding of areas described above and application of clinical care to the pediatric patient.
PASS/SATISFACTORY (70%-89%)	The student demonstrates adequate or good understanding of areas described above and application of clinical care to the pediatric patient.
FAIL/ UNSATISFACTORY (69% and below)	The student fails to demonstrate competence in one or more areas described above, and general application of clinical care to the pediatric patient.

Critical Errors

Students must earn a score of 70% in order to pass this competency examination.

Description of Remediation

If a student fails this competency exam on the third attempt, a one-on-one meeting will be held to review the topics identified as problematic on the examination. An oral question and answer re-evaluation will occur until the student is able to show mastery of the material. A make-up written examination will then be given and the student will have to reach 70% or higher in order to pass.

COMPETENCY EXAMINATION # 20

Title: Radiology in Pediatric Dentistry Competency Examination
Course: PEDS 538: Pediatric Dentistry III/ Orthodontics and Pediatric Dentistry D3
Timing: D3
Category: Summative
Contact: Dr. Martina Majstorovic (mmajstorovic@umaryland.edu)/course director
Dr. Carolina Rojas (crojas@umaryland.edu) / course co-director

General Description

Description of Assessment

This competency is web-based (Questionmark), simulated clinical cases/scenarios with 15 questions in multiple choice in a 15-minute time frame and is administered in the spring semester. Students have up to 3 opportunities to challenge this competency. Based on the preliminary feedback after the first attempt, students can decide if they want to use the remaining attempts. Grading will be based on the order of assessments submitted. If the previous attempt is above the passing grade, the later attempt(s) will not be graded. **Students must pass this competency in order to pass PEDS 538.**

Prerequisites

Students must complete one (1) pediatric dentistry block rotation before challenging this competency examination.

Criteria for Evaluation

This competency exam evaluates the student:

1. Understanding of the principle and rationale of using radiographs as diagnostic tools and is able to prescribe proper radiographs to pediatric patients based on their caries risk and individual needs.
2. Ability to identify and evaluate the quality of radiographs according to the patients' growth and development, and to summarize radiographical findings (normal structure/anatomical landmarks/pathology) on all types of radiographs such as periapical, bitewing and panoramic films.
3. Understanding of the indications/procedures/techniques including armamentarium and materials of taking radiographs in pediatric patients and is able to explain and give age-appropriate instructions and directions to them.

See grading rubric.

Setting

Classroom

Type of Competency Examination

Exam-written (case-based)

Time Allotted

40 minutes

Remediation Required Under the Following Circumstances

Two (2) attempts and failures

Maryland Competency Statements

3c. Communicate with a diverse population of patients.

4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.

5e. Comply with state and federal regulations related to OSHA and HIPAA, catastrophe preparedness, patient confidentiality, infection control, hazard communications, radiation safety, and medical waste disposal.

6c. Order, obtain, and interpret appropriate radiographic/digital images.

Grading Information and Remediation

Grading

The competency exam is scored as a percentage of correct answers ranging from 0 -100%. Passing grade is 70%.

Grading Rubric

Grade	Description
SUPERIOR (90% and above)	The student demonstrates excellent or outstanding understanding of areas described above and application of clinical care to the pediatric patient.
PASS/SATISFACTORY (70%-89%)	The student demonstrates adequate or good understanding of areas described above and application of clinical care to the pediatric patient.
FAIL/UNSATISFACTORY (69% and below)	The student fails to demonstrate competence in one or more areas described above, and general application of clinical care to the pediatric patient.

Critical Errors

Students must earn a score of 70% in order to pass this competency examination.

Description of Remediation

If a student fails this competency exam, a one-on-one meeting will be held to review the topics identified as problematic on the examination. An oral question and answer re-evaluation will occur until the student is able to show mastery of the material. A make-up written examination will be given and the student will have to reach 80% or higher in order to pass.

COMPETENCY EXAMINATION #21

Title: Pediatric Dentistry Class II Clinical Simulation
Course: PEDS 538 – Pediatric Dentistry III/ Orthodontics and Pediatric Dentistry D3
Timing: Summative
Category: Dr. Martina Majstorovic (mmajstorovic@umaryland.edu)/course director
Contact: Dr. Carolina Rojas (crojas@umaryland.edu)/course co-director

General Description

Description of Assessment

Students will be scheduled to prepare a Class II mesial occlusal preparation for a primary second molar for composite resin for a typodont tooth as a clinical simulation. The student will be presented with a case based clinical scenario to include a preoperative image of the tooth to be prepared and a simulated radiograph that defines the extent of the caries for the tooth selected on the day of the exam. **Students must pass this competency in order to pass PEDS 538.**

Prerequisites

Students must have passed PEDS 522 and complete at least 1 PEDS block rotation.

Criteria for Evaluation

Refer to the rubric for the criteria for evaluation.

Type of Competency Examination

Demonstration- simulated patient/typodont/laboratory

Time Allotted

1 lab session

Remediation Required Under the Following Circumstances

Failure to receive a passing grade on the 2nd attempt will require student remediation.

Maryland Competency Statements

7d. Restore missing or defective tooth structure to proper form, function, and esthetics, and promote soft and hard tissue health.

Grading Information and Remediation

Examiners

Pediatric Dentistry Faculty

Grading

Grading is Pass/Fail based upon the grading form and rubric.

* Critical Errors

See the grading rubric and criteria for evaluation section for a detailed description of critical errors. Critical error(s) result in an automatic failure.

Critical errors are noted with *; any failure of a critical criteria is a failure of the examination

Tooth identification*

External outline form

Outline shape, continuity, extension*

Gingival clearance *

Proximal clearance*

Internal outline form

Pulpal depth*

Axial depth*

Care of adjacent tooth and soft tissue*

Grading Rubric

The student will have to pass ALL criteria in order to pass this competency.

Description of Remediation

A failing grade on the competency examination requires remediation. The remediation consists of one on one counseling with the student reviewing the tooth preparation and the problematic areas. The student will be required to rechallenge the examination and pass. The student has 2 attempts to pass the examination.

Grading Rubric Primary 2nd Molar Class II Preparation

Criteria category	P	F*
Tooth identification	Correct tooth is prepared	Incorrect tooth is prepared
Outline shape, continuity, extension	The shape of the outline is consistent with the simulation images and radiograph; the outline form has a smooth flowing, rounded outline; the outline extension of the preparation includes all carious pits and fissures	The shape of the outline is inconsistent with the simulation images and radiograph; the outline form is irregular; would result in an unacceptable restoration; the outline extension over-extended by greater than 0.5 mm or under-extended greater than 0.5 mm based upon the caries extension portrayed in the clinical image.
Gingival clearance	Gingival wall and margin is consistent with the radiographic extension of the caries	The gingival wall and margin is inconsistent with the radiograph extension of the caries; the walls are either under extended by >0.5 mm or overextended by >0.5 mm and/ or the preparation is sub-gingival
Proximal clearance	The proximal clearance at the height of contour is either closed or visibly open and at the height of contour proximal clearance may extend ≤ 1.0 mm beyond either one or both walls. The extensions is consistent with the clinical and radiographic appearance of the caries.	The proximal clearance at the height of contour at the height of contour extends ≥ 1.5 mm beyond either one or both walls. The extensions is inconsistent with the clinical and radiographic appearance of the caries
Pulpal depth	Pulpal wall depth is 1.0 mm to ≤ 2.5 mm which is consistent with the requirements of the restorative material	Pulpal wall depth is ≤ 1.0 mm or ≥ 2.5 mm which is inconsistent with the requirements and/or the radiographic extension of the caries and would put the pulp at risk
Axial depth	Axial depth is consistent with the radiographic extension of the caries extending 1.0 mm to ≤ 2.0 mm	Axial depth is inconsistent with the radiographic extension of the caries extending ≤ 1.0 mm or > 2 mm
Care of adjacent tooth and soft tissues	No damage to adjacent tooth or any damage to the adjacent tooth can be removed with polishing without adversely altering the shape and contour and/or contact; soft tissue is free from damage	Gross damage to adjacent tooth would require restoration; iatrogenic soft tissue damage is inconsistent with the procedure

Critical errors noted with *; any failure of critical criteria is a failure of the examination

Student name: _____ S# _____

GP: _____

Primary second molar Class II Preparation

Grading Form

Criteria category	P	F*
Tooth identification	P	F*
Outline shape, continuity, Extension	P	F*
Gingival clearance	P	F*
Proximal clearance	P	F*
Pulpal depth	P	F*
Axial depth	P	F*
Care of adjacent tooth and soft tissues	P	F*

Critical errors noted with *; any failure of critical criteria is a failure of the examination

COMPETENCY EXAMINATION # 22

Title: Pediatric Dentistry Comprehensive Care Competency Examination
Course: PEDS 548: Pediatric Dentistry IV/ Orthodontics and Pediatric Dentistry
Timing: D4
Category: Summative
Contact: Dr. Kuei Ling Hsu
kshu@umaryland.edu

Dr. Martina Majstorovic
Mmajstorovic@umaryland.edu

General Description

Description of Assessment

The student will find the description of 5 or 6 children and several questions about each case. This competency must be passed in order to pass PEDS 548.

Prerequisites

Students must have successfully completed PEDS 522 and PEDS 538.

Criteria for Evaluation

Exam is 75% of the course grade. . Students must receive 70% or higher to pass.
See grading rubric for criteria for evaluation.

Setting

Classroom

Type of Competency Examination

Computer based written (Questionmark) (case-based; on the academic class calendar)

Time Allotted

120 minutes

Remediation Required Under the Following Circumstances

Two (2) attempts and failures

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 3b. Utilize principles of behavioral sciences for maintaining patient's oral health.
- 3c. Communicate with a diverse population of patients.
- 4b. Provide appropriate prevention, intervention, and educational strategies.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6c. Order, obtain, and interpret appropriate radiographic/digital images.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 7a. Manage acute pain and dental anxiety.
- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patients and restore oral health.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related periradicular pathology and restore oral health.
- 7n. Recognize and refer patient abuse and/or neglect.
- 7q. Provide care for a diverse population of patients including infants, children, adolescents, adults, and geriatric and special needs patients.

Grading Information and Remediation

Grading

The examination is scored as a percentage of 0-100%. A grade of 70% is required to pass.

Critical Errors

Students must earn a score of 70% in order to pass this competency examination.

Description of Remediation

If a student fails the competency exam, a one-on-one meeting will be held to review the topics identified as problematic on the examination. A re-examination will be given and the student will have to reach 70% or higher in order to pass the competency.

COMPETENCY EXAMINATION #22 A

Title: Pediatric Dentistry: Examination and Treatment Plan
Course: PEDS 548 – Pediatric Dentistry IV/ Orthodontics and Pediatric Dentistry
Timing: D4
Category: Summative
Contact: Dr. Kuei Ling C. Hsu
kshu@umaryland.edu

Dr. Martina Majstorovic
Mmajstorovic@umaryland.edu

General Description

Description of Assessment

Students will perform a dental exam and write the appropriate treatment plan on a new or recall pediatric patient case in Pediatric Dentistry Clinic.

Prerequisites

Students must have passed 538: Pediatric Dentistry III and competed at least minimum two similar cases prior to challenge the competency.

Criteria for Evaluation

Exam is P/F.

See grading rubric for criteria for evaluation.

Setting

Clinic

Type of Competency Examination

Demonstration- clinical performance patient-based (student self-scheduled)

Time Allotted

1 hour

Remediation Required Under the Following Circumstances

3 attempts

Maryland Competency Statements

5d. Apply principles of risk management, including informed consent and appropriate record keeping in patient care.

6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.

- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history
- 6c. Order, obtain, and interpret appropriate radiographic/digital images.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.

Grading Information and Remediation

Examiner

Pediatric faculty

Grading

The competency examination consists of conducting an examination and treatment plan in a new or recall child patient. See grading rubric for detailed description of criteria. A grade of 100% (pass in all categories) is required for passing.

Critical Errors

See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

Failure of three attempts will require faculty counseling; a fourth failure will require Dean's counseling. A one-on-one meeting will be held to review the topics identified as problematic on the examination.

University of Maryland School of Dentistry
Pediatric Dentistry Clinical Competency: Examination and Treatment Planning

Student's Name: _____ Student's ID #: _____
 Patient's Chart #: _____ Date: _____

UMB	Clinical Criteria	Level of Performance	
		<u>PASS</u>	<u>FAIL (Critical Errors)</u>
6b	Chief complaint	<ul style="list-style-type: none"> Asks for and records patient's chief complaint and reasons for the visit. <div style="text-align: center;"><input type="checkbox"/></div>	<ul style="list-style-type: none"> Not able to identify and address the patient's prime reason for seeking care. <div style="text-align: center;"><input type="checkbox"/></div>
5d	Informed consent obtained	<ul style="list-style-type: none"> Seeks informed consent. Explains the benefits and risks of treatment offered, suggests alternatives in language patient/parents understands. <div style="text-align: center;"><input type="checkbox"/></div>	<ul style="list-style-type: none"> Not having consent signed by patient's parent. Not informing parents of all options and possible complications of treatment. Consent for minor not given by legal guardian. Allowing minor to sign by themselves. <div style="text-align: center;"><input type="checkbox"/></div>
6a	Medical, dental, social, dietary, developmental history	<ul style="list-style-type: none"> Records all relevant history including thorough medical, dental, social, dietary, and developmental history. <div style="text-align: center;"><input type="checkbox"/></div>	<ul style="list-style-type: none"> Failure to obtain a full medical, dental, social, dietary and developmental history. Failure to recognize medication issues or need for consult before treatment. Failure to identify insurance or payment issues. <div style="text-align: center;"><input type="checkbox"/></div>
	Intra- and extra-oral examination	<ul style="list-style-type: none"> Utilizes appropriate diagnostic aids. Conducts thorough extra-oral and intra-oral examination - general and specific to area of chief complaint. <div style="text-align: center;"><input type="checkbox"/></div>	<ul style="list-style-type: none"> Failure to recognize abnormalities/lesions present. <div style="text-align: center;"><input type="checkbox"/></div>

6d	Treatment plan	<ul style="list-style-type: none"> • Age-appropriate treatment planning based on AAPD guidelines. • Understanding rationale, indications and procedures of sealants, composites. <input type="checkbox"/>	<ul style="list-style-type: none"> • Proposed treatment planning does not follow AAPD guidelines. <input type="checkbox"/>
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Grade: Pass (100% correct) _____ Fail _____ Attempt: First _____ Second _____ Third _____

Instructor's Name (Printed): _____ Instructor's Signature: _____

Instructions for Students:

1. Inform attending faculty that you would like to challenge the competency prior to starting patient care.
2. After completing the competency, your attending faculty will mark the grade, attempt number, print and sign his/her name.
3. Students have up to 3 opportunities to pass this competency. After a third failed attempt, they will receive faculty counseling and will be able to take it again. If the student fails this competency, they will receive Dean's counseling before a last attempt. Students who fail this attempt will fail the course PEDS 548.

Please **take a digital photo** of the front of the competency and **upload it to Blackboard** in the appropriate assignment area of PEDS 548; this is mandatory **to obtain credit for the successful competency**. Keep the paper copy for your records; however, submission of the paper copy to the course director will not be accepted for credit. **If you FAIL the competency, the attending faculty will keep the paper copy of your competency** after you have taken the picture; this picture has to be uploaded to Blackboard.

Instructions for Faculty:

1. Confirm that student is prepared to challenge the competency.
2. Grade each criteria as pass or fail by placing an X in the appropriate checkbox.
3. Student must pass ALL sections to receive a pass for the competency.
4. Place an 'X' next to pass or fail and the attempt number.
5. Print and sign name in the appropriate areas.

Student take a digital photo of the front page of the competency to upload on Blackboard. If the student passes they keep the paper copy; if the student fails, the faculty member should keep the paper copy. All student are responsible for uploading a copy of the competency to Blackboard. Paper copy is given to PEDS 548 course director, Dr. Kuei-Ling C. Hsu.

COMPETENCY EXAMINATION #23

Title: Periodontics Essential Clinical Elements Assessment
Course: PERI 538: Periodontics
Timing: D3
Category: Summative
Contact: Dr. Se-lim Oh / soh@umaryland.edu

General Description

Description of Essential Clinical Element (ECE)

As part of a formative competency evaluation **students will complete Essential Clinical Elements (ECE)**. ECE's are the elements embedded within clinical procedures that require direct patient interactions and require the implementation and integration of preclinical knowledge and skills in a manner consistent with appropriate care delivery. The goal of the ECE is to assess the student's ability to apply the knowledge and skills gained during PERI 518 & 528 in the clinical periodontics setting to demonstrate competency in following areas:

1. Effectiveness in communication in Patient Education and Oral Hygiene Instructions
2. 1) Safety and effectiveness in periodontal assessment, 2) instrumentation and management planning in the normal course of clinical care.

CREDITS are completed when eligible faculty observes the ECE attempts and deems it passing.

Criteria for Evaluation

1. **(1.1) Effectiveness in communication in Patient Education and Oral Hygiene Instructions**
 - a. **Communicating diagnosis and disease process (including Risk Factors) - graded by PERIODONTIST/ HYGIENIST**

Goal: Imparted patient with an appropriate level of understanding of their periodontal condition

Methods employed may include the following:

- a. Use of open-ended questions to facilitate patient dialogue
- b. Use of appropriate language level and degree of detail
- c. Use of summarization or other approaches to reinforce understanding
- d. Use of reflective listening to assure patient of understanding
- e. Accurately represented most important information for patient understanding

b. Guidance of Patient in Oral Hygiene

- a. Appropriate consideration and application of clinical assessment (appropriate instructions are given for proper homecare)
- b. Appropriately communicated oral hygiene plan to patient (the patient understands what to do)
- c. Engaged patient toward optimizing level of interest and motivation for oral hygiene (patient can reasonably demonstrate applied techniques)

Guidance should include at least two of the following patient education situations:

- tooth brushing
- flossing
- inter-proximal device use
- care of removable prosthesis
- medical condition or disability relevant to oral health
- clinical oral situation requiring unique application of techniques (e.g., management of furcations, dental implants, gingival recession)

2. Safety and effectiveness of periodontal assessment, instrumentation and management planning in the normal course of clinical care.

2.1 Periodontal Assessment/Measurement – graded by Periodontist

Goals: a) demonstrate accuracy in periodontal assessment/measurement in the clinical periodontics setting and student recognizes any clinical factors that may alter interpretation of the measurement, b) apply the results obtained through the data collection towards recognition of the problem and formulate diagnosis.

Effective intra-oral assessment of the following periodontal measurements:

- a. Periodontal Assessment will include:
- b. Plaque Free Score
- c. Probing (pocket depth)
- d. Clinical attachment level
- e. Bleeding on probing / Suppuration
- f. Width of attached gingiva/keratinized tissue & Detection of MGJ
- g. Fremitus / Mobility
- h. Furcation involvement

2.2 Periodontal Instrumentation – graded by HYGIENIST and DESIGNATED PERIODONTIST

Goals: demonstrate a). effective use of instruments in the management of local factors, b). awareness of extraordinary clinical conditions that may compromise effectiveness of instrumentation, and if so, demonstrates or discusses appropriate approaches to manage compromised areas. (Student recognizes limitations of instrumentation and clinical conditions that compromise debridement and can discuss appropriate approaches to manage area).

Guidelines assisting effective use of instruments includes:

- a. Adequate intraoral and/or extraoral fulcrum is present
- b. Appropriate selection of instruments
- c. Using correct cutting edge
- d. Short, overlapping, and continuous stroke
- e. Adaptation of terminal, lateral 1/3 of the cutting edge is adapted to the tooth surface
- f. Avoid tissue trauma

Assessment may include the use of the following instruments:

- Universal
- Gracey 13/14

CREDITS must be earned in 1.1, 2.1 and 2.2. CREDITS can be earned in more than one patient and more than one clinic session per assessment area if needed.

Prerequisites

Students have passed PERI 518, PERI 528

Setting

Clinic

Type of Competency Examination

Demonstration-clinical performance

Time Allotted

Multiple clinic sessions treating more than one patient may be required to complete all sections.

Remediation Required Under the Following Circumstances

Failure of the exam

Maryland Competency Statements

3b. Utilize principles of behavioral sciences for maintaining patient's oral health.

4b. Provide appropriate prevention, intervention, and educational strategies.

7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.

Grading Information and Remediation

Examiners

Ms. Barnes, Ms. Syme (dental hygienists), Dr. Oh, and Dr. Jones (periodontist) (for 2.2)

Drs. Saito, Oh, Jones, Thumbigere-Math, Yu, Yen, Chen, Rostami, Yu (for 1.1 and 2.1).

Grading

Pass/Fail.

- The student has to complete the competency with his or her own patient. If, for any reason, the student does not use his or her own patient, there will be a 3% deduction from the PERI 538 clinical grade.
- If all competencies are not completed by the end of the academic year, *you will receive an "E" as your final course grade.*

Due Dates

23.1.1. Patient Education and OHI: End of September of D3 year

23.2.1 Periodontal Assessment: Friday before Spring Break of D3 Year

23.2.2. Instrumentation: End of D3 Fall Semester

*Failure to attempt each competency at least once by its deadline will result in a 3% deduction of your final PERI538 **clinical grade.***

Critical Errors

See the grading rubric for a detailed description of critical errors. Critical error(s) result in failure to demonstrate competency.

Description of Remediation

A failure in any section requires remediation for that section. After a review of the problematic areas with the faculty examiner, the student will re-challenge the competency exam section at a separate visit with a new patient. If you do not pass any competency after three separate attempts, you will be required to attend an in-person remediation session with faculty.

Examination Protocol

Student has a **patient of their record** with an established or working treatment plan, presenting in the pre-doctoral clinic for a periodontics procedure. This appointment is typically a **periodontics visit**. The student is **signed up in Axiom for coverage with the respective Periodontics faculty member**. For example, patient may be presenting for a 6-month recall or even a quadrant scaling and root planing appointment. Here is a guide to appointment type and “typical” content area that a credit might be “earned.”

Eligible faculty covering should be asked if they can administer the ECSA during the session. The faculty availability to do so is dependent on the busyness of the schedule--thus, a student may be denied the opportunity to challenge the ECSA on *rare* occasions.

GRADING RUBRIC/GUIDE:

- Faculty member will evaluate the patient and query the student on the patient’s current periodontal diagnosis and treatment plan.
- Faculty will observe student performing ECE(s).
- The faculty will evaluate the student’s ability on each ECE.
- Faculty will provide suggestions to the student to improve ECE(s).
- For 1.1, faculty member will monitor the communication between the student and patient.

TRACKING:

The faculty will log in the credit earned.

RUBRIC

	PASS	FAIL
1.1 Communicating diagnosis and disease process & Patient in Oral Hygiene	<p>The student explains biologically accurate content related to the patient's diagnosis and disease process. All relevant etiology, contributing factors and risk factors are discussed with the patient. An appropriate patient-centered explanation for the aforementioned topics and also pathogenesis is made. The role of major systemic/environmental risk factors is addressed. The interaction is interactive with the patient; when appropriate patient should be solicited to convey their own existing personal knowledge, which may be based on popular press or lay literature.</p> <p>The student effectively educates the patient using appropriate tell-show-do, or similar technique. Student engages the patient in an interactive manner. Student does not violate any essential infection control protocol during the demonstration.</p>	<p>Inaccurate statements that are not scientifically valid made by student. The student does not engage the patient sufficiently and "lectures" at the patient. The student's communication is beyond the patient's comprehension, using terminology patient does not understand. *</p> <p>Patient's level of understanding is inconsistent with capabilities and cannot discuss or relate to appropriate information.</p> <p>Inappropriate or insufficient techniques shown to patient. The student does not engage the patient and, as a result, the patient cannot replicate the skill. Student commits a violation in standard infection control protocol.</p>
2.1 Periodontal Assessment – graded by Periodontist	<p>The student demonstrates accurate periodontal assessment.</p> <p>The student recognizes and interprets any medical/clinical factors that may influence assessment, recognition of the problem, and diagnosis.</p>	<p>Inaccurate periodontal assessment and failure to recognize clinical conditions that may compromise the measurement and/or interpretation of the results obtained through the data collection towards recognition of the problem and in formulating a diagnosis</p>
2.2 Periodontal Instrumentation	<p>The student accurately demonstrates a). effective use of instruments in the management of local factors, b). awareness of extraordinary clinical conditions that may compromise effectiveness of instrumentation and recognizes limitations of instrumentation and clinical conditions that compromise debridement and can discuss appropriate approaches to manage area.</p>	<p>Inaccurate use of instruments in the management of local factors and recognition limitations of instrumentation and clinical conditions that compromise debridement and can discuss appropriate approaches to manage area.</p>

* (Example: Patient asks, "So the bacteria in my plaque are destroying the fibers that attach my teeth?" Student responds, "Well, not exactly, the lipopolysaccharide (LPS)-mediated host responses cause certain injury in periodontal disease. LPS acts as a potent stimulus to a variety of host cells via LPS, LPS-binding protein (LBP), and CD14 pathway, which subsequently results in the expression of proinflammatory cytokines and amplifies the related host immune response in periodontal diseases." A better patient centered response would be, "Well, not exactly, the bacteria cause a reaction from your immune system. This generates inflammation. One of the outcomes of inflammation is destruction of the fibers that hold your tooth in place and loss of the bone that supports the tooth.")

23.1.1 Patient Education and OHI

1. Brushing device
 - ☐ Soft bristle TB
 - ☐ Powered TB
 - ☐ Other _____
2. Brushing method
 - ☐ Modified Bass
 - ☐ Other _____
3. Interdental device and Other
 - ☐ Floss
 - ☐ Interdental brush
 - ☐ Superfloss
 - ☐ End-tuft
 - ☐ Other _____
4. Toothpaste
 - ☐ OTC toothpaste
 - ☐ Rx toothpaste

	PASS	FAIL
1.1 Communicating diagnosis and disease process & Patient in Oral Hygiene	<p>The student explains biologically accurate content related to the patient's diagnosis and disease process. All relevant etiology, contributing factors and risk factors are discussed with the patient. An appropriate patient-centered explanation for the aforementioned topics and also pathogenesis is made. The role of major systemic/environmental risk factors is addressed. The interaction is interactive with the patient; when appropriate patient should be solicited to convey their own existing personal knowledge, which may be based on popular press or lay literature.</p> <p>The student effectively educates the patient using appropriate tell-show-do, or similar technique. Student engages the patient in an interactive manner. Student does not violate any essential infection control protocol during the demonstration.</p>	<p>Inaccurate statements that are not scientifically valid made by student. The student does not engage the patient sufficiently and "lectures" at the patient. The student's communication is beyond the patient's comprehension, using terminology patient does not understand. *</p> <p>Patient's level of understanding is inconsistent with capabilities and cannot discuss or relate to appropriate information.</p> <p>Inappropriate or insufficient techniques shown to patient. The student does not engage the patient and, as a result, the patient cannot replicate the skill. Student commits a violation in standard infection control protocol.</p>

Critical error (related to professionalism and patient safety) :: Yes / No

☐ 2.1 Periodontal Assessment

1. Probing depth

- acceptable (Pass)
- unacceptable (Fail)
 - ☐ ≥ 2 mm Measurement discrepancies
 - ☐ Not inserting probe tip under proximal contact
 - ☐ Adaptation too open/close
 - ☐ Not walking
 - ☐ Too forceful

2. BOP (Bleeding on Probing)

- acceptable (Pass)
- unacceptable (Fail)
 - ☐ Overall BOP is too low than gingival index by visual inspection
 - ☐ Missed a lot of delayed BOP

3. FGM (Free Gingival Margin) - CEJ (Cementoenamel Junction)

- acceptable (Pass)
- unacceptable (Fail)
 - ☐ Not recognizing the CEJ
 - ☐ Not recognizing the FGM
 - ☐ Cannot calculate clinical attachment loss

4. Width of keratinized gingiva

- Pass
- Fail:
 - ☐ Not recognizing the MGJ (mucogingival junction)

5. Mobility

- Pass
- Fail
 - ☐ Fails to use blunt end of two instruments
 - ☐ Does not recognize tooth mobility, if present
 - ☐ Cannot describe Miller's mobility index

6. Fremitus

- Pass
- Fail
 - ☐ Does not know how to detect fremitus
 - ☐ Does not recognize fremitus, if present

7. Furcation

Pass

- Fail
 - ☐ Not using Nabers Probe
 - ☐ Unable to detect buccal/lingual furcations
 - ☐ Not approaching palatally to detect mesial and distal furcations
 - ☐ Cannot describe Glickman's furcation index

8. Plaque free score

- Pass
- Fail
 - ☐ Does not use the disclosing tablet
 - ☐ Overall % Plaque free score is too high

	PASS	FAIL
2.1	The student demonstrates accurate periodontal assessment. The student recognizes and interprets any medical/clinical factors that may influence assessment, recognition of the problem, and diagnosis.	Inaccurate periodontal assessment and failure to recognize clinical conditions that may compromise the measurement and/or interpretation of the results obtained through the data collection towards recognition of the problem and in formulating a diagnosis
Periodontal Assessment – graded by Periodontist		

Critical error (related to professionalism and patient safety) : Yes / No

2.2 Periodontal Instrumentation

1. Gracey 13/14

- Pass
- Fail
 - ☐ incorrect instrument
 - ☐ incorrect working end
 - ☐ not scaling the entire surface
 - ☐ scaling backward
 - ☐ severe soft tissue damage
 - ☐ incorrect surface

2. Universal curette

- Pass
- Fail
 - ☐ incorrect instrument
 - ☐ incorrect working end
 - ☐ flipping while scaling the same side
 - ☐ not scaling entire surface
 - ☐ scaling backward
 - ☐ severe soft tissue damage
 - ☐ incorrect surface

	PASS	FAIL
2.2 Periodontal Instrumentation	The student accurately demonstrates a). effective use of instruments in the management of local factors, b). awareness of extraordinary clinical conditions that may compromise effectiveness of instrumentation, and recognizes limitations of instrumentation and clinical conditions that compromise debridement, and can discuss appropriate approaches to manage area.	Inaccurate use of instruments in the management of local factors and recognition limitations of instrumentation and clinical conditions that compromise debridement, and can discuss appropriate approaches to manage area.

Critical error: Yes / No _____

COMPETENCY EXAMINATION #25

Title: Periodontics Treatment Plan Competency Exam I
Course: PERI 538
Timing: D3
Category: Formative
Contact: Dr. Hanae Saito / hsaito@umaryland.edu

General Description

Description of Assessment

The student will be required to demonstrate competency in treatment planning a generalized mild and/or moderate periodontitis case. The student should utilize the knowledge base gained from their previous periodontal curriculum, clinical experiences and biomedical knowledge to demonstrate their understanding for periodontal treatment planning on the computer-case-based examination. The topics and concepts listed below will be the focus of the examination.

Prerequisites

1. Student has passed PERI 518, PERI 528
2. Student has completed Small Group PTXP exercise during fall semester of PERI 538.
3. Student has completed 1. At least one (1) periodontal treatment plan presentation (coded D9450.2) on a Chronic Periodontitis Patient with a Periodontist, in the Division of Periodontics
4. Student has passed Competency 23 Essential Clinical Elements.

Criteria for Evaluation

Topics of Focus

- A. Medical History/Medical Consultation/Emergency
- B. Dental History
- C. Radiographic Interpretation
- D. Gingival assessment and description
- E. Occlusal evaluation
- F. Clinical examination (periodontal examination)
- G. Extra and Intraoral exam including Differential Diagnosis for soft and hard tissues
- H. Problem List, Diagnosis, Prognosis
- I. Development of a Treatment Plan

Setting

Classroom Examination

Type of Competency Examination

Exam- written (case-based)

Time Allotted

75 minutes

Remediation Required Under the Following Circumstances

Failure of examination with a score of less than 70%.

Maryland Competency Statements

- 1a. Evaluate and assess emerging trends, technologies, and products in health care; and integrate best research outcomes with clinical expertise and patient values for evidence-based practice
- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 2b. Practice within the scope of competency and know how to refer to professional colleagues.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 6c. Order, obtain, and interpret appropriate radiographic/digital images.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 6e. Use knowledge of the basic and clinical sciences to evaluate the form and function of the oral and craniofacial complex and its interaction with other systems of the body in health and disease.
- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.
- 7h. Prevent, recognize, and manage medical emergencies that occur in the dental practice.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.
- 7m. Prevent, diagnose and manage developmental or acquired occlusal abnormalities and restore oral health.

Grading Information and Remediation

Examiner

Dr. Saito

Grading

Numerical 0-100, 70 is passing.

Critical Errors

Failing grade of less than 70%

Description of Remediation

Less than a score of 70 requires remediation. Course director counsels the student on problematic areas. After remediation the student must pass an oral exam. Students challenge the oral exam up to two times.

COMPETENCY EXAMINATION #26

Due: Prior
to CDCA
exam

Title: Qualifying Scaling Competency
Course: PERI 548: Periodontics
Timing: D4
Category: Summative
Contact: Dr. [Se-lim](#) Oh / soh@umaryland.edu

General Description

Description of Assessment

The simulation-based qualifying scaling competency is designed to ensure that students achieve adequate instrumentation skills as they progress through the 3rd and 4th year clinical program. The Qualifying Scaling Competency is focused on effective removal of calculus and soft tissue management. This competency exam is designed to prepare students for the CDCA Periodontal Examination.

Prerequisites

Student has passed PERI 518, PERI 528, PERI 538. The student has completed:

- ☐ Competency 23
- ☐ Have worked with designated periodontics faculty (Dr. Mishler, MS. Barnes, or Ms. Syme) a minimum of **four (4) instrumentation procedures (D4341, D4342, D4346 or equivalent).**

Criteria for Evaluation

Students must remove calculus from the designated 6 sites without damage to soft tissue and hard tissue.

Setting

Clinic/Lab

Type of Competency Examination

Demonstration - Clinical Performance

Time Allotted

45 minutes

Remediation Required Under the Following Circumstances

Students must demonstrate no critical failure in all evaluation criteria described in the rubric. If a student makes critical failure(s), they receive individualized counseling (practice) and will need to re-challenge this competency exam.

Maryland Competency Statements

7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.

Grading Information and Remediation

Examiners

Dr. Mishler and Ms. Syme (dental hygienists)

Grading

See grading rubric for detailed description of criteria.

Critical Failures

See grading rubric for detailed description of critical failures. Critical failure(s) result in automatic failure.

Description of Remediation

Failure of the examination requires the students to receive individualized counseling (practice) and will need to re-challenge this competency exam. Student only have three attempts to pass the exam. **The highest grade the student can receive upon successful passing of the remediation is 70.**

PERI548 Qualifying Competency Examination Rubric

Student # _____ Student Last Name: _____ Student First Name: _____

Students must demonstrate no critical failure in all following criteria for all sites at their first attempts to receive 100 points. The examination duration is 45 minutes.

- **If a student passes on the second attempt, they receive 85 points.**
- **If a student passes on the third attempt, they receive 70 points.**

Critical Failure		
Damage to soft tissue <input type="checkbox"/> Site 1 <input type="checkbox"/> Site 2 <input type="checkbox"/> Site 3 <input type="checkbox"/> Site 4 <input type="checkbox"/> Site 5 <input type="checkbox"/> Site 6	Damage to hard tissue <input type="checkbox"/> Site 1 <input type="checkbox"/> Site 2 <input type="checkbox"/> Site 3 <input type="checkbox"/> Site 4 <input type="checkbox"/> Site 5 <input type="checkbox"/> Site 6	Residual calculus <input type="checkbox"/> Site 1 <input type="checkbox"/> Site 2 <input type="checkbox"/> Site 3 <input type="checkbox"/> Site 4 <input type="checkbox"/> Site 5 <input type="checkbox"/> Site 6

COMPETENCY EXAMINATION #27

Title: Periodontics Treatment Plan Competency Exam II
Course: PERI 548
Timing: D4
Category: Summative
Contact: Dr. Hanae Saito / hsaito@umaryland.edu

General Description

Description of Assessment

The student will be required to demonstrate competency in treatment planning and reevaluation of a periodontitis case, determination of future treatment needs and frequency of maintenance. The student should utilize the knowledge base gained from their previous periodontal curriculum, clinical experiences and biomedical knowledge to demonstrate their understanding for periodontal treatment planning on the computer-case-based examination. The topics and concepts listed below will be the focus of the examination.

The second periodontal treatment plan competency will have questions less weighted on basics of assessment (reading radiographs and periodontal measurements) and more weight on non-surgical therapy and recognition of the basis for referral.

Prerequisites

Students have passed PERI 518, PERI 528, PERI 538. Student is in Year IV (D4) and has completed Periodontal Treatment Plan Competency I and **two (2) evaluation of initial therapy (D0170.2, D0170.8) visits with periodontics faculty or residents.**

Criteria for Evaluation

- Recognition of an update of medical and dental history that indicates chief complaint, patient expectations, and past dental history
- Demonstrate a knowledge of the basic and clinic sciences when evaluating the form and function of the oral and craniofacial complex and its interaction with other systems of the body in health and disease when appropriate
- Demonstrate radiographic images with interpretation.
- Reevaluation, recognition of change, and interpretation of clinical findings and analysis for the patient using critical thinking and scientific knowledge
- Formulate a primary treatment plan and alternative treatment plans or referrals based upon relevant findings and individual patient considerations and clinical findings if needed
- Identify surgical and non-surgical treatment options to include emerging trends, technologies and products in periodontal care, as well as, use the best research outcomes and evidence that will provide optimal care for the patient
- For non-surgical treatment options present a plan to include diagnosis, prevention strategy with justification of maintenance frequency/interval from gingivitis to moderate periodontitis

- Identify any oral conditions that are outside of your scope of competency to develop a plan for referral to a specialist

Setting

Classroom Examination

Type of Competency Examination

Exam- written (case-based)

Time Allotted

75 minutes

Remediation Required Under the Following Circumstances

Failure of examination with a score of less than 70%.

Maryland Competency Statements

- 1a. Evaluate and assess emerging trends, technologies, and products in health care; and integrate best research outcomes with clinical expertise and patient values for evidence-based practice
- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care
- 2b. Practice within the scope of competency and know how to refer to professional colleagues.
- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 6c. Order, obtain, and interpret appropriate radiographic/digital images.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 6e. Use knowledge of the basic and clinical sciences to evaluate the form and function of the oral and craniofacial complex and its interaction with other systems of the body in health and disease
- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.
- 7h. Prevent, recognize, and manage medical emergencies that occur in the dental practice.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.

Grading Information and Remediation

Examiner

Drs. Saito, Jones

Grading

Numerical 0-100, 70 is passing.

Critical Errors

A failing grade of less than 70%

Description of Remediation

Division of Periodontics Ver. 051923

Less than a score of 70 requires remediation. The course director counsels the student on problematic areas. **The highest grade the student can receive upon successful passing of the remediation is 70.**

COMPETENCY EXAMINATION # 30

Title: Practice Option Competency Examination
Course: PRAC 532: Practice Management I/ Public Health Dentistry
Timing: D3
Category: Summative
Contact: Dr. Scott Swank/ sswank@umaryland.edu

General Description

Description of Assessment

This exercise is devoted to the exploration of various criteria necessary to choose a practice setting, lead a professional oral health care team and evaluate different models of health care delivery. Various economic and non-economic factors must be used to make an informed decision. Capital cost, leasehold improvements, operating expenses, working capital, risk, space requirements, marketing and location preference are all be considered.

Criteria for Evaluation

- Evaluate and apply contemporary and emerging information including clinical and practice management technology resources
- Utilize basic principles of practice management and have the skills to function as the leader of an oral health team.
- Evaluate different models of oral health care management and delivery

Prerequisites

None

Setting

Classroom examination

Type of Competency Examination

Computer based written (Questionmark) (tests didactic materials; on the academic class calendar)

Time Allotted

60 minutes

Remediation Required Under the Following Circumstances

Remediation required if any section is failed with a score of less than 70%

Maryland Competency Statements

- 5a. Evaluate and apply contemporary and emerging information including clinical and practice management technology resources
- 5b. Utilize basic principles of practice management and have the skills to function as the leader of an oral health team.
- 5c. Evaluate different models of oral health care management and delivery

Grading Information and Remediation

Examiner

Dr. Richard Manski

Grading

An overall grade of at least 70% to pass. Course is Pass/Fail

Critical Errors

Students must earn a score of at least 70% to pass this competency examination.

Description of Remediation

If the student fails the examination they will have the opportunity for a one-on-one meeting with the course director to review the topics identified as problematic on the examination. The students have the materials necessary for them to restudy the information. The student will retake of the examination until passed.

COMPETENCY EXAMINATION # 31

Title: Cultural Competency Examination
Course: PRAC 532: Practice Management I/ Public Health Dentistry
Timing: D3
Category: Summative
Contact: Dr. Scott Swank/ sswank@umaryland.edu

General Description

Description of Assessment

This examination is devoted to cultural competency. After completion of the learning module students will be able to:

1. Recognize issues related to cultural competency in oral health care.
2. Describe the benefits of providing culturally and linguistically appropriate oral health care.
3. Identify strategies to promote self-awareness about attitudes, beliefs, biases, and behaviors.
4. Describe steps to take to provide culturally and linguistically appropriate services.
5. Utilize principles of behavioral sciences in enhancing prevention and treatment services in oral health care.
6. Communicate with a diverse population of patients.
7. Identify and describe culturally and linguistically appropriate practice management strategies.
8. Communication and the characteristics of effective communication with health care professionals and staff regarding the patient care.

Prerequisites

None

Criteria for Evaluation

After completion of the learning module students will be able to:

1. Recognize issues related to cultural competency in oral health care.
2. Describe the benefits of providing culturally and linguistically appropriate oral health care.
3. Identify strategies to promote self-awareness about attitudes, beliefs, biases, and behaviors.
4. Describe steps to take to provide culturally and linguistically appropriate services.
5. Utilize principles of behavioral sciences in enhancing prevention and treatment services in oral health care.
6. Communicate with a diverse population of patients.
7. Identify and describe culturally and linguistically appropriate practice management strategies.
8. Communication and the characteristics of effective communication with health care professionals and staff regarding the patient care.

Setting

Classroom examination

Type of Competency Examination

Computer based written (Questionmark) (tests didactic materials; on the academic class calendar)

Time Allotted

60 minutes

Remediation Required Under the Following Circumstances

Remediation required if any section is failed with a score of less than 70%

Maryland Competency Statements

- 3a. Communicate effectively with other professionals and staff regarding the care of patients
- 3b. Utilize principles of behavioral sciences for maintaining patient's oral health
- 3c. Communicate with a diverse population of patients

Grading Information and Remediation

Grading

An overall grade of at least 70% is required for passing. Course is Pass/Fail

Critical Errors

Students must earn a score of at least 70%

Description of Remediation

A failure of the examination will require a one-on-one meeting with the course director to review the topics identified as problematic on the examination. The student will retake of the examination until passed

COMPETENCY EXAMINATION # 32

Title: Ethics Competency Exam
Course: PROF 538: Profession/Professionalism III/ General Dentistry
Timing: D3
Category: Summative
Contact: Dr. Fotini King
fking@umaryland.edu

General Description

Description of Assessment

Students will be presented with an ethical dilemma for a clinical case and will be asked to provide a one-page report applying principles of ethics taught in the course.

Prerequisites

PROF 518

Criteria for Evaluation

Student must use and address all applicable principles of ethics to the clinical case with a presented ethical dilemma.

The principles of ethics presented include:

- Autonomy
- Veracity
- Beneficence
- Non-maleficence
- Justice

Setting

Classroom examination

Type of Competency Examination

Computer based written (Questionmark) (case-based; on the academic class calendar)

Time Allotted

60 minutes

Remediation Required Under the Following Circumstances

A grade of less than 70% will require remediation.

Maryland Competency Statements

2a. Utilize and apply ethical and legal reasoning in the provision of dental care.

Grading Information and Remediation

Examiner

Dr. Fotini King

Grading

The competency consists of the student presented with an ethical dilemma and in a one page report the student will address the principles of ethics from the course and how they are applied to this case report.

Critical Errors

The student must apply all the principles of ethics taught in the course at a level of at least 70%.

Description of Remediation

Failure requires a one-on-one meeting with the course director to review the topics identified as problematic on the examination. An oral question and answer re-evaluation will occur until the student is able to show mastery of the material and then a make-up written examination will be given and the student will have to reach 70% or higher in order to pass. In the event of failure on the second attempt to take the examination, remediation or re-examination will not be offered until the Committee on Pre-doctoral Progression meets. The Committee will determine if remediation or re-examination will be provided.

General Rubric for PROF 538 Ethics Competency Exam

<u>70% and above---PASS</u>	<u>69% and below---FAIL</u>
<ul style="list-style-type: none">❖ Listed all pertinent facts❖ All five ethical principles applied❖ All ethical principles appropriately applied❖ Primary ethical issue identified❖ At least three possible and reasonable solutions were presented❖ Best solution was selected❖ Decision was justified	<ul style="list-style-type: none">❖ Did not list all pertinent facts❖ Not all five ethical principles applied❖ Not all ethical principles appropriately applied❖ Did not identify primary ethical issue❖ Fewer than three possible and reasonable solutions were presented❖ Best solution was not selected❖ Decision was unjustified

COMPETENCY EXAMINATION #33

Title: Informed Consent Competency Exam
Course: PROF 538: Profession/Professionalism III/ General Dentistry
Timing: D3
Category: Summative
Contact: Dr. Fotini V. Anagnostopoulos-King
fking@umaryland.edu

General Description

Description of Assessment

Students will be presented twenty questions (multiple choice form) based on the Informed Consent principles taught throughout the course.

Prerequisites

PROF 518

Criteria for Evaluation

Student must use and address all applicable principles of Informed Consent. The consent process is guided by the following concepts:

- Paternalism vs. two-way discussion, seeking second opinion
- Verbal and written witnessed informed consent
- Informed Refusal
- Mental Capacity with possible proxies
- Pediatric patients
- Conflict of interest

The core elements of Informed Consent presented include:

- Diagnosis
- Prognosis
- Nature of treatment
- Risks
- Benefits
- Alternative Treatments

Setting

Classroom examination

Type of Competency Examination

Computer based written (Questionmark) (case-based; on the academic class calendar)

Time Allotted

60 minutes

Remediation Required Under the Following Circumstances

A grade of less than 70% will require remediation.

Maryland Competency Statements

2a. Utilize and apply ethical and legal reasoning in the provision of dental care.

Grading Information and Remediation

Examiner

Dr. Fotini V. Anagnostopoulos-King

Grading

The competency consists of twenty multiple choice questions. The student must display and understanding of the concept of Informed Consent by answering 70% of the questions correctly.

Critical Errors

Failure to comprehend necessity of alternative treatments and risks associated with them when presenting to patient.

Description of Remediation

A one-on-one meeting will be held to review the topics identified as problematic on the examination. An oral question and answer re-evaluation will occur until the student is able to show mastery of the material. A make-up written examination will be given and the student will have to reach 70% or higher in order to pass.

In the event of failure on the second attempt to take the examination, remediation or re-examination will not be offered until the Committee on Pre-doctoral Progression meets. The Committee will determine if remediation or re-examination will be provided.

General Rubric for PROF 538 Informed Consent Competency Exam

<u>70% and above---PASS</u>	<u>69% and below---FAIL</u>
<ul style="list-style-type: none">❖ Displays understanding of the concept of Informed Consent	<ul style="list-style-type: none">❖ Displays limited understanding if any of the concept of Informed Consent❖ Less than 70% of multiple-choice questions were answered correctly

COMPETENCY EXAMINATION #34

Title: Radiology Clinical Competency Examination

Course: RADI 538: Radiology III/ Diagnostic Sciences

Timing: D3

Category: Summative

Contact: Dr. Azin Parsa AParsa1@umaryland.edu

Dr. Jeffery JBPrice@umaryland.edu

Ms. Sharon Varlotta Svarlotta@umaryland.edu

General Description

Description of Assessment

The student evaluates the DXTTR simulated patient and exposes the prescribed number of radiographs that constitutes a FMX (20 images with vertical BW's are required). The student exposes, orients the radiographs and completes the technical analysis within XELIS Dental/INFINITT 2D Viewer. The student is expected to demonstrate appropriate clinical techniques to ensure that proper infection control procedures are followed. The instructor observes clinical and processing techniques during the examination. The student is expected to work independently.

Prerequisites

Completion of RADI 528

Students must complete a minimum of one (1) D3 radiology block rotation before challenging this competency examination.

Criteria for Evaluation

- Comply with state and federal regulations related to OSHA and HIPPA
- Demonstrate proper infection control and radiation safety protocols when exposing a radiographic full mouth series (FMX)
- Demonstrate exposing the appropriate radiographs for an FMX
- Demonstrate appropriate clinical techniques when exposing an FMX
- Accurate technical analysis of radiographic/digital images
- Demonstrate acceptable quality assurance for radiographic images in the series
- Demonstrate acceptable radiographic anatomy knowledge from an FMX

See grading rubric for criteria for evaluation.

Setting

Pre-doctoral Clinic

Type of Competency Examination

Demonstration-clinical performance simulation/manikin.

Time Allotted

1 clinic session

Remediation Required Under the Following Circumstances

If 5 or more retakes are required, failure of the examination results; and, the student must repeat the examination on another DXTTR until competency is achieved.

Maryland Competency Statements

2a. Utilize and apply ethical and legal reasoning in the provision of dental care.

5e. Comply with state and federal regulations related to OSHA and HIPAA, catastrophe preparedness, patient confidentiality, infection control, hazard communications, radiation safety, and medical waste disposal.

5f. Apply quality assurance, assessment, and improvement concepts.

6c. Order, obtain, and interpret appropriate radiographic/digital images.

Grading Information and Remediation

Grading

The competency examination consists of the student exposing a FMX for an individual DXTTR) manikin. In addition, students are asked a series of five (5) intraoral radiographic anatomy questions. The grading follows the rubric on the grading form. Passing is 75%. A grade of less than 75% is a failure.

Critical Errors

An automatic failure occurs for the following critical errors:

- 6 or more retakes
- Lack of safe and effective treatment
- Failure to follow infection control guidelines
- Not demonstrating adequate quality assurance (Lack of Xelis approval)

Description of Remediation

A one-on-one meeting will be held to review the topics identified as problematic on the examination. An oral question-and-answer re-evaluation will occur until the student is able to show mastery of the material. A make-up written examination will be given and the student will have to reach 75% or higher to pass.

Professionalism & Infection Control:
Punctual, Prepared, Professional attitudes of integrity, honesty, and reliability. Instrument set up, barriers applied, gloves & mask, glasses w/side shields; #2 direct digital sensor ready with barrier
Critical Point: Do NOT Break the Chain of Asepsis
(S) Follows infection control procedures
(A) Minor infection control breach (-10)
(N) Student requires multiple corrections (-15)
(U) Repeated failures/breaches (-35) AUTOMATIC FAILURE
Radiology Patient Assessment & Management
Head rest adjusted properly; Glasses off, Dentures/partials, Piercings removed; Evaluate IO anatomy
Critical Points: Glasses/Appliances/Piercings Not Removed with Artifacts in Images or Error in Patient Assessment Before Radiographs
(S) Proper management of glasses/appliances/piercings
(S) Patient accurately assessed and radiographic technique altered with proper use of cotton rolls, Edge-EZ, etc; diagnostic quality radiographs obtained
(A) Minor artifacts from glasses/appliances/piercings that do not affect diagnostic quality of radiographs (-5)
(A) Patient accurately assessed but radiographic errors evident (-5)
(N) Few major artifacts from glasses/appliances/piercings that DO affect diagnostic quality of radiographs, requiring 3-4 retakes (-10)
(N) Patient was not well assessed and managed resulting in 3-4 retakes (-10)
(N) Many major artifacts from glasses/appliances/piercings that DO affect diagnostic quality of radiographs, requiring 5 retakes (-20)
(U) Patient was poorly assessed and managed resulting in 6 more retakes (-35) AUTOMATIC FAILURE
(U) Patient was poorly assessed and managed resulting in faculty intervention (-35) AUTOMATIC FAILURE
Radiation Safety
Proper use of lead apron/thyroid collar; Proper use of the XCP/collimator; Patient observed during exposure; Exposure switch pressed during exposure
Critical Points: Use of Lead Apron & Rectangular Collimator; Must Observe Patient & Must Keep Exposure Button Depressed During Exposure
(S) Proper use of lead apron & rectangular collimator; Patient observed & exposure button depressed during exposure
(A) Lead apron used, but improperly or a reminder required (-10) points for experience procedures
(N) No lead apron used; reminder required (-20) I.e., for experience procedures only
(U) No lead apron used, reminder required (-35) I.e., AUTOMATIC FAILURE for competency only
(U) No lead apron used, or lead apron used improperly, multiple reminders required (-35) , points for experience procedures, AUTOMATIC FAILURE
(U) No rectangular collimation ring used when applicable (-35) I.e., AUTOMATIC FAILURE , competency only
(U) Patient not observed during exposure (-5) experience or competency
(U) Exposure button not depressed properly during exposure (-5) experience or competency
Radiology Computer/Equipment Prep
Series planned & sent to INFINITT; Template showing in INFINITT; #2 sensor 'Ready for exposure'; X-ray unit w/ correct exposure settings; Tube head stored properly after exposures
Critical Points: Software not open/procedure planned; Proper storage of tube head and other equipment at end of procedure.
(S) Series planned in Axiom and sent to INFINITT properly, Proper storage of tube head and other equipment.
(A) Minor corrections required in Axiom/INFINITT settings; Tube head and equipment stored, but the tube head arms not folded properly (-5)

(N) Mismanagement of software with image acquisition errors; Tube head and equipment not stored; reminder required (-10)
(U) Multiple image acquisition errors due to mismanagement of Axiom/INFINITT; Improper storage of tube head and equipment before leaving the clinic area (-15)
Clinic Acquisition of Images
Follow ALARA/rad safety procedures; Proper patient management; Stay on task and focused; Proper image selection, BW type; PSP; Expose entire series in order; Proper use of PSPs including asepsis
Critical Point: approx. 2/3 of our patients have significant periodontal disease and require vertical BW's!! Look at your PA's and then decide which type of BW's to take; if unsure, ASK
(S) Proper selection of image type with independent decision
(A) Proper selection of image type with minimal input from faculty
(N) Improper selection of image type (-5)
(U) Exposing horizontal BW's when vertical BW's are indicated, without faculty consultation (-10)
(U) Breach of infection control with PSP technique while processing PSP plates (-10)
(U) Exposing wrong images after discussion with faculty (-25)
Grading Rubric for Image Retakes
Obtain approval for retakes; Must recognize technical errors; ASK for ASSISTANCE if >3 retakes
Critical Points: Retakes are to be expected in clinic; however, the goal is to have a minimal number of retakes to minimize our patient's radiation exposure.
(S) CRS with 1-2 retakes (-5)
(A) CRS with 3 retakes (-10)
(N) CRS with 4 retakes (-15)
(N) CRS with 5 retakes (-20)
(U) CRS with 6 or more retakes (-35); AUTOMATIC FAILURE
Knowledge of Radiographic and Clinical Anatomy
(S) Correctly identify all areas of anatomy
(A) Correctly identify all but one area of anatomy (-5)
(N) Correctly identify most areas of anatomy (2 areas incorrectly identified) (-10)
(N) Correctly identify most areas of anatomy (3 areas incorrectly identified) (-15)
(U) Correctly identify few or no areas of anatomy (4 areas incorrectly identified) (-20)
Review images for Technical Quality
See Page 3 for Technical Quality Analysis Document
Approve Series in INFINITT at Time of Service
(S) Series is approved in Xelis Dental and sent to INFINITT Viewer at time of service
(A) Series is approved in Xelis Dental and sent to INFINITT Viewer within 24-48 hours of acquisition
(U) Series is approved in Xelis Dental and sent to INFINITT Viewer more than 48 hours after acquisition (-25)

COMPETENCY EXAMINATION #35

Title: Radiographic Interpretation Competency Exam
Course: RADI 548: Radiology IV/ Diagnostic Sciences
Timing: D4
Category: Summative
Contact: Dr. Azin Parsa
Aparsa1@umaryland.edu

Dr. Jeffery Price
JBPrice@umaryland.edu

General Description

Description of Assessment

The radiographic interpretation competency is administered during the spring semester as a case-based examination. Several cases are presented with various radiographic features such as caries, periodontitis, pulpal pathology, basic odontogenic pathology, etcetera. Diagnostic and patient management questions are asked relating to these cases.

Prerequisites

Prior to taking this examination, the student must have successfully completed RADI 538, including the prerequisites of RADI 512 & 528. In addition, the student must have successfully challenged the technical competency component of RADI 538.

Criteria for Evaluation

- Demonstrates an understanding of the requirements for dental radiographs with high technical quality
- Demonstrates an understanding of the skills required for radiographic interpretation of dental caries
- Demonstrates an understanding of the skills required for radiographic interpretation of periodontitis
- Demonstrates an understanding of the skills required for radiographic interpretation of dental pathology
- In making decisions for radiographic interpretation the student will demonstrate the utilization of critical thinking and scientific knowledge

Follows grading rubric

Setting

Classroom examination

Type of Competency Examination

Computer based written (Questionmark) (case-based; on the academic class calendar)

Time Allotted

1 hour

Remediation Required Under the Following Circumstances

Failure of examination with a score of less than 70%

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision-making processes involved in patient care
- 2a. Utilize and apply ethical and legal reasoning in the provision of dental care
- 5e. Comply with state and federal regulations related to OSHA and HIPAA, catastrophe preparedness, patient confidentiality, infection control, hazard communications, radiation safety, and medical waste disposal.
- 5f. Apply quality assurance, assessment, and improvement concepts.
- 6c. Order, obtain, and interpret appropriate radiographic/digital images.
- 7l. Diagnose and manage temporomandibular disorders.

Grading Information and Remediation**Grading**

Passing is 70%

Critical Errors

Students must earn a score of 70% in order to pass this competency examination.

Description of Remediation

If a student (or students) fails the interpretation examination with a score of less than 70%, the student meets with the course director to review the topics identified as problematic on the examination. Oral question and answer re-evaluation will occur until the student is able to show mastery of the material.

General Rubric for RADI 548 Radiographic Competency Examination

Demonstrates an understanding of the requirements for dental radiographs with high technical quality	Honors: Displays an excellent understanding of the requirements of high quality dental radiographs. Is able to accurately and reliably recognize common technical errors in dental radiographs.	Pass: Displays some understanding of the requirements of high quality dental radiographs. Is able to recognize many common technical errors in dental radiographs; however, does not accurately recognize all common technical errors.	Fail: Displays limited understanding of the requirements of high quality dental radiographs. Is able to recognize few, if any, common technical errors in dental radiographs; and, seldom recognizes common technical errors.
Demonstrates an understanding of the skills required for radiographic interpretation of dental caries	Honors: Displays an excellent understanding of the radiographic features of dental caries and is able to accurately and reliably differentiate the various radiographic classifications of dental caries.	Pass: Displays some understanding of the radiographic features of dental caries and is able to detect most moderate to large carious lesions; however, has difficulty accurately detecting smaller carious lesions.	Fail: Displays little understanding of the radiographic features of dental caries and has difficulty accurately detecting carious lesions.
Demonstrates an understanding of the skills required for radiographic interpretation of periodontitis	Honors: Displays an excellent understanding of the radiographic features of periodontitis and is able to accurately and reliably differentiate the various radiographic classifications of periodontitis.	Pass: Displays some understanding of the radiographic features of periodontitis and is able to detect most sites exhibiting moderate periodontal bone loss; however, has difficulty accurately detecting early or mild periodontitis.	Fail: Displays little understanding of the radiographic features of periodontitis and has difficulty accurately detecting periodontitis.
Demonstrates an understanding of the skills required for radiographic interpretation of dental pathology	Honors: Displays a clear, well thought out process to follow the diagnostic schemes described in lecture during RADI 528; and, exhibits an excellent understanding of the principles of developing differential diagnoses.	Pass: Displays some understanding of the process required to follow the diagnostic schemes described in lecture during RADI 528; and, exhibits a limited understanding of the principles of developing differential diagnoses.	Fail: Displays very little understanding of the process required to follow the diagnostic schemes described in lecture during RADI 528; and, exhibits little to no understanding of the principles of developing differential diagnoses.

COMPETENCY EXAMINATION #36

Title: Posterior Class II preparation and restoration competency exam/clinical simulation
Course: REST 538A: Operative Dentistry/ General Dentistry
Timing: D4
Category: Formative
Contact: Mary Anne Melo, DDS, MS, PhD
mmelo@umaryland.edu

Dr. Isadora Garcia
lgarcia1@umaryland.edu

General Description

Description of Assessment

The student will be scheduled on **block** to complete the Class III and Class II preparation and restoration for composite resin using a bilayered caries tooth..

A simulation patient with an electronic patient record in Axium with simulated radiographs for the extent of caries present in the bilayered teeth to be used. The student will demonstrate knowledge of the patient's clinical conditions based upon this simulated patient record.

The preparation and restoration will be evaluated at each step based upon the grading criteria form. The student will follow the format for request for preparation modifications and liner placement using the CDCA format.

Assessment includes up-to-date patient record, diagnosis and radiograph interpretation for the tooth assigned. The assessment of the preparation and restoration criteria will be evaluated at each step based upon the rubric and grading form. The student will follow the format for request for preparation modification(s) and liner placement using the CDCA format.

Self-assessment: as part of this examination the student will perform a self-assessment that is described to the student during the pre-exam briefing before the start of each clinic session.

Before each check step during the examination the student will use their grading form to do the self-assessment of that step from the criteria for the examination.

Patient/tooth/lesion selection:

CLASS II Posterior composite resin

- Class II caries on a bilayered simulated tooth
- Proximal contact with the adjacent tooth for the surface being restored;

Dependent on extent of caries the class II composite resin preparation design can be a traditional preparation with proximal box and occlusal preparation or a conservative slot/box preparation.

Prerequisites

D3 student; Completion of the D1 operative dentistry course (FOUN 518)

Criteria for Evaluation

Criteria for evaluation (critical criteria are noted with *; any failure- critically deficient of a criteria is a failure of the exam):

Tooth preparation

Critical errors

- Wrong tooth/surface treated*
- Unrecognized pulpal exposure*

External outline form:

- Proximal clearance*
- Gingival clearance*
- Outline shape, continuity, extension*
- Isthmus (when present)*
- Cavosurface margin
- Sound marginal tooth structure

Internal form:

- Axial walls*
- Pulpal walls*
- Pulpal-axial line angle
- Caries-remaining restorative material(s)*
- Retention
- Proximal box walls*
- Treatment management:
 - Isolation dam
 - Pain control/anesthesia
 - Adjacent tooth damage*
 - Soft tissue damage*

Tooth restoration

Matrix placement

Critical errors:

- Fractured restoration*
- Incomplete procedure (timed out)*

Marginal integrity and surface finish:

- Marginal excess/deficiency*
- Surface finish
- Adjacent tooth structure*

Contour, contact and occlusion:

- Interproximal contact*
- Centric occlusion/excursive contacts*
- Anatomy/contour

Treatment management:

- Patient comfort
- Adjacent tooth damage*
- Soft tissue damage*

Setting

Clinic

Type of Competency Examination

Demonstration – clinical performance simulation (scheduled by block)

Time Allotted

1 clinic session

Remediation Required Under the Following Circumstances

Failure to receive a passing grade will require student remediation.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 7d. Restore missing or defective tooth structure to proper form, function, and esthetics, and promote soft and hard tissue health.

Grading Information and Remediation**Examiners**

Operative faculty

Grading

Grading is numerically based from a grading criteria sheet/rubric. A grade grid that identifies the numerical score for the student based upon performance in each of the criteria for the examination.

Critical errors are listed as DEF on the grading rubric form. A DEF in any category results in a failing grade and requires remediation. Other critical errors include wrong tooth/surface treated, fractured restoration, timed out procedure and inability to demonstrate critical thinking and scientific knowledge skills during the examination.

Critical Errors

See grading rubric and the criteria for evaluation section for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

A student failure will result in counseling with the student. The student will be required to repeat the examination.

Grade Grid Mock Board Competency Exams REST 538A and 548A Operative Dentistry

All critical criteria are noted by the DEF grade

Grade	Criteria
100	all SAT no other categories
95	all SAT except 1 ACC
91	all SAT except 2 ACC
88	all SAT except 3 ACC
85	all Sat except 4 ACC
82	all SAT except 1-2 ACC with 1 SUB or 1 SUB or all SAT except 5-6 ACC
80	all SAT except 3-4 ACC with 1 <u>SUB</u> or all SAT except 7-8 ACC
77	all SAT except 3-4 ACC with 2 SUB or 2 SUB or all SAT except 5-6 ACC with 1 SUB
75	all SAT except 5-6 ACC <u>with 2</u> SUB or all SAT except 7-9 ACC
73	all SAT except 7 ACC with 2 <u>SUB</u>
70	all SAT except 8-9 ACC with 2 <u>SUB</u>
F	3 or more SUB 1 or more DEF
	An "F" grade requires remediation; highest grade after remediation is a "70"

Posterior Composite Preparation Non-patient option
Mock Board Clinical Competency REST 548A Operative Dentistry

Student name: _____ Student ID # (S#): _____
 Date: _____ **REQUEST FOR LINER** YES ☐ NO ☐
 Tooth #: _____ Lesion surface MO ☐ DO ☐ MOD ☐ FACULTY APPROVAL LINER
 Lesion size: S ☐ M ☐ L ☐ FACULTY INITIALS: _____
CRITICAL ERRORS (Automatic Failures)
 Wrong tooth/surface treated Yes ☐
 Unrecognized Exposure Yes ☐

SELF-ASSESSMENT- CIRCLE YOUR SELF-ASSESSMENT ON LEFT SIDE OF CRITERIA

Sat. = Satisfactory Acc. = Minimally Acceptable Sub. = Marginally Substandard Def. = Critically Deficient*

EXTERNAL OUTLINE FORM

Proximal Clearance	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
Sat.	Proximal contact is either closed or visibly open up to 0.5 mm			
Acc.	Proximal contact is visible open, and proximal clearance at the height of contour extends beyond 0.5 mm but not more than 1.0 mm on either one or both proximal walls.			
Sub.	Proximal clearance at the height of contour extends beyond 1.0 mm but not more than 2.0 mm on either one or both proximal walls.			
Def.	The proximal clearance at the height of contour extends beyond 2.0 mm on either one or both proximal walls.			

Gingival Clearance	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
Sat.	Contact is open gingivally up to 0.5 mm.			
Acc.	The gingival clearance is greater than 0.5 mm but not greater than 1.0 mm..			
Sub.	The gingival clearance is greater than 1.0 but not more than 1.5 mm;			
Def.	The gingival clearance is greater than 1.5 mm; gingival contact is not visually open.			

Outline Shape/Extension	NA <input type="checkbox"/>	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
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(conventional preparation only)

NA
 Sat. The outline form includes all carious and non-coalesced fissures, and is smooth, flowing and, rounded with no sharp curves or angles.
 Acc. The outline form is sharp and irregular
 Sub. The outline form is inappropriately overextended by 0.5 mm but up to 1.0 mm so that it compromises the remaining marginal ridge and/or cusp(s). Non-coalesced fissure(s) remain which extend to the DEJ and are contiguous with the outline form.
 Def. The outline form is grossly overextended compromising the remaining marginal ridge to the extent that the cavosurface margin is unsupported by dentin or the width of the marginal ridge is 1 mm or less.

Isthmus	NA <input type="checkbox"/>	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Def <input type="checkbox"/>
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(conventional preparation only)

NA
 Sat. The isthmus must be 1-1.5 mm wide, but not more than ¼ the intercusp width of the tooth.
 Acc. The isthmus is more than ¼ and not more than 1/2 the intercusp width.
 Def. The isthmus is greater than ½ the intercusp width or less than 1 mm in width

Cavosurface margin	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>
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Sat. The external cavosurface margin meets the enamel at 90°. There are no gingival bevels. The gingival floor is flat, smooth and perpendicular to long axis of the tooth. The proximal gingival point angles may be rounded or sharp.
 Acc. The proximal cavosurface margin deviates from 90° but is unlikely to jeopardize the longevity of the tooth or restoration; this would include small areas of unsupported enamel. The gingival floor is rough and not perpendicular to long axis of the tooth.
 Sub. The proximal cavosurface margin deviates from 90°, and is likely to jeopardize the longevity of the tooth or restoration. This would include unsupported enamel and/or excessive bevel(s). The gingival floor is rough and uneven with fractures and irregularities that would put the restoration at risk and is not perpendicular to long axis of the tooth.

Sound Marginal Tooth Structure	Sat <input type="checkbox"/>	Sub. <input type="checkbox"/>
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Sat. The cavosurface margin terminates in sound natural tooth structure. There is no previous restorative material including sealants, at the cavosurface margin. There is no degree of decalcification on the gingival cavosurface margin.
 Sub. The cavosurface margin does not terminate in sound natural tooth structure; or there is explorer penetrable decalcification remaining on the cavosurface margin or the cavosurface margin terminates in previous restorative material.

SELF-ASSESSMENT- CIRCLE YOUR SELF-ASSESSMENT ON LEFT SIDE OF CRITERIA

INTERNAL FORM

Axial Walls	Sat	<input type="checkbox"/>	Acc	<input type="checkbox"/>	Sub.	<input type="checkbox"/>	Def	<input type="checkbox"/>
Sat.	The axial wall follows the external contours of the tooth and is entirely in dentin, not more than 1.0 mm from DEJ.							
Acc.	The depth of the axial wall is greater than 1.0 mm to 1.5 mm beyond the DEJ.							
Sub.	The axial wall is more than 1.5 mm and up to 2.5 mm beyond the DEJ.							
Def.	The axial wall is more than 2.5 mm beyond the DEJ or is still in enamel and does not include the DEJ							

Pulpal Floor (conventional preparation only)	NA	<input type="checkbox"/>	Sat	<input type="checkbox"/>	Acc	<input type="checkbox"/>	Sub.	<input type="checkbox"/>	Def	<input type="checkbox"/>
Sat.	The pulpal floor depth should be at least 1-2 mm in all areas; there may be remaining enamel. <u>The pulpal floor is flat, smooth and perpendicular to long axis of the tooth.</u>									
Acc.	The pulpal floor depth is between 2 and 3 mm in all areas; there may be remaining enamel. <u>The pulpal floor is rough and not perpendicular to long axis of the tooth.</u>									
Sub.	The pulpal floor depth is greater than 3 mm up to 4 mm. <u>The pulpal floor is very irregular and not perpendicular to long axis of the tooth.</u>									
Def.	The pulpal floor depth is 4 mm or greater from the cavosurface margin or less than 1 mm..									

Caries/Remaining material	Sat	<input type="checkbox"/>	Def	<input type="checkbox"/>
Sat.	All carious tooth structure and/or previous restoration has been removed.			
Def.	Caries or previous restorative material remains.			

Proximal Box Walls	Sat	<input type="checkbox"/>	Acc	<input type="checkbox"/>	Sub.	<input type="checkbox"/>
Sat.	The walls of the proximal box should be parallel or convergent occlusally					
Acc.	The walls of the proximal box are slightly divergent, but not likely to jeopardize the longevity of the tooth or restoration.					
Sub.	The walls of the proximal box are too divergent or too convergent (resulting in excessively undermined enamel).					

Surfaces	Sat	<input type="checkbox"/>	Sub	<input type="checkbox"/>
Sat	All prepared surfaces are smooth, rounded and well-defined			
Sub	Prepared surfaces are rough, sharp and irregular			

TREATMENT MANAGEMENT

Isolation Dam	Sat	<input type="checkbox"/>	Sub.	<input type="checkbox"/>
Sat.	The isolation dam is adequate to isolate sufficient teeth for visibility and accessibility and has no debris, saliva or hemorrhagic leakage into the preparation. This would include isolation of the treated tooth and both proximal adjacent teeth, if possible.			
Sub.	The isolation dam is inappropriate applied, torn and/or leaking, rendering the preparation unsuitable for evaluation or subsequent manipulation of the restorative material.			

Adjacent Tooth Damage	Sat	<input type="checkbox"/>	Acc	<input type="checkbox"/>	Sub.	<input type="checkbox"/>	Def	<input type="checkbox"/>
Sat.	The adjacent teeth and/or restorations are free from damage.							
Acc.	Damage to adjacent tooth/teeth can be removed with polishing without adversely affecting the shape and/or position of the contact.							
Sub.	Damage to the adjacent tooth/teeth requires recontouring which changes the shape and/or position of the contact.							
Def.	There is gross damage to adjacent tooth/teeth which requires a restoration.							

Soft tissue damage	Sat	<input type="checkbox"/>	Sub.	<input type="checkbox"/>	Def	<input type="checkbox"/>
Sat.	The soft tissue is free from damage or there is damage consistent with the procedure.					
Sub.	There is iatrogenic soft tissue damage that is inconsistent with the procedure.					
Def.	There is major damage to the soft tissue that is inconsistent with the procedure and pre-existing condition.					

Utilize critical thinking and scientific knowledge in decision-making processes

P ☐ F ☐

Faculty signature _____ Faculty number _____

*All DEF grades = critically deficient of a criterion is a failure of the exam and requires remediation

MODIFICATION REQUEST FORM

Cubicle #:

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Candidate Sequential:
PLACE ID LABEL HERE

Test Site

Place ID label above. If you do not have a ID label, write in the corresponding numbers from your ID card on the lines above.

Restorative

- ☐ Amalgam Prep
☐ Composite Prep

Tooth #: _____ Surface: _____

I certify that I have prepared the tooth to at least acceptable dimensions and all preexisting restorative material, if present, has been removed.

Candidate Initials: _____ Time: _____ : _____ CFE#:

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Modification Request #1

What: _____

Where: _____

How Much: _____

Why: _____

No Request ☐

Granted ☐

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Not Granted ☐

--	--	--	--	--

--	--	--	--	--

Document: _____

Modification Request #2

What: _____

Where: _____

How Much: _____

Why: _____

No Request ☐

Granted ☐

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Not Granted ☐

--	--	--	--	--

--	--	--	--	--

Document: _____

Modification Request #3

What: _____

Where: _____

How Much: _____

Why: _____

No Request ☐

Granted ☐

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Not Granted ☐

--	--	--	--	--

--	--	--	--	--

Document: _____

Modification Request #4

What: _____

Where: _____

How Much: _____

Why: _____

No Request ☐

Granted ☐

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Not Granted ☐

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--	--	--	--	--

Document: _____

Composite Class II Restoration (conventional or box)

SELF-ASSESSMENT- CIRCLE YOUR SELF-ASSESSMENT ON LEFT SIDE OF CRITERIA

MATRIX PLACEMENT

Sat ☐Sub. ☐

Sat. Matrix is stable with appropriate gingival wedge placement.

Sub. Matrix is not stable and can lead to an unacceptable restoration; gingival wedge has not been placed or is placed inappropriately placement.

CRITICAL ERRORS (*Automatic Failures*)

Fractured restoration

Yes ☐

Incomplete procedure (timed out)

Yes ☐Tooth #: _____ Lesion surface MO ☐ DO ☐ MOD ☐

Sat. = Satisfactory Acc. = Minimally Acceptable Sub. = Marginally Substandard Def. = Critically Deficient

MARGINAL INTEGRITY AND SURFACE FINISH

Marginal Excess/Deficiency

Sat ☐Acc ☐Sub. ☐Def ☐

Sat. No marginal excess (overhang) or deficiency is detectable at the restoration-tooth interface either visually or with an explorer. There is no evidence of voids or open margins

Acc. There is a detectable marginal excess or deficiency at the restoration-tooth interface either visually or with the fine of an explorer, but it is no greater than 0.5 mm. There is no evidence of pits or voids at the cavosurface margin.

Sub. A marginal excess or deficiency is detectable visually or with the fine of an explorer and the discrepancy is more than 0.5 mm and up to 1.0 mm, which can include pits and voids at the cavosurface margin.

Def. There is evidence of marginal excess or deficiency of more than 1.0 mm to include pits and voids at the cavosurface margin and/ or there is an open margin.

Surface Finish

Sat ☐Acc ☐Sub. ☐

Sat. The surface of the restoration is uniformly smooth and free of pits and voids.

Acc. The surface of the restoration is slightly grainy or rough but is free of significant pits and voids.

Sub. The surface of the restoration is rough and exhibits significant irregularities, pits or voids.

Adjacent Tooth Structures

Sat ☐Acc ☐Sub. ☐Def ☐

Sat. There is no evidence of unwarranted or unnecessary removal, modification, or recontouring of tooth structure adjacent to the restoration.

Acc. There is minimal evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration (enamelplasty).

Sub. There is evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration (enamelplasty).

Def. There is gross enamelplasty resulting in the exposure of dentin.

Bonding

Sat ☐Def ☐

Sat. The restoration is bonded to the prepared tooth structure

Def. The restoration is debonded and/or movable in the preparation

CONTOUR, CONTACT AND OCCLUSION

Interproximal Contact

Sat ☐Acc ☐Sub. ☐Def ☐

Sat. Interproximal contact is present, the contact is visually closed and properly shaped in size, shape and position; there is a definite but not excessive resistance to dental floss when passed through the interproximal contact area.

Acc. Interproximal contact is visually closed, and the contact is adequate in size, shape or position but demonstrates little resistance to dental floss.

Sub. Interproximal contact is visually closed, but the contact is deficient in size, shape, or position and demonstrates little resistance to dental floss or shreds the floss.

Def. The interproximal contact is visually open or will not allow floss to pass through the contact area.

SELF-ASSESSMENT- CIRCLE YOUR SELF-ASSESSMENT ON LEFT SIDE OF CRITERIA

Centric/Excursive Contacts	Sat <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
Sat.	When checked with articulating ribbon or paper, all centric and excursive contacts on the restoration are consistent in size, shape and intensity with such contacts on other teeth, in that quadrant.		
Sub.	When checked with articulating ribbon or paper, the restoration is in hyper-occlusion inconsistent with size, shape and intensity with the contacts on surrounding teeth, and requires adjustment.		
Def.	There is gross hyperocclusion so that the restoration is the only point of occlusion in that quadrant.		

Shade Selection	Sat <input type="checkbox"/>	Sub <input type="checkbox"/>
Sat	Shade selection matches surrounding tooth structure	
Sub	Shade selection does not match surrounding tooth structure	

CONTOUR, CONTACT AND OCCLUSION (cont)

Anatomy/Contour	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>
Sat.	The restoration reproduces the normal physiological proximal contours of the tooth, occlusal anatomy, marginal ridge anatomy and facial and lingual anatomy when present.		
Acc.	The restoration does not reproduce the normal occlusal anatomy, proximal contours or the tooth or marginal ridge anatomy or facial and lingual anatomy when present, but would not be expected to adversely affect the tissue health.		
Sub.	The restoration does not reproduce the normal occlusal anatomy, proximal contours of the tooth or marginal ridge anatomy or facial and lingual anatomy when present and would be expected to adversely affect the tissue health.		

TREATMENT MANAGEMENT

Adjacent Tooth Damage	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
Sat.	Adjacent and/or opposing hard tissue is free from evidence of damage or alteration.			
Acc.	Damage to adjacent tooth/teeth can be removed with polishing without adversely affecting the shape of the contour and/or contact.			
Sub.	Adjacent and/or opposing hard tissue show evidence of damage and/or alteration inconsistent with the procedure.			
Def.	There is gross damage and/or alteration to adjacent and/or opposing hard tissue inconsistent with the procedure.			

Soft tissue damage	Sat <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
Sat.	The soft tissue is free from damage or there is damage consistent with the procedure.		
Sub.	There is iatrogenic trauma to the soft tissue inconsistent with the procedure.		
Def.	There is gross iatrogenic trauma to the soft tissue inconsistent with the procedure and pre-existing condition of the soft tissue.		

Utilize critical thinking and scientific knowledge in decision-making processesP ☐ F ☐

Faculty signature _____ Faculty number _____

*All DEF grades = critically deficient of a criterion is a failure of the exam and requires remediation

COMPETENCY EXAMINATION # 37

Title: Anterior Class III preparation and restoration, clinical simulation
Course: REST 538A: Operative Dentistry
Timing: D4
Category: Formative
Contact: Mary Anne Melo, DDS, MS, PhD
mmelo@umaryland.edu
Isadora Garcia, DDS, MSc, PhD
Lgarcia1@umaryland.edu

General Description

Description of Assessment

The student will be scheduled on **block** to complete the Class III simulation preparation for a bilayered caries tooth during a single clinic session and restoration of a pre-prepared tooth anterior Class III with composite using the format of the CDCA examination. A simulation patient with an electronic patient record in Axium with simulated radiographs for the extent of caries present in the bilayered teeth to be used. The student will demonstrate knowledge of the patient's clinical conditions based upon this simulated patient record.

The preparation and restoration will be evaluated at each step based upon the grading criteria form for the Mock CDCA exam. The student will follow the format for request for preparation modification and liner placement using the CDCA format.

The assessment will follow the grading form for this examination.

Standard cavity design for Class III must have a boxlike design with well-defined internal walls. Gingival margin must break contact.

Self-assessment: as part of this examination the student will perform a self-assessment that is described to the student during the pre-exam briefing before the start of each clinic session. Before each check step during the examination the student will use their grading form to do the self-assessment of that step from the criteria for the examination.

Patient/tooth/lesion selection:

CLASS III COMPOSITE RESIN:

- Class III caries on a bilayered simulated tooth
- Must have proximal contact with adjacent tooth for the surface being restored
- Occlusal contact on opposing occlusion is NOT required

Standard cavity design for Class III must have a boxlike design with well defined internal walls. Gingival margin must break contact.

Prerequisites

D3 student; Completion of the D1 operative dentistry course (FOUN 518)

Criteria for Evaluation

Criteria for evaluation (critical criteria are noted with *; any failure- critically deficient of a criteria is a failure of the exam):

Tooth preparation

Critical errors

- Wrong tooth/surface treated*
- Unrecognized pulpal exposure*

External outline form:

- Outline extension*
- Gingival clearance*
- Margin smoothness/continuity/bevels
- Sound marginal tooth structure

Internal form:

- Axial walls*
- Internal retention
- Smoothness
- Caries-remaining restorative material(s)*

Treatment management:

- Isolation dam
- Pain control/anesthesia
- Adjacent tooth damage*
- Soft tissue damage*

Tooth restoration

Critical errors:

- Restoration is movable/debonded in preparation*
- Incomplete procedure (timed out)*

Marginal integrity and surface finish:

- Marginal excess/deficiency*
- Surface finish
- Adjacent tooth structure*
- Shade selection

Contour, contact and occlusion:

- Interproximal contact*
- Centric occlusion/excursive contacts*
- Anatomy/contour

Treatment management:

- Patient comfort
- Adjacent tooth damage*
- Soft tissue damage*

Setting
Clinic

Type of Competency Examination
Demonstration – clinical performance simulation (scheduled by block)

Time Allotted
1 clinic session

Remediation Required Under the Following Circumstances
Failure to receive a passing grade will require student remediation.

Maryland Competency Statements
1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
7d. Restore missing or defective tooth structure to proper form, function, and esthetics, and promote soft and hard tissue health.

Grading Information and Remediation

Examiners
Operative Faculty

Grading
Grading is numerically based from a grading criteria sheet/rubric. A grade grid that identifies the numerical score for the student based upon performance in each of the criteria for the examination.
Critical errors are listed as DEF on the grading rubric form. A DEF in any category results in a failing grade and requires remediation. Other critical errors include wrong tooth/surface treated, fractured restoration, timed out procedure and inability to demonstrate critical thinking and scientific knowledge skills during the examination.

Critical Errors
See grading rubric and the criteria for evaluation section for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation
A student failure will result in counseling with the student. The student will be required to repeat the examination.

Grade Grid Mock Board Competency Exams REST 538A and 548A Operative Dentistry

All critical criteria are noted by the DEF grade

Grade	Criteria
100	all SAT no other categories
95	all SAT except 1 ACC
91	all SAT except 2 ACC
88	all SAT except 3 ACC
85	all Sat except 4 ACC
82	all SAT except 1-2 ACC with 1 SUB or 1 SUB or all SAT except 5-6 ACC
80	all SAT except 3-4 ACC with 1 <u>SUB</u> or all SAT except 7-8 ACC
77	all SAT except 3-4 ACC with 2 SUB or 2 SUB or all SAT except 5-6 ACC with 1 SUB
75	all SAT except 5-6 ACC <u>with 2</u> SUB or all SAT except 7-9 ACC
73	all SAT except 7 ACC with 2 <u>SUB</u>
70	all SAT except 8-9 ACC with 2 <u>SUB</u>
F	3 or more SUB 1 or more DEF

An "F" grade requires remediation; highest grade after remediation is a "70"

Anterior Composite Resin Class III Preparation
Mock Board Clinical Competency REST 548A Operative Dentistry

Non-patient option

Student name: _____ Student ID #: _____

Date: _____

REQUEST FOR LINER YES ☐ NO ☐

FACULTY APPROVAL _____ (initial)

Tooth #: _____ Lesion surfaces ML ☐ DL ☐ MF ☐ DF ☐

Lesion size: S ☐ M ☐ L ☐ Restoration present ☐ (draw outline on odontogram)

CRITICAL ERRORS (Automatic Failures)

Wrong tooth/surface treated

Yes ☐

Unrecognized Exposure

Yes ☐

Sat. = Satisfactory Acc. = Minimally Acceptable Sub. = Marginally Substandard Def. = Critically Deficient*

SELF-ASSESSMENT- CIRCLE YOUR SELF-ASSESSMENT ON LEFT SIDE OF CRITERIA
EXTERNAL OUTLINE FORM

Outline extension	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
Sat. The outline dimension incisal-gingival is ≤ 2.5 mm; the wall opposite the access, if broken may extend ≤ 0.5 mm beyond the contact area. The outline form may be over-extended mesiodistally 0.5 mm to ≤ 1.0 mm beyond what is necessary for complete removal of caries and/or previous restorative material.				
Acc. The outline dimension incisal-gingival is > 2.5 mm to ≤ 3.0 mm; the wall opposite the access, if broken may extend > 0.5 mm to ≤ 1.0 mm beyond the contact area. The outline form may be over-extended mesiodistally > 1.0 mm to < 1.5 mm beyond what is necessary for complete removal of caries and/or previous restorative material.				
Sub. The outline form is underextended making caries removal or insertion of restoration material questionable. The outline dimension incisal-gingival is > 3.0 to ≤ 5.0 mm.				
Def. The wall opposite the access opening extends more than 1 mm beyond the contact area but no more than 2 mm. The outline dimension incisal-gingival is > 5.0 mm; the wall opposite the access extends > 2.0 mm beyond the contact area. The outline form may be over-extended mesiodistally > 1.5 mm beyond what is necessary for complete removal of caries and/or previous restorative material. The incisal angle is unnecessarily removed or fractured.				
The wall opposite the access opening extends more than 2 mm beyond the contact area.				

Gingival wall/contact	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
Sat. The gingival clearance is ≤ 0.5 mm and can be visually closed. The incisal contact need not be broken, unless indicated by the location of the caries. If a lingual approach is initiated, facial may or may not be broken as long as the margin terminates in sound tooth structure. <u>The gingival floor is flat and perpendicular to long axis of the tooth.</u>				
Acc. The gingival clearance > 0.5 mm to ≤ 1.0 mm. <u>The gingival floor is not perpendicular to long axis of the tooth.</u>				
Sub. The gingival clearance > 1.0 mm to ≤ 2.0 mm. <u>The gingival floor is not perpendicular to long axis of the tooth.</u>				
Def. The gingival clearance is > 2.0 mm				

Margin Smoothness/Continuity/Bevels	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>
Sat. Cavo-surface margins form a smooth continuous curve with no sharp angles. Enamel cavo-surface margins may be beveled.			
Acc. The cavo-surface margins are slightly irregular. Enamel cavo-surface margin bevels if present, do not exceed 1.0 mm in width.			
Sub. The cavo-surface margin is rough and severely irregular. Enamel cavo-surface margin bevels, if present, exceed 1.0 mm in width, are not uniform or are inappropriate for the size of the restoration.			

Sound Marginal Tooth Structure	Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>
Sat. The cavo-surface margin terminates in sound natural tooth structure. There is no previous restorative material excluding sealants, at the cavo-surface margin. There is no degree of decalcification on the gingival cavo-surface margin.			
Sub. There are large or multiple areas of unsupported enamel which are not necessary to preserve facial esthetics. The cavo-surface margin does not terminate in sound natural tooth structure (cannot terminate in a restorative material.)			
Def. There is explorer-penetrable decalcification remaining on the cavo-surface margin			

SELF-ASSESSMENT- CIRCLE YOUR SELF-ASSESSMENT ON LEFT SIDE OF CRITERIA

INTERNAL FORM

Axial walls (depends on tooth prepared)		Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>
Sat.	MAX CENTRALS & MAX/MAND CANINES: the depth of the axial wall extends ≤ 1.0 mm from DEJ MAX LATERALS & MAND INCISORS: the depth of the axial wall extends ≤ 1.0 mm from cavosurface margin; axial wall smooth			
Acc.	MAX CENTRALS & MAX/MAND CANINES: the depth of the axial wall extends > 1.0 mm to ≤ 1.5 mm from DEJ MAX LATERALS & MAND INCISORS: the depth of the axial wall extends > 1.0 mm to ≤ 1.25 mm from cavosurface margin; axial wall rough			
Sub.	MAX CENTRALS & MAX/MAND CANINES: the depth of the axial wall extends > 1.5 mm to ≤ 2.5 mm from DEJ MAX LATERALS & MAND INCISORS: the depth of the axial wall extends > 1.25 mm to ≤ 2.0 mm from cavosurface margin; axial wall highly irregular			
Def.	MAX CENTRALS & MAX/MAND CANINES: the depth of the axial wall extends > 2.5 mm from DEJ MAX LATERALS & MAND INCISORS: the depth of the axial wall extends > 2.0 mm from cavosurface margin			

Smoothness		Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>
Sat.	All prepared surfaces are smooth and well-defined.			
Acc.	The internal walls are slightly rough and irregular.			
Sub.	The internal walls are significantly rough and irregular			

Caries/Remaining material		Sat <input type="checkbox"/>	Def <input type="checkbox"/>
Sat.	All carious tooth structure and/or previous restoration has been removed.		
Def.	Caries has not been accessed and /or remains in the preparation; previous restorative material remains in the preparation.		

TREATMENT MANAGEMENT

Isolation Dam		Sat <input type="checkbox"/>	Sub. <input type="checkbox"/>
Sat.	The isolation dam is adequate to isolate sufficient teeth for visibility and accessibility and has no debris, saliva or hemorrhagic leakage into the preparation. This would include isolation of the treated tooth and both proximal adjacent teeth, if possible.		
Sub.	The isolation dam is inappropriate applied, torn and/or leaking, rendering the preparation unsuitable for evaluation or subsequent manipulation of the restorative material.		

Adjacent Tooth Damage		Sat <input type="checkbox"/>	Acc <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
Sat.	The adjacent teeth and/or restorations are free from damage.				
Acc.	Damage to adjacent tooth/teeth can be removed with polishing without adversely affecting the shape and/or position of the contact.				
Sub.	Damage to the adjacent tooth/teeth requires recontouring which changes the shape and/or position of the contact.				
Def.	There is gross damage to adjacent tooth/teeth which requires a restoration.				

Soft tissue damage		Sat <input type="checkbox"/>	Sub. <input type="checkbox"/>	Def <input type="checkbox"/>
Sat.	The soft tissue is free from damage or there is damage consistent with the procedure.			
Sub.	There is iatrogenic soft tissue damage that is inconsistent with the procedure.			
Def.	There is major damage to the soft tissue that is inconsistent with the procedure and pre-existing condition.			

Utilize critical thinking and scientific knowledge in decision-making processes P ☐ F ☐

Faculty signature _____ Faculty number _____

*All DEF grades = critically deficient of a criterion is a failure of the exam and requires remediation

MODIFICATION REQUEST FORM

Cubicle #:

--	--	--	--

Candidate Sequential:
PLACE ID LABEL HERE

Test Site

Place ID label above. If you do not have a ID label, write in the corresponding numbers from your ID card on the lines above.

Restorative

- ☐ Amalgam Prep
☐ Composite Prep

Tooth #: _____ Surface: _____

I certify that I have prepared the tooth to at least acceptable dimensions and all preexisting restorative material, if present, has been removed.

Candidate Initials: _____ Time: _____ : _____ CFE#:

--	--	--	--	--	--

Modification Request #1

What: _____

Where: _____

How Much: _____

Why: _____

No Request ☐

Granted ☐

--	--	--	--	--	--

Not Granted ☐

--	--	--	--	--	--

--	--	--	--	--	--

Document: _____

Modification Request #2

What: _____

Where: _____

How Much: _____

Why: _____

No Request ☐

Granted ☐

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Not Granted ☐

--	--	--	--	--	--

--	--	--	--	--	--

Document: _____

Modification Request #3

What: _____

Where: _____

How Much: _____

Why: _____

No Request ☐

Granted ☐

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Not Granted ☐

--	--	--	--	--	--

--	--	--	--	--	--

Document: _____

Modification Request #4

What: _____

Where: _____

How Much: _____

Why: _____

No Request ☐

Granted ☐

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Not Granted ☐

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--	--	--	--	--	--

Document: _____

Anterior Class III Composite Resin Restoration

CRITICAL ERRORS (*Automatic Failures*)

The restoration is debonded and/or movable in the preparation Yes ☐
Incomplete procedure (timed out) Yes ☐

Sat. = Satisfactory Acc. = Minimally Acceptable Sub. = Marginally Substandard Def. = Critically Deficient

SELF-ASSESSMENT- CIRCLE YOUR SELF-ASSESSMENT ON LEFT SIDE OF CRITERIA

MARGINAL INTEGRITY AND SURFACE FINISH

Marginal Excess/Deficiency	Sat	Acc	Sub.	Def
Sat. There is no marginal excess (overhang) or deficiency. There is no detectable marginal excess at the restoration-tooth interface either visually or with the tine of the explorer. There is no evidence of voids or open margins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acc. There is a detectable marginal excess or deficiency at the restoration-tooth interface either visually or with the tine of an explorer, but it is no greater than 0.5 mm. There is no evidence of voids or open margins.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sub. The restoration-tooth interface is detectable visually or with the tine of an explorer. There is evidence of marginal excess or deficiency, more than 0.5 mm and up to 1.0 mm, which can include pits and voids at the cavosurface margin.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Def. There is evidence of marginal excess more than 1.0 mm or marginal deficiency of up to 0.5 mm to include pits and voids at the cavosurface margin and/or there is an open margin. There is internal contamination between the restoration and tooth.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Surface Finish	Sat	Acc	Sub.
Sat. The surface of the restoration is uniformly smooth and free of pits and voids.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acc. The surface of the restoration is slightly grainy or rough but is significantly free of pits and voids.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sub. The surface of the restoration is rough and exhibits significant irregularities, pits or voids.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Adjacent Tooth Structures	Sat	Acc	Sub.	Def
Sat. There is no evidence of unwarranted or unnecessary removal, modification, or recontouring of tooth structure adjacent to the restoration.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acc. There is minimal evidence of unwarranted or unnecessary removal , modification or recontouring of tooth structure adjacent to the restoration (enamelplasty).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sub. There is evidence of unwarranted or unnecessary removal , modification or recontouring of tooth structure adjacent to the restoration (enamelplasty).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Def. There is gross enamelplasty resulting in the exposure of dentin.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Shade Selection	Sat	Sub.
Sat. The shade of the restoration blends with the surrounding tooth structure.	<input type="checkbox"/>	<input type="checkbox"/>
Sub. The shade of the restoration contrasts markedly with the surrounding tooth structure.	<input type="checkbox"/>	<input type="checkbox"/>

SELF-ASSESSMENT- CIRCLE YOUR SELF-ASSESSMENT ON LEFT SIDE OF CRITERIA**CONTOUR, CONTACT AND OCCLUSION**

Interproximal Contact		Sat	Acc	Sub.	Def
Sat.	Interproximal contact is present, the contact is visually closed and is properly shaped and positioned; and there is definite but not excessive, resistance to dental floss when passed through the interproximal contact area.				
Acc.	Interproximal contact is visually closed, and the contact is of adequate size, shape or position but demonstrates little resistance to dental floss.				
Sub.	Interproximal contact is visually closed, but the contact is deficient in size, shape, or position and demonstrates little resistance to dental floss or shreds the floss.				
Def.	The interproximal contact is visually open or will not allow floss to pass through the contact area.				

Centric/Excursive Contacts		Sat	Sub.	Def
Sat.	When checked with articulating ribbon or paper, all centric and excursive contacts on the restoration are consistent in size, shape and intensity with such contacts on other teeth, in that quadrant.			
Sub.	When checked with articulating ribbon or paper, the restoration is in hyper-occlusion inconsistent with size, shape and intensity with the contacts on surrounding teeth, and requires adjustment.			
Def.	There is gross hyperocclusion so that the restoration is the only point of occlusion in that quadrant.			

Anatomy/Contour		Sat	Acc	Sub.
Sat.	The restoration reproduces the normal physiological proximal contours of the tooth, lingual and facial anatomy and marginal ridge anatomy.			
Acc.	The restoration does not reproduce the normal lingual and facial anatomy, proximal contours or the tooth or marginal ridge anatomy, but would not be expected to adversely affect the tissue health.			
Sub.	The restoration does not reproduce the normal lingual and facial anatomy, proximal contours of the tooth or marginal ridge anatomy and would be expected to adversely affect the tissue health.			

TREATMENT MANAGEMENT

Adjacent Tooth Damage		Sat	Acc	Sub.	Def
Sat.	Adjacent and/or opposing hard tissue is free from evidence of damage or alteration.				
Acc.	Damage to adjacent tooth/teeth can be removed with polishing without adversely affecting the shape of the contour and/or contact.				
Sub.	Adjacent and/or opposing hard tissue show evidence of damage and/or alteration inconsistent with the procedure.				
Def.	There is gross damage and/or alteration to adjacent and/or opposing hard tissue inconsistent with the procedure.				

Soft tissue damage		Sat	Sub.	Def
Sat.	The soft tissue is free from damage or there is damage consistent with the procedure.			
Sub.	There is iatrogenic trauma to the soft tissue inconsistent with the procedure.			
Def.	There is gross iatrogenic trauma to the soft tissue inconsistent with the procedure and pre-existing condition of the soft tissue.			

Utilize critical thinking and scientific knowledge in decision-making processes P ☐ F ☐

Faculty signature _____ Faculty number _____

*All DEF grades = critically deficient of a criterion is a failure of the exam and requires remediation

COMPETENCY EXAMINATION #38

Title: Caries management-pulpal management clinical competency exam
Course: REST 548A: Operative Dentistry III/ General Dentistry
Timing: D4
Category: Summative
Contact: Drs. Eve Desai and Andrea Morgan
edesai@umaryland.edu
amorgan@umaryland.edu

General Description

Description of Assessment

This assessment is part of the Mock Board Competency Exams for REST 548A Operative Dentistry. Assessment includes diagnosis and preparation to identify caries and then requests using the CDCA-WREB AEX modification request format to identify and describe the removal of caries. The assessment includes critical thinking skills by the student as an assessment of independent decision making and clinical performance. For deep caries where a pulp exposure may occur the student will be evaluated for decision-making in managing vital pulpal therapies.

- this examination is an assessment of the student's ability to detect, remove and manage caries; management of caries for this competency includes complete removal. If there is a pulp exposure pulpal management will follow the guidelines of the Division of Endodontics.

The preparation and restoration will be evaluated at each step based upon the grading criteria form for the anterior and posterior mock board competency exam. The student will follow the format for request for preparation modification and liner placement using the CDCA-WREB format. The assessment will follow the grading form/rubric for this examination and is included in the rubric for the mock board competency exam- for caries removal criteria.

Prerequisites

D4 student, Operative treatment of at least 5 teeth that have had carious lesions to include teeth that are treated with caries control. Operative treatment of non-carious lesions cannot be included in the five teeth treated as a prerequisite.

Criteria for Evaluation

Case selection using critical thinking to determine a diagnosis following patient selection criteria.

Tooth preparation

*Critical errors- automatic failure

Wrong tooth/surface treated*

Unrecognized pulpal exposure*

External outline form:

Outline extension*

Gingival clearance*

Margin smoothness/continuity/bevels

Sound marginal tooth structure

Internal form:

Axial walls*

Internal retention

Smoothness

Caries-remaining restorative material(s)*

Treatment management:

Isolation dam

Pain control/anesthesia

Adjacent tooth damage*

Soft tissue damage*

Tooth restoration

Critical errors:

Restoration is movable/debonded in preparation*

Incomplete procedure (timed out)*

Marginal integrity and surface finish:

Marginal excess/deficiency*

Surface finish

Adjacent tooth structure*

Shade selection

Contour, contact and occlusion:

Interproximal contact*

Centric occlusion/excursive contacts*

Anatomy/contour

Treatment management:

Patient comfort

Adjacent tooth damage*

Soft tissue damage*

Setting

Clinic

Type of Competency Examination

Demonstration- clinic performance

Time Allotted

1 clinic session

Remediation Required Under the Following Circumstances

One attempt and failure requires remediation.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patient and restore oral health.
- 7d. Restore missing or defective tooth structure to proper form, function, and esthetics

Grading Information and Remediation**Examiners**

Operative Faculty

Grading

Pass/Fail

Critical Errors

See grading rubric and the criteria for evaluation section for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

Failure to receive a passing grade for this patient-based procedure will require student remediation. Student remediation will include student counseling with the supervising faculty and the repeat of the examination. The student is allowed three attempts to pass this examination.

COMPETENCY EXAMINATION #39

Title: Year III Diagnostic competency for Class II and Class III caries
Course: TXPL 538: Treatment Planning II
Timing: D3
Category: Summative
Contact: Stephanie Dennison, DDS
sdennison@umaryland.edu

General Description

Description of Assessment

This competency is an assessment of the student's ability to diagnose and treatment plan from radiographic and clinical evidence both a Class II minimally invasive to moderate caries lesion and Class III minimal to moderate carious lesions (lesions that would clinically be expected to reach the DEJ- ICDAS II criteria 2 to criteria 4) and that for a minimally invasive lesion (ICDAS II criteria 2) because of patient's caries risk would not be treated with a remineralization therapy but would be treated with a restoration.

Prerequisites

Completion of TXPL 528 Treatment Planning, REST 528A Operative Dentistry; D3 student

Criteria for Evaluation

Radiographic or clinical diagnosis for a Class II or Class III carious lesion that fulfills the ICDAS II criteria 2 (demineralization (brown discoloration) involving between 50% of the enamel and 1/3 of the dentin. Based upon the patient's caries risk, this lesion would be deemed as not to be treated or planned for remineralization therapy.

Setting

Classroom

Type of Competency Examination

Computer based written (Questionmark) (case-based; on the academic class calendar)

Time Allotted

60 minutes

Remediation Required Under the Following Circumstances

Failure of the exam with a grade of less than 70%

Maryland Competency Statements

7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patient and restore oral health.

Grading Information and Remediation

Examiners

Dr. Dennison

Grading

Pass/Fail

Critical Errors

See grading rubric and the criteria for evaluation section for detailed description of critical errors.

Description of Remediation

Failure to receive a passing grade for this competency will require remediation. The student will be counseled and will repeat the examination.

Grading Rubric:

Radiographic or clinical diagnosis for a Class II or Class III carious lesion that fulfills the ICDAS II criteria 2 (demineralization (brown discoloration) involving between 50% of the enamel and 1/3 of the dentin. Based upon the patient's caries risk, this lesion would be deemed as not to be treated planned for remineralization therapy.

ICDAS II (International Caries Detection and Assessment System)

- Sound tooth surface-0: • There should be no change in enamel translucency after 5 seconds air drying.
- First visual change in enamel-1: • When seen wet there is no evidence of any change in color but after air drying a carious opacity is visible that is not consistent with the clinical appearance of sound enamel and is seen from the buccal or lingual surface.
- Distinct visual change in enamel-2: • When wet there is a carious opacity and/or brown carious discoloration and the lesion is still visible when dry. Lesion may be seen when viewed from the buccal or lingual direction.
- When viewed from the occlusal direction, this opacity may be seen as a shadow confined to enamel, seen through the marginal ridge.
- Initial enamel breakdown due to caries with no visible dentin-3 • Once dried for approximately 5 seconds there is distinct loss of enamel integrity viewed from the buccal or lingual direction.
- Underlying dark shadow from dentin with or without enamel breakdown-4 • This lesion appears as a shadow of discolored dentin visible through an apparently intact marginal ridge, buccal or lingual walls of enamel.
- This shadow may appear as grey, blue or brown in color and is often seen more easily when tooth is wet.
- Distinct cavity with visible dentin-5: • Cavitation in opaque or discolored enamel with exposed dentin.
- Extensive distinct cavity with visible dentin-6: • Obvious loss of tooth structure, extensive cavity may be deep or wide and dentin is clearly visible on both walls and at the base. The marginal ridge may or may not be present.

COMPETENCY EXAMINATION # 41

Title: Posterior Fixed Partial Denture Preparation #19-21 – Clinical Simulation Exam

Course: REST 538B: Fixed Prosthodontics

Timing: D3, first semester as assigned on Academic Calendar

Category: Formative

Contact: Dr. James Cope, Dr. Amelia Orta
jcope1@umaryland.edu
aorta@umaryland.edu

General Description

Description of Assessment

Using a typodont in the 5th floor simulation lab, students prepare teeth #19 and #21 for a PFM bridge.

Prerequisites

Completion of REST 528

Successful completion of simulation all ceramic crown #9 and provisional clinical exam.

Criteria for Evaluation of Bridge Preparation

- Occlusal Clearance
- Finish Line
- Axial Reduction
- Taper/Retention
- Finish of Preparation
- Occlusion
- Proximal Contacts
- Margin Integrity
- Anatomic Form
- Density and Finish of Acrylic
- Care of Soft tissues and adjacent teeth

Criteria for Evaluation of Provisional

- Contours and anatomy
- Intaglio surface
- Margins
- Embrasures
- Interproximal contacts
- Finishing and polishing
- Occlusion

Rubric describes the point additions and deductions to calculate a grade for this examination.

Setting

5th floor simulation lab

Type of Competency Examination

Demonstration – clinical performance simulation (scheduled by block)

Time Allotted

1 clinic session – 4 hours

Remediation Required Under the Following Circumstances

A score of less than 70% requires remediation.

Maryland Competency Statements

7d. Restore missing or defective tooth structure to proper form, function, and esthetics and promote soft and hard tissue health.

7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.

Grading Information and Remediation

Examiners

Calibrated Prosthodontics faculty

Grading

Each activity has a grading sheet and rubric (Attached below)

An overall grade of at least 70% is required for passing.

Exam will be 20% of REST 538B final grade.

Clinical points will be awarded for the summer activity depending on performance. An A grade will receive 50 Qpts, B grade 40 Qpts and C grade 30 Qpts in the REST 538B course at the end of the D3 year.

Critical Errors Examples include but are not limited to the following:

Preparation

Occlusal clearance > 2.0 mm or < 0.5 mm.

PFM: FC: <1.5mm or >2.5mm NFC: <1.0mm or >2.0 Metal: FC <1mm or >2mm, NFC <0.5mm or >1.5

Excessive axial reduction or gross under reduction > 2.5 mm or < 0.5 mm

PFM: <1mm or >2mm Metal: <0.5mm or >2.0mm

Margin location > 1.5 mm above FGM or > 0.5 sub FGM

Margin design PFM <1 or >2 Metal <0.5 or > 2.0 mm or not detectable and/or is feathered.

Taper < 6° or >20° Gross undercuts on axial wall with lack of 360° visibility of margin from path of insertion

Damage to adjacent teeth- gross damage inconsistent with the procedure; adjacent tooth would need restoration

Tissue damage- gross damage to soft tissue inconsistent with the procedure

Provisional

Gross hyper occlusion or hypo occlusion

Gross open proximal contact

Gross marginal opening or overhang

Excessive voids/porosity

Rough, unfinished surfaces

Automatic failures:

Preparation of the wrong tooth

Removal of the typodont during examination

Broken provisional

Failure to wear PPE

Description of Remediation

If the student scores less than 70% there is departmental counseling to identify the problematic areas. The student will have to repeat the examination, prior to rechallenge the competency again the student must show 3 practice teeth to the course directors. If the remediation is not successfully completed, the student will be referred to the Clinical Progression Committee. (???)

Grading Rubric for Summer activity All ceramic crown prep #9

REST 538B - Clinical Fixed Prosthodontic Grading Form for Preparation: All Ceramic Crown Preparation #9 for Provisional Summer Project to be saved and used for Comp 40-41

Student Name	S#	GP
Assigned Faculty Name and Signature		Date

Rules:

1. Grading criteria One **DEF** or more than three (3) **SUB** is an automatic failure.
2. Every **DEF** is 15% points deduction. Every **SUB** is 10% points deduction. Passing grade is 70%
3. Blackboard submission on course REST 538B: a) Self-assessment, b) Occlusal view of the prep, c) Frontal view of the prep, d) Lingual view of the prep, e) Frontal view of the provisional, and f) Lingual view of the provisional

CERVICAL MARGIN AND DRAW By using explorer/~~perio~~ probe, visual & tactile inspection with lab putty matrix

	ACC	SUB	DEF
Margin Vertical Position	<input type="checkbox"/> 0.5 to 1mm above FGM	<input type="checkbox"/> < 0.5 above FGM > 1mm above FGM	<input type="checkbox"/> Below FGM "subgingival" or >1.5mm above FGM
Margin/definition	<input type="checkbox"/> Cervical margin is continuous and smooth	<input type="checkbox"/> Cervical margin is continuous, but irregular	<input type="checkbox"/> Cervical margin has no continuity, cupped or J-shaped.
Facial Margin/width Chamfer	<input type="checkbox"/> 1 to 1.2mm	<input type="checkbox"/> $0.8 \leq X \leq 1.5\text{mm}$	<input type="checkbox"/> $0.8 > X > 1.5\text{mm}$
Lingual Margin/width	<input type="checkbox"/> 1 to 1.2mm	<input type="checkbox"/> $0.8 \leq X \leq 1.5\text{mm}$	<input type="checkbox"/> $0.8 > X > 1.5\text{mm}$
Line of draw	<input type="checkbox"/> Deviates < 20° from the long axis of the tooth	<input type="checkbox"/> Deviates 20° to <30° from the long axis of the tooth.	<input type="checkbox"/> Deviates ≥ 30° from the long axis of the tooth

WALLS, TAPER AND MARGIN By using explorer/~~perio~~ probe, visual & tactile inspection with lab putty matrix

Axial tooth removal is:	<input type="checkbox"/> 1.5 mm	<input type="checkbox"/> $1\text{mm} \leq X \leq 2\text{mm}$	<input type="checkbox"/> The axial tissue removal is <0.9mm or >2.0mm
Axial Walls Smoothness/Undercut Rounded line/point angles	<input type="checkbox"/> Smooth and rounded	<input type="checkbox"/> Moderately sharp line angles	<input type="checkbox"/> No continuity or definition/jagged/irregular/beveled/cupped <input type="checkbox"/> Excessive sharp line angles with no evidence of rounding
Taper	<input type="checkbox"/> 6° - 10° No Undercuts parallel to ≤ 12° per wall.	<input type="checkbox"/> 10°-20° Minor undercut on axial wall but 360° visibility of margin for path of insertion	<input type="checkbox"/> < 6° or >20° Gross undercuts on axial wall with lack of 360° visibility of margin from path of insertion.
Incisal reduction is: Vertical reduction (VR) Incisal Edge Width (IEW)	<input type="checkbox"/> 1.5-2.0mm uniform VR ≥ 0.8mm IEW	<input type="checkbox"/> <1.4mm or 2.5mm VR 0.5 to 0.8mm IEW	<input type="checkbox"/> $1.2\text{mm} < X < 2.5\text{mm VR}$ <0.5mm IEW
Lingual wall height Straight lingual cingulum wall measurement. Ideal length 2mm	<input type="checkbox"/> ≥1.5mm	<input type="checkbox"/> $0.8 \leq X \leq 1.5\text{mm}$	<input type="checkbox"/> <0.8mm
Interproximal Clearance Perio probe tip passes without binding between margin and neighbor tooth	<input type="checkbox"/> ≥0.5mm	<input type="checkbox"/> <0.5mm	<input type="checkbox"/> No breakage of the interproximal contact

TREATMENT MANAGEMENT By using explorer/~~perio~~ probe, visual & tactile inspection

Condition of adjacent/opposing teeth	<input type="checkbox"/> No damage to adjacent teeth	<input type="checkbox"/> Adjacent teeth abraded but can be polished to restore without affecting original shape	<input type="checkbox"/> Gross iatrogenic damage to adjacent tooth requiring a restoration or alteration to opposing hard tissue
Condition of soft tissue	<input type="checkbox"/> No damage to soft tissue	<input type="checkbox"/> Mildly abrade	<input type="checkbox"/> Soft tissue grossly lacerated

Self-Assessment, for the students to be filled prior to submission

Students Self-Assessment: #9 All Ceramic Crown Preparation for Provisional Summer Project to be saved and used for Comp 40-41

Student Name	S#
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CERVICAL MARGIN AND DRAW By using explorer/peri~~o~~ probe, visual & tactile inspection with lab putty matrix

	ACC	SUB	DEF
Margin Vertical Position	<input type="checkbox"/> 0.5 to 1mm <u>above</u> FGM	<input type="checkbox"/> < 0.5 <u>above</u> FGM > 1mm <u>above</u> FGM	<input type="checkbox"/> Below FGM "subgingival" or >1.5mm <u>above</u> FGM
Margin/definition	<input type="checkbox"/> Cervical margin is continuous and smooth	<input type="checkbox"/> Cervical margin is continuous, but irregular	<input type="checkbox"/> Cervical margin has no continuity, cupped or J-shaped.
Facial Margin/width Chamfer	<input type="checkbox"/> 1 to 1.2mm	<input type="checkbox"/> $0.8 \leq X \leq 1.5\text{mm}$	<input type="checkbox"/> $0.8 > X > 1.5\text{mm}$
Lingual Margin/width	<input type="checkbox"/> 1 to 1.2mm	<input type="checkbox"/> $0.8 \leq X \leq 1.5\text{mm}$	<input type="checkbox"/> $0.8 > X > 1.5\text{mm}$
Line of draw	<input type="checkbox"/> Deviates < 20° from the long axis of the tooth	<input type="checkbox"/> Deviates 20° to <30° from the long axis of the tooth.	<input type="checkbox"/> Deviates ≥ 30° from the long axis of the tooth

WALLS, TAPER AND MARGIN By using explorer/peri~~o~~ probe, visual & tactile inspection with lab putty matrix

Axial tooth removal is:	<input type="checkbox"/> 1.5 mm	<input type="checkbox"/> $1\text{mm} \leq X \leq 2\text{mm}$	<input type="checkbox"/> The axial tissue removal is <0.9mm or >2.0mm
Axial Walls Smoothness/Undercut Rounded line/point angles	<input type="checkbox"/> Smooth and rounded	<input type="checkbox"/> Moderately sharp line angles	<input type="checkbox"/> No continuity or definition/jagged/irregular/ beveled /cup ped <input type="checkbox"/> Excessive sharp line angles with no evidence of rounding
Taper	<input type="checkbox"/> 6° - 10° No Undercuts parallel to ≤ 12° per wall.	<input type="checkbox"/> 10°-20° Minor undercut on axial wall but 360° visibility of margin for path of insertion	<input type="checkbox"/> < 6° or >20° Gross undercuts on axial wall with lack of 360° visibility of margin from path of insertion.
Incisal reduction is: Vertical reduction (VR) Incisal Edge Width (IEW)	<input type="checkbox"/> 1.5-2.0mm uniform VR ≥ 0.8mm IEW	<input type="checkbox"/> <1.4mm or 2.5mm VR 0.5 to 0.8mm IEW	<input type="checkbox"/> $1.2\text{mm} < X > 2.5\text{mm}$ VR <0.5mm IEW
Lingual wall height Straight lingual cingulum wall measurement. Ideal length 2mm	<input type="checkbox"/> ≥1.5mm	<input type="checkbox"/> $0.8 \leq X \leq 1.5\text{mm}$	<input type="checkbox"/> <0.8mm
Interproximal Clearance Perio probe tip passes without binding between margin and neighbor tooth	<input type="checkbox"/> ≥0.5mm	<input type="checkbox"/> <0.5mm	<input type="checkbox"/> No breakage of the interproximal contact

TREATMENT MANAGEMENT By using explorer/peri~~o~~ probe, visual & tactile inspection

Condition of adjacent/opposing teeth	<input type="checkbox"/> No damage to adjacent teeth	<input type="checkbox"/> Adjacent teeth abraded but can be polished to restore <u>without affecting original shape</u>	<input type="checkbox"/> Gross iatrogenic damage to adjacent tooth requiring a restoration or alteration to opposing hard tissue
Condition of soft tissue	<input type="checkbox"/> No damage to soft tissue	<input type="checkbox"/> <u>Mildly abrade</u>	<input type="checkbox"/> Soft tissue grossly lacerated

Grading Rubric for Summer activity Provisional fabrication on prep #9

REST 538B - Clinical Fixed Prosthodontic Grading Form for Provisional Crown Provisional #9 Summer Project to be saved and used for Comp 40-41

Student Name	S#	GP
Assigned Faculty Name and Signature		Date

Rules:

1. Grading criteria One **DEF** or more than three (3) **SUB** is an automatic failure.
2. Every DEF is 15% points deduction. Every SUB is 10% points deduction. Passing grade is 70%.
3. Blackboard submission on course REST 538B: a) Self-assessment, b) Occlusal view of the prep, c) Frontal view of the prep, d) Lingual view of the prep, e) Frontal view of the provisional, and f) Lingual view of the provisional

	ACC	SUB	DEF
Contours and Anatomy Restoration's anatomy represents the teeth being restored/replaced	<input type="checkbox"/> Crown is adequately positioned and follows the ideal tooth positioning and contour	<input type="checkbox"/> Crown is closely in an adequate position. Minor adjustments required	<input type="checkbox"/> Crown is not correctly placed and it is not clinically acceptable
Intaglio surface Smooth and uniform no bubbles	<input type="checkbox"/> Intaglio surface is smooth and uniform following the preparation outline	<input type="checkbox"/> Intaglio surfaces have small bubbles <0.5mm Some debris observed that slightly alter seating	<input type="checkbox"/> Intaglio surface with gross bubbles (>0.5 mm). It doesn't follow the preparation outline
Margin Materials match each other with a nice smooth transition when evaluated with explorer	<input type="checkbox"/> No open margins/overhangs	<input type="checkbox"/> Slightly open margins/overhangs (slightly catches perio probe tip) <0.5mm discrepancy Short margin (<0.5mm)	<input type="checkbox"/> Gross open margins/overhangs ≥ 0.5 mm discrepancy Short margin (>0.5mm)
Intaglio Margin Margin is easily identified 360°	<input type="checkbox"/> Margin is easily identified in 360° Uniform and smooth	<input type="checkbox"/> Margin is easily identified in ¾ of the provisional Slightly rough	<input type="checkbox"/> Margin can't be identified, have gross bubbles, or has been trimmed excessively
Embrasures Lingual, buccal and gingival embrasures	<input type="checkbox"/> Gingival embrasures are appropriately created, leaving room to maintain healthy gingiva Small lingual and buccal embrasures	<input type="checkbox"/> Acceptable gingival embrasures with some room for gingiva to maintain health Slightly bigger or smaller lingual and buccal embrasures	<input type="checkbox"/> No creation of gingival, lingual, and/or buccal embrasures
Interproximal contacts Mesial & distal	<input type="checkbox"/> Moderate resistance contact Nice floss resistance	<input type="checkbox"/> Visually open contact No floss resistance	<input type="checkbox"/> ≥0.5mm open contact
Incisal edge position: Matches contralateral tooth	<input type="checkbox"/> Incisal edge follows #9 position	<input type="checkbox"/> Incisal edge almost follows #9 position ≤0.5 mm longer/ shorter/B/L than ideal incisal edge	<input type="checkbox"/> Incisal edge doesn't follow #9 position >0.5mm longer/ shorter/B/L than ideal incisal edge
Finishing & polishing Shininess/Roughness Stains and whitish acrylic spots	<input type="checkbox"/> Shiny polished surface No stains Very small "whitish" spots	<input type="checkbox"/> Poorly finished/polished Esthetic compromise with stains/"whitish" spots	<input type="checkbox"/> No signs of finishing/polishing Gross stains (clinically unacceptable)
Occlusion Contact on MIP No contact on excursive movements Canine guidance ARP: Anterior reference point	<input type="checkbox"/> Contact on MIP No contact on excursive movements Canine guidance is present	<input type="checkbox"/> Heavy contact MIP (no contact of ARP) Slightly out of occlusion (<0.5mm from contacting) No contact on excursive movements	<input type="checkbox"/> Very heavy contact MIP (≥0.5 mm ARP out of occlusion) Excessively out of occlusion (≥0.5mm from contacting) Contact on excursive movements

Self-Assessment, for the students to be filled prior to submission

Students Self-Assessment: Provisional Crown Provisional #9
Summer Project to be saved and used for Comp 40-41

Student Name	S#
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	ACC	SUB	DEF
Contours and Anatomy Restoration's anatomy represents the teeth being restored/replaced	<input type="checkbox"/> Crown is adequately positioned and follows the ideal tooth positioning and contour	<input type="checkbox"/> Crown is closely in an adequate position. Minor adjustments required	<input type="checkbox"/> Crown is not correctly placed and it is not clinically acceptable
Intaglio surface Smooth and uniform no bubbles	<input type="checkbox"/> Intaglio surface is smooth and uniform following the preparation outline	<input type="checkbox"/> Intaglio surfaces have small bubbles <0.5mm Some debris observed that slightly alter seating	<input type="checkbox"/> Intaglio surface with gross bubbles (>0.5 mm). It doesn't follow the preparation outline
Margin Materials match each other with a nice smooth transition when evaluated with explorer	<input type="checkbox"/> No open margins/overhangs	<input type="checkbox"/> Slightly open margins/overhangs (slightly catches <u>perio</u> probe tip) <0.5mm discrepancy Short margin (<0.5mm)	<input type="checkbox"/> Gross open margins/overhangs ≥ 0.5 mm discrepancy Short margin (>0.5mm)
Intaglio Margin Margin is easily identified 360°	<input type="checkbox"/> Margin is easily identified in 360° Uniform and smooth	<input type="checkbox"/> Margin is easily identified in ¾ of the provisional Slightly rough	<input type="checkbox"/> Margin can't be identified, have gross bubbles, or has been trimmed excessively
Embrasures Lingual, buccal and gingival embrasures	<input type="checkbox"/> Gingival embrasures are appropriately created, leaving room to maintain healthy gingiva Small lingual and buccal embrasures	<input type="checkbox"/> Acceptable gingival embrasures with some room for gingiva to maintain health Slightly bigger or smaller lingual and buccal embrasures	<input type="checkbox"/> No creation of gingival, lingual, and/or buccal embrasures
Interproximal contacts Mesial & distal	<input type="checkbox"/> Moderate resistance contact Nice floss resistance	<input type="checkbox"/> Visually open contact No floss resistance	<input type="checkbox"/> ≥0.5mm open contact
Incisal edge position: Matches contralateral tooth	<input type="checkbox"/> Incisal edge follows #9 position	<input type="checkbox"/> Incisal edge almost follows #9 position ≤0.5 mm longer/ shorter/B/L than ideal incisal edge	<input type="checkbox"/> Incisal edge doesn't follow #9 position >0.5mm longer/ shorter/B/L than ideal incisal edge
Finishing & polishing Shininess/Roughness Stains and whitish acrylic spots	<input type="checkbox"/> Shiny polished surface No stains Very small "whitish" spots	<input type="checkbox"/> Poorly finished/polished Esthetic compromise with stains/ <u>whitish</u> spots	<input type="checkbox"/> No signs of finishing/polishing Gross stains (clinically unacceptable)
Occlusion Contact on MIP No contact on excursive movements Canine guidance ARP: Anterior reference point	<input type="checkbox"/> Contact on MIP No contact on excursive movements Canine guidance is present	<input type="checkbox"/> Heavy contact MIP (no contact of ARP) Slightly out of occlusion (<0.5mm from contacting) No contact on excursive movements	<input type="checkbox"/> Very heavy contact MIP (≥0.5 mm ARP out of occlusion) Excessively out of occlusion (≥0.5mm from contacting) Contact on excursive movements

Self-Assessment, for the students to be filled prior to submission

REST 538B - Clinical Fixed Prosthodontics Competency 40-41 Self-Assessment for Preparation: FPD # 19 (Metal with facial PFM), #21 (PFM)

S#	Group	Date
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Automatic Failures:

1. Wrong tooth prepared	
2. Removal of typodont from manikin during preparation	
3. Failure to wear PPE *cause of dismissal from lab	
4. Procedure no challenge	

Pre-tooth guidelines: (4 pts)

1. Ergonomics: appropriate posture maintained at all times	
2. Students self-assessment: demonstrated the ability to performed accurate self-assessment of their own hand skills	
3. Cleanliness: typodont is clean at the time of submission, no visible debris. The working area is clean.	
4. Professionalism: maintained professional behavior and appearance at all times	

CERVICAL MARGIN AND DRAW By using explorer/peri probe, visual & tactile inspection with lab putty matrix

	ACC	SUB	DEF
Margin Vertical Position	<input type="checkbox"/> 0.5 to 1mm above FGM	<input type="checkbox"/> < 0.5 below FGM > 1mm above	<input type="checkbox"/> <0.0 Sub or >1.0mm Supra
Margin/definition	<input type="checkbox"/> Cervical margin is continuous and smooth	<input type="checkbox"/> Cervical margin is continuous, but irregular	<input type="checkbox"/> Cervical margin has no continuity, cupped or J-shaped.
Facial Margin/width Light Chamfer	<input type="checkbox"/> Facial margin width: PFM: Visually and explorer detectable to 1.5 mm.	<input type="checkbox"/> Facial margin width: PFM: <1.5mm or >1.5mm	<input type="checkbox"/> Facial margin width: PFM: < 1.0mm or >2mm, Not detectable and/or is feathered.
Deep Chamfer Lingual Margin/width	<input type="checkbox"/> Metal: visually and explorer detectable to ≤ 1.0 mm. PFM: visually & explorer detectable to 1.5 mm.	<input type="checkbox"/> Metal: > 1.0 mm but ≤ 2.0 mm. PFM: Margin width is < or > 1.5mm	<input type="checkbox"/> Metal: <0.5 or > 2.0 mm or not detectable and/or is feathered. PFM: Margin width is <1mm or > 2.0 mm or feathered and/or is not explorer detectable.
Line of draw	<input type="checkbox"/> Deviates < 20° from the long axis of the tooth	<input type="checkbox"/> Deviates 20° to <30° from the long axis of the tooth.	<input type="checkbox"/> deviates ≥ 30° from the long axis of the tooth

WALLS, TAPER AND MARGIN By using explorer/peri probe, visual & tactile inspection with lab putty matrix

Axial tooth removal is:	<input type="checkbox"/> Metal: 1 mm but ≤ 1.5 mm. PFM: 1.5 mm	<input type="checkbox"/> Metal: <1 mm or > 1.5 mm PFM: <1.5mm or >1.5mm	<input type="checkbox"/> Metal: The axial tissue removal is <0.5mm or >2.0mm PFM: <1mm or >2mm
Axial Walls Smoothness/ Rounded line/point angles	<input type="checkbox"/> Well smoothened walls with no sharp line or point angles	<input type="checkbox"/> Moderately smoothened with moderately sharp line or point angles	<input type="checkbox"/> No continuity or definition/jagged/irregular/beveled/cupped <input type="checkbox"/> Excessive sharp line angles with no evidence of rounding
Taper/ Undercut	<input type="checkbox"/> 6° - 10° No Undercuts parallel to ≤ 12° per wall.	<input type="checkbox"/> 10°-20° Minor undercut on axial wall but 360° visibility of margin for path of insertion	<input type="checkbox"/> < 6° or >20° Gross undercuts on axial wall with lack of 360° visibility of margin from path of insertion.
Occlusal reduction Use putty index	<input type="checkbox"/> PFM: FC: 2.0 mm, NFC: 1.5mm Metal: FC: 1.5mm, NFC: 1mm	<input type="checkbox"/> PFM: FC: < or >2mm, NFC < or >1.5mm Metal: FC: < or >1.5mm, NFC < or >1mm	<input type="checkbox"/> PFM: FC: <1.5mm or >2.5mm NFC: <1.0mm or >2.0 Metal: FC: <1mm or >2mm, NFC: <0.5mm or >1.5mm
Occlusal anatomy	<input type="checkbox"/> Prep follows original occlusal anatomy	<input type="checkbox"/> Follows approximately original anatomic contours	<input type="checkbox"/> Flat, without occlusal anatomy

BRIDGE FACTOR Visual inspection

Path of Insertion/Line of Draw	<input type="checkbox"/> Path of insertion is direct	<input type="checkbox"/> May require altering the path of insertion from a direct vertical axis to allow full seating	<input type="checkbox"/> No path of insertion exists without removal of additional tooth structure in the apical/ of either/both of the preparations
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TREATMENT MANAGEMENT By using explorer/peri probe, visual & tactile inspection

Condition of adjacent/opposing teeth	<input type="checkbox"/> No damage to adjacent teeth	<input type="checkbox"/> Adjacent teeth abraded but can be polished to restore without affecting original shape	<input type="checkbox"/> Gross iatrogenic damage to adjacent tooth requiring a restoration or alteration to opposing hard tissue
Condition of soft tissue	<input type="checkbox"/> No damage to soft tissue	<input type="checkbox"/> Mildly abraded	<input type="checkbox"/> Soft tissue grossly lacerated

Faculty Grading sheet for Competency 40-41

Faculty Grading Sheet

S#	Group	Date
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Criteria	ACC Minimum 4	SUB Minimum 8	DEF	Faculty Comment	Student Self- Assessment
Margin Vertical Position					
Margin width					
Margin smoothness					
Line of draw					
Interproximal clearance					
Axial Wall Reduction					
Axial wall smoothness transitions					
Taper/Undercuts					
Occlusal Reduction					
Occlusal Bevel (width)					
Occlusal Anatomy					
Condition hard and soft tissues					
	X=	X=	X=	Grade	
Prep-tooth prep guideline	/4		/4		



ACC	SUB	DEF	Prep-tooth guidelines PASS		Prep-tooth guidelines FAIL
12	0	0	100		96
11	1	0	98		94
10	2	0	95		91
9	3	0	92		88
8	4	0	89		85
7	5	0	86		82
6	6	0	83		79
5	7	0	79		75
4	8	0	75		71
	≥9	0	70		66
7,8,9,10,11	0,1,2,3,4	1	70		66
Failing grades					
3,4,5,6	5,6,7,8	1	65		61
		≥3	50		50

Faculty grader #1: _____ Faculty grader #2: _____

COMPETENCY EXAMINATION # 42

Title: Removable Partial Denture Case–Based Competency Examination
Course: REST 538C: Removable Prosthodontics
Timing: D3
Category: Formative
Contact: Dr. Chris Choi
cchoi@umaryland.edu

General Description

Description of Assessment

This competency exam assesses the dental student's knowledge for the treatment planning and design of removable partial dentures following the clinical principles required for an acceptable removable partial denture.

Prerequisites

Successful completion of REST 529B, Preclinical Removable Partial Dentures and current enrollment in REST 538C, Removable Prosthodontics

Criteria for Evaluation

Students need to understand and implement a partial denture design from the guidelines from REST 529B Removable Prosthodontics course. Through a case-based exam the student will be presented with a variety of clinical cases to evaluate criteria for acceptability of design. The student will be evaluated for

- identify and classify partially edentulous arch form and understand the use and specifications of RPD components
- design a removable partial denture with its appropriate components with their desired location in order to fabricate a satisfactory removable partial denture
- evaluate a proposed partial denture design, identify errors and propose corrections

Setting

Classroom

Type of Competency Examination

Computer based written (Questionmark) (case-based; on the academic class calendar)

Time Allotted

60 minutes

Remediation Required Under the Following Circumstances

A score of less than 70% requires remediation.

Maryland Competency Statements

- 3a. Communicate effectively with other professionals regarding the care of patients.
- 7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.

Grading Information and Remediation

Examiner

Drs. Brennan, Choi

Grading

0-100%. Students scoring less than 70% fail the exam and must undergo remediation and re-examination until a passing score is achieved.

Critical errors

A grade of less than 70%

Description of Remediation

Students that are not successful with a grade less than 70% in their examination will be instructed/counseled by the course director identifying the problematic areas. The student will take re-examinations until a passing score is achieved.

Grading rubric

Passing	Failure
Student is able to recognize and classify the partially edentulous arch	Student unable to identify and classify partially edentulous arch form
Student is able to design a removable partial denture with its appropriate components and their desired location in order to fabricate a satisfactory removable partial denture	Inability to design a removable partial denture with its appropriate components with their desired location in order to fabricate a satisfactory removable partial denture
Student is able to evaluate a proposed partial denture design for acceptability	Inability to identify inadequate removable partial denture designs
Student is able to evaluate a proposed partial denture design, identify errors and propose corrections	Inability to evaluate a proposed partial denture design, identify errors and propose corrections
Student is able to identify and utilize the specifications of PDF components	Inability to identify and utilize the specifications of PDF components

COMPETENCY EXAMINATION #43

Title: Posterior Class II preparation and restoration competency exam
Course: REST 548A: Operative Dentistry/ General Dentistry
Timing: D4
Category: Summative
Contact: Drs. Eve Desai and Andrea Morgan
edesai@umaryland.edu
amorgan@umaryland.edu

General Description

Description of Assessment

The student will be scheduled on **block** to complete the Class II preparation and restoration for composite resin using a bilayered caries tooth during a single day to simulate the ADEX-CDCA-WREB and other licensure experiences of completing both restorations on the same day.

A simulation patient with an electronic patient record in Axiom with simulated radiographs for the extent of caries present in the bilayered teeth to be used. The student will demonstrate knowledge of the patient's clinical conditions based upon this simulated patient record.

The preparation and restoration will be evaluated at each step based upon the grading criteria form for the Mock ADEX CDCA-WREB exam. The student will follow the protocols for request for preparation modification and liner placement using the CDCA-WREB format.

Assessment includes up-to-date patient record, diagnosis and radiograph interpretation for the tooth assigned and critical thinking skills. The assessment of the preparation and restoration criteria will be evaluated at each step based upon the rubric and grading form. The student will follow the format for request for preparation modification(s) and liner placement using the CDCA-WREB format.

Self-assessment: as part of this examination the student will perform a self-assessment that is described to the student during the pre-exam briefing before the start of each clinic session. Before each check step during the examination the student will use their grading form to do the self-assessment of that step from the criteria for the examination. If an assessment is Satisfactory (SAT) or Acceptable (ACC) the student will not notate this criteria. The student will only note Clinically Substandard (SUB) and Critically Deficient (DEF)

CLASS II Posterior composite resin

- Class II caries on a bilayered simulated tooth with simulated diagnostic radiographs
- Proximal contact with the adjacent tooth for the surface being restored;

Dependent on extent of caries the class II composite resin preparation design can be a traditional preparation with proximal box and occlusal preparation or a conservative slot/box preparation. Design and dimensions based upon the extent of the caries and the criteria.

Prerequisites

Students have passed REST 528A, REST 538A. D4 student, first semester; successful completion of the D3 competencies Class III anterior composite resin preparation (simulation) and restoration and Class II preparation and restoration (simulation); acceptable completion of four Class III and four Class II preparations and restorations (patient) (composite resin and/or amalgam)

Criteria for Evaluation

Criteria for evaluation (critical criteria are noted with *; any failure- critically deficient of a criteria is a failure of the exam):

Tooth preparation

Critical errors

- Wrong tooth/surface treated*

- Unrecognized pulpal exposure*

External outline form:

- Proximal clearance*

- Gingival clearance*

- Outline shape, continuity, extension*

- Isthmus (when present)*

- Cavosurface margin

- Sound marginal tooth structure

Internal form:

- Axial walls*

- Pulpal walls*

- Pulpal-axial line angle

- Caries remaining*

- Retention

- Proximal box walls*

Treatment management:

- Isolation dam

- Pain control/anesthesia

- Adjacent tooth damage*

- Soft tissue damage*

Tooth restoration

Matrix placement

Critical errors:

- Fractured restoration*

- Incomplete procedure (timed out)*

Marginal integrity and surface finish:

- Marginal excess/deficiency*

- Surface finish

- Adjacent tooth structure*

Contour, contact and occlusion:

- Interproximal contact*

- Centric occlusion/excursive contacts*

- Anatomy/contour

Treatment management:

Patient comfort

Adjacent tooth damage*

Soft tissue damage*

Setting

Clinic

Type of Competency Examination

Demonstration- clinical performance

Time Allotted

1 clinic session

Remediation Required Under the Following Circumstances

Failure to receive a passing grade will require student remediation.

Maryland Competency Statements

1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.

7d. Restore missing or defective tooth structure to proper form, function, and esthetics, and promote soft and hard tissue health.

Grading Information and Remediation

Examiners

Operative faculty

Grading

Grading is numerically based from a grading criteria sheet/rubric. A grade grid that identifies the numerical score for the student based upon performance in each of the criteria for the examination. Critical errors are listed as DEF on the grading rubric form. A DEF in any category results in a failing grade and requires remediation. Other critical errors include wrong tooth/surface treated, fractured restoration, timed out procedure and inability to demonstrate critical thinking and scientific knowledge skills during the examination.

Critical Errors

See grading rubric and the criteria for evaluation section for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

For the patient-based examinations the student will be counseled and then may be requested to complete one additional patient treatment of the prerequisites before challenging the examination again or remediate through the correction of the critical error during the examination after faculty counseling. For students that are unsuccessful on either one or both patient treatments having been evaluated with a critical criteria failure, there may be an additional patient treatment of the same type of preparation and restoration in a Mock Board format with a calibrated faculty during a clinic session before the student can be approved to take the CDCA examination.

PREPARATION: POSTERIOR COMPOSITE

ADEX 2024

Tooth #: _____

MO	DO	MOD
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CRITICAL ERRORS		
Wrong Tooth/Surface Treated	No	Yes
Unrecognized Exposure	No	Yes

NOTE: Those SUBs that are highlighted are part of the 3-SUB Rule

ACC = Adheres to Criteria SUB= Marginally Substandard DEF= Critically Deficient

EXTERNAL OUTLINE FORM	
Proximal Clearance	
ACC	Proximal contact is either closed or visibly open, and, at the height of contour, proximal clearance may extend ≤ 1.0 mm beyond either one or both proximal walls.
SUB	Proximal clearance at the height of contour extends > 1.0 mm but ≤ 2.0 mm beyond either one or both proximal walls.
DEF	Proximal clearance at the height of contour extends > 2.0 mm beyond either one or both proximal walls.
Gingival Clearance	
ACC	The gingival clearance is visually open but ≤ 1.0 mm.
SUB	A. The gingival clearance is > 1.0 mm but ≤ 2.0 mm.
DEF	A. The gingival clearance is > 2.0 mm. B. The gingival contact is not visually open.
Outline Shape/Continuity/Extension	
ACC	The outline form may be sharp and irregular.
SUB	A. The outline form is inappropriately over-extended, compromising the remaining marginal ridge and/or cusp(s).
DEF	A. The outline form is grossly over-extended, compromising and undermining the remaining marginal ridge to the extent that the cavosurface margin is unsupported by dentin. B. The width of the marginal ridge is ≤ 1.0 mm.
Isthmus	
ACC	The isthmus may be between 1.0 mm - 2.0 mm in width but $\leq 1/3$ the intercuspal width.
SUB	The isthmus is $> 1/3$ the intercuspal width but $\leq 1/2$ the intercuspal width.
DEF	The isthmus is $> 1/2$ the intercuspal width or the isthmus width is < 1.0 mm.
Cavosurface Margin	
ACC	The external cavosurface margin meets the enamel at 90° ; The gingival floor is flat, smooth, and perpendicular to the long axis of the tooth.
SUB	The proximal cavosurface margin deviates from 90° and is likely to jeopardize the longevity of the tooth or restoration. This would include unsupported enamel and/or excessive bevel(s).
Sound Marginal Tooth Structure	
ACC	The cavosurface margin terminates in sound tooth structure. There is no previous restorative material, excluding sealants, at the cavosurface margin.
SUB	The cavosurface margin does not terminate in sound natural tooth structure.
DEF	A. There is explorer-penetrable decalcification remaining on the cavosurface margin. B. There are large or multiple areas of unsupported enamel which are not necessary to preserve facial aesthetics.

INTERNAL FORM	
Axial Walls	
ACC	MOLARS: The depth of the axial wall extends beyond the DEJ ≤ 1.5 mm. PREMOLARS: The depth of the axial wall extends beyond the DEJ ≤ 1.0 mm.
SUB	MOLARS: The axial wall extends beyond the DEJ > 1.5 mm but ≤ 2.5 mm. PREMOLARS: The axial wall extends beyond the DEJ > 1.0 mm but ≤ 1.5 mm.
DEF	A. MOLARS: The axial wall extends beyond the DEJ > 2.5 mm. A. PREMOLARS: The axial wall extends beyond the DEJ > 1.5 mm B. MOLARS & PREMOLARS: The axial wall is entirely in enamel.
Pulpal Floor	
ACC	The pulpal floor depth is ≥ 0.5 mm but ≤ 3.0 mm in all areas; there may be remaining enamel.
SUB	A. The pulpal floor depth is > 3.0 mm but ≤ 4.0 mm from the cavosurface margin.
DEF	A. The pulpal floor is > 4.0 mm from the cavosurface margin. B. The pulpal floor depth is < 0.5 mm.
Caries/Remaining Material	
ACC	All caries and/or previous restorative material are removed.
DEF	A. Caries has not been accessed and/or remains in the preparation. B. Previous restorative material remains in the preparation.
Retention	
ACC	Retention, when used, is well defined, in dentin, and does not undermine enamel.
SUB	Retention, when used, undermines the enamel.
Proximal Box Walls	
ACC	The proximal walls are parallel or convergent occlusally but may be slightly divergent and are not likely to jeopardize the longevity of the tooth or restoration.
SUB	The proximal walls are too divergent.
TREATMENT MANAGEMENT	
Adjacent Tooth Damage	
ACC	Any damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.
SUB	Damage to adjacent tooth/teeth requires re-contouring that changes the shape and/or contour and/or contact.
DEF	There is gross damage to adjacent tooth/teeth which requires a restoration.
Soft Tissue Damage	
ACC	The soft tissue is free from damage, or there is tissue damage that is consistent with the procedure.
DEF	There is gross iatrogenic damage to the soft tissue inconsistent with the procedure and pre-existing condition of the soft tissue.

RESTORATION: POSTERIOR COMPOSITE

ADEX 2024

Tooth #: _____

MO

DO

MOD

CRITICAL ERRORS

The restoration is fractured.....

No

Yes

ACC= Adheres to Criteria SUB= Marginally Substandard DEF= Critically Deficient

MARGIN INTEGRITY AND SURFACE FINISH	
Margin Excess/Deficiency	
ACC	A. No marginal deficiency. There is no evidence of pits and/or voids at the cavosurface margin. B. Marginal excess ≤ 0.5 mm at the restoration-tooth interface, detectable either visually or with the tine of an explorer.
SUB	A. DEFICIENCY: The restoration-tooth interface is detectable visually or with the tine of an explorer, and there is evidence of marginal deficiency ≤ 0.5 mm, which can include pits and/or voids at the cavosurface margin. B. EXCESS: The restoration-tooth interface is detectable visually or with the tine of an explorer, and there is evidence of marginal excess > 0.5 mm but ≤ 1.0 mm. There is flash with or without contamination underneath, but it is not internal to the cavosurface margin and could be removed by polishing or finishing.
DEF	A. There is evidence of marginal deficiency of > 0.5 mm, to include pits and voids at the cavosurface margin, and/or there is an open margin, and/or there is internal contamination at the interface between the restoration and the tooth. B. There is a marginal excess (excluding bonding agent or unfilled resin) of > 1.0 mm.
Adjacent Tooth Structure	
ACC	There is no or minimal evidence of unwarranted or unnecessary removal, modification, or recontouring of tooth structure adjacent to the restoration.
DEF	There is gross enameloplasty.
Bonding	
ACC	The restoration is bonded to the prepared tooth structure.
DEF	The restoration is debonded and/or movable in the preparation.
CONTOUR, CONTACT, AND OCCLUSION	
Interproximal Contact	
ACC	Interproximal contact is visually closed, and the contact appears adequate in size, shape, or position, but may demonstrate little resistance to dental floss.
DEF	A. The interproximal contact is visually open or concave/irregular, allowing for food impaction. B. The interproximal contact will not allow floss to pass.
Centric/Excursive Contacts	
ACC	When checked with articulating paper, all centric and excursive contacts on the restoration are consistent in size, shape, and intensity with such contacts on other teeth in that quadrant.
SUB	When checked with articulating paper, the restoration is in hyper-occlusion, making it inconsistent in size, shape, and intensity with the occlusal contacts on surrounding teeth, and it requires adjustment.
DEF	There is gross hyper-occlusion so that the restoration is the only point of occlusion in that quadrant.

TREATMENT MANAGEMENT	
Adjacent Tooth Damage	
ACC	Any minimal damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.
DEF	There is evidence of gross damage and/or alteration to adjacent and/or opposing hard tissue inconsistent with the procedure.
Soft Tissue Damage	
ACC	The soft tissue is free from damage, or there is tissue damage that is consistent with the procedure.
DEF	There is gross iatrogenic damage to the soft tissue inconsistent with the procedure.

REST 548A Operative Mock Boards Rubric Grade Conversion

For each tooth being treated (restoration and preparation combined)

All ACC = 100 points

Each non-highlighted SUB -5 points

Each highlighted SUB -11 points

DEF is -33 points (critical failure)

Students scoring 70 or below need to remediate that section (Anterior OR Posterior)

Posterior Restorative Modification Request Form

CANDIDATE LABEL



Unit/Cubicle #

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Request(s) must be discussed with and signed off by a CFE prior to submission to the Evaluation Station.
Four (4) denied modifications will result in a review by the Chief Examiner.

I certify the preparation is within the **ACCEPTABLE** range, and the surfaces to be modified are at the limit of the **ACCEPTABLE** criteria.

Candidate ID #

Trip #/Mod #	Discussed with CFE:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>				
<div style="transform: rotate(-45deg); width: 10px; height: 10px; margin: 0 auto;"></div>	What:					
	Where:			How Much:		
	Why:					
Granted:	Grading Examiner	Not Granted:	Grading Examiner	Grading Examiner	Reviewed by CFE	

Trip #/Mod #	Discussed with CFE:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>				
<div style="transform: rotate(-45deg); width: 10px; height: 10px; margin: 0 auto;"></div>	What:					
	Where:			How Much:		
	Why:					
Granted:	Grading Examiner	Not Granted:	Grading Examiner	Grading Examiner	Reviewed by CFE	

Trip #/Mod #	Discussed with CFE:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>				
<div style="transform: rotate(-45deg); width: 10px; height: 10px; margin: 0 auto;"></div>	What:					
	Where:			How Much:		
	Why:					
Granted:	Grading Examiner	Not Granted:	Grading Examiner	Grading Examiner	Reviewed by CFE	

Trip #/Mod #	Discussed with CFE:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>				
<div style="transform: rotate(-45deg); width: 10px; height: 10px; margin: 0 auto;"></div>	What:					
	Where:			How Much:		
	Why:					
Granted:	Grading Examiner	Not Granted:	Grading Examiner	Grading Examiner	Reviewed by CFE	

Trip #/Mod #	Discussed with CFE:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>				
<div style="transform: rotate(-45deg); width: 10px; height: 10px; margin: 0 auto;"></div>	What:					
	Where:			How Much:		
	Why:					
Granted:	Grading Examiner	Not Granted:	Grading Examiner	Grading Examiner	Reviewed by CFE	

COMPETENCY EXAMINATION # 44

Title: Anterior Class III preparation and restoration competency exam
Course: REST 548A: Operative Dentistry
Timing: D4
Category: Summative
Contact: Drs. Eve Desai and Andrea Morgan
edesai@umaryland.edu
morgan@umaryland.edu

General Description

Description of Assessment

The student will be scheduled on **block** to complete the Class III preparation and restoration for composite resin using a bilayered caries tooth during a single day to simulate the ADEX-CDCA-WREB and other licensure experiences of completing both restorations on the same day.

A simulation patient with an electronic patient record in Axium with simulated radiographs for the extent of caries present in the bilayered teeth to be used. The student will demonstrate knowledge of the patient's clinical conditions based upon this simulated patient record.

The preparation and restoration will be evaluated at each step based upon the grading criteria form for the Mock ADEX CDCA-WREB exam. The student will follow the protocols for request for preparation modification and liner placement using the CDCA-WREB format.

Assessment includes up-to-date patient record, diagnosis and radiograph interpretation for the tooth assigned and critical thinking skills. The assessment of the preparation and restoration criteria will be evaluated at each step based upon the rubric and grading form. The student will follow the format for request for preparation modification(s) and liner placement using the CDCA-WREB format.

Self-assessment: as part of this examination the student will perform a self-assessment that is described to the student during the pre-exam briefing before the start of each clinic session.

Before each check step during the examination the student will use their grading form to do the self-assessment of that step from the criteria for the examination. If an assessment is Satisfactory (SAT) or Acceptable (ACC) the student will not notate this criteria. The student will only note Clinically Substandard (SUB) and Critically Deficient (DEF)

CLASS III COMPOSITE RESIN:

- Class III caries on a bilayered simulated tooth with simulated diagnostic radiograph
- Must have proximal contact with adjacent tooth for the surface being restored
- Occlusion on opposing teeth is NOT required

Standard cavity design for Class III must have a boxlike design with well-defined internal walls. Design and dimensions based upon the extent of the caries and the criteria.

Prerequisites

Students have passed REST 528A, REST 538A. D4 student, first semester; successful completion of the D3 competencies Class III anterior composite resin preparation (simulation)

and restoration and Class II preparation and restoration (simulation); acceptable completion of four Class III and four Class II preparations and restorations (patient) (composite resin and/or amalgam)

Criteria for Evaluation

Criteria for evaluation (critical criteria are noted with *; any failure- critically deficient of a criteria is a failure of the exam):

Tooth preparation

Critical errors:

- Wrong tooth/surface treated*
- Unrecognized pulpal exposure*

External outline form:

- Outline extension*
- Gingival clearance*
- Margin smoothness/continuity/bevels
- Sound marginal tooth structure

Internal form:

- Axial walls*
- Internal retention
- Smoothness
- Caries-remaining*

Treatment management:

- Isolation dam
- Pain control/anesthesia
- Adjacent tooth damage*
- Soft tissue damage*

Tooth restoration

Critical errors:

- Restoration is movable/debonded in preparation*
- Incomplete procedure (timed out)*

Marginal integrity and surface finish:

- Marginal excess/deficiency*
- Surface finish
- Adjacent tooth structure*
- Shade selection

Contour, contact and occlusion:

- Interproximal contact*
- Centric occlusion/excursive contacts*
- Anatomy/contour

Treatment management:

- Patient comfort
- Adjacent tooth damage*
- Soft tissue damage*

Setting

Clinic

Type of Competency Examination

Demonstration- clinical performance

Time Allotted

1 clinic session

Remediation Required Under the Following Circumstances

Failure to receive a passing grade will require student remediation.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 7d. Restore missing or defective tooth structure to proper form, function, and esthetics, and promote soft and hard tissue health.

Grading Information and Remediation**Examiners**

Operative Faculty

Grading

Grading is numerically based from a grading criteria sheet/rubric. A grade grid that identifies the numerical score for the student based upon performance in each of the criteria for the examination. Critical errors are listed as DEF on the grading rubric form. A DEF in any category results in a failing grade and requires remediation. Other critical errors include wrong tooth/surface treated, fractured restoration, timed out procedure and inability to demonstrate critical thinking and scientific knowledge skills during the examination.

Critical Errors

See grading rubric and the criteria for evaluation section for detailed description of critical errors. Critical error(s) result in automatic failure.

Description of Remediation

For the patient-based examinations the student will be counseled and then may be requested to complete one additional patient treatment of the prerequisites before challenging the examination again or remediate through the correction of the critical error during the examination after faculty counseling. For students that are unsuccessful on either one or both patient treatments having been evaluated with a critical criteria failure, there may be an additional patient treatment of the same type of preparation and restoration in a Mock Board format with a calibrated faculty during a clinic session before the student can be approved to take the CDCA examination.

PREPARATION: ANTERIOR COMPOSITE

ADEX 2024

Tooth #: _____

M	D	F	L
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CRITICAL ERRORS

Wrong tooth/surface treated	No	Yes
Unrecognized exposure	No	Yes

NOTE: Those SUBs that are highlighted are part of the 3-SUB Rule

ACC= Adheres to Criteria SUB= Marginally Substandard DEF= Critically Deficient

EXTERNAL OUTLINE FORM	
Outline Extension	
ACC	The wall opposite the access, if broken, may extend < 1.0 mm beyond the contact area. The outline form dimension is ≤ 3.0 mm incisal gingivally.
SUB	A. The incisal cavosurface margin is over-extended so that the integrity of the incisal angle is compromised. B. The wall opposite the access opening extends > 1.0 mm but ≤ 2.0 mm beyond the contact area. C. The outline form dimension is > 3.0 mm but ≤ 5.0 mm incisal gingivally.
DEF	A. The incisal angle is unnecessarily removed or fractured. B. The wall opposite the access opening extends > 2.0 mm beyond the contact area. C. The outline form dimension is > 5.0 mm incisal gingivally.
Gingival Clearance	
ACC	The gingival clearance is ≤ 1.0 mm.
SUB	The gingival clearance is > 1.0 mm but ≤ 2.0 mm.
DEF	The gingival clearance is > 2.0 mm.
Margin Smoothness/Continuity/Bevels	
ACC	The cavosurface margins may be slightly irregular. Enamel cavosurface margin bevels, if present, are ≤ 1.0 mm in width.
SUB	The cavosurface margin is rough and severely irregular. Enamel cavosurface margin bevels, if present, are > 1.0 mm in width, are not uniform, or are inappropriate for the size of the restoration.
Sound Marginal Tooth Structure	
ACC	There may be a small area of unsupported enamel which is not necessary to preserve facial aesthetics. There is no previous restorative material, excluding sealants, at the cavosurface margin.
SUB	The cavosurface margin does not terminate in sound natural tooth structure.
DEF	A. There is explorer-penetrable decalcification remaining on the cavosurface margin. B. There are large or multiple areas of unsupported enamel which are not necessary to preserve facial aesthetics.

INTERNAL FORM**Axial Walls**

ACC	MAX CENTRALS & MAX/MAND CUSPIDS: The depth of the axial wall extends ≤ 1.5 mm in depth from the DEJ. MAX LATERALS & MAND INCISORS: The depth of the axial wall extends ≤ 1.0 mm in depth from the cavosurface margin.
SUB	MAX CENTRALS & MAX/MAND CUSPIDS: The depth of the axial wall extends > 1.5 mm but ≤ 2.5 mm in depth from the DEJ. MAX LATERALS & MAND INCISORS: The depth of the axial wall extends > 1.0 mm but ≤ 2.0 mm in depth from the cavosurface margin.
DEF	MAX CENTRALS & MAX/MAND CUSPIDS: The depth of the axial wall extends > 2.5 mm in depth from the DEJ. MAX LATERALS & MAND INCISORS: The depth of the axial wall extends > 2.0 mm beyond the cavosurface margin.

Internal Retention

ACC	If used, rounded internal retention is placed in the dentin of the gingival and incisal walls just axial to the DEJ as dictated by cavity form. Retention is tactilely and visually present.
SUB	When used, retention is excessive and undermines enamel, or jeopardizes the incisal angle, or encroaches on the pulp.

Caries/Remaining Material

ACC	All carious tooth structure and/or previous restorative material are removed.
DEF	A. Caries has not been accessed and/or remains in the preparation. B. Previous restorative material remains in the preparation.

TREATMENT MANAGEMENT**Adjacent Tooth Damage**

ACC	Any damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.
SUB	Damage to adjacent tooth/teeth requires re-contouring that changes the shape and/or contour and/or contact.
DEF	There is gross damage to adjacent tooth/teeth which requires a restoration.

Soft Tissue Damage

ACC	The soft tissue is free from damage or there is tissue damage that is consistent with the procedure.
DEF	There is gross iatrogenic damage to the soft tissue inconsistent with the procedure and pre-existing condition of the soft tissue.

RESTORATION: ANTERIOR COMPOSITE

ADEX 2024

Tooth #: _____

M	D	F	L
---	---	---	---

CRITICAL ERRORS

The restoration is debonded and/or movable in the preparation	No	Yes
The restoration is fractured	No	Yes

ACC= Adheres to Criteria SUB= Marginally Substandard DEF= Critically Deficient

MARGIN INTEGRITY AND SURFACE FINISH	
Margin Excess/Deficiency	
ACC	A. No marginal deficiency. There is no evidence of pits and/or voids at the cavosurface margin. B. Marginal excess ≤ 0.5 mm at the restoration-tooth interface, detectable either visually or with the tine of an explorer.
SUB	A. DEFICIENCY: The restoration-tooth interface is detectable visually or with the tine of an explorer, and there is evidence of marginal deficiency ≤ 0.5 mm, which can include pits and/or voids at the cavosurface margin. B. EXCESS: The restoration-tooth interface is detectable visually or with the tine of an explorer, and there is evidence of marginal excess > 0.5 mm but ≤ 1.0 mm. There is flash with or without contamination underneath, but it is not internal to the cavosurface margin and could be removed by polishing or finishing.
DEF	A. There is evidence of marginal deficiency of > 0.5 mm, to include pits and voids at the cavosurface margin, and/or there is an open margin, and/or there is internal contamination at the interface between the restoration and the teeth. B. There is a margin excess (excluding bonding agent or unfilled resin) of > 1.0 mm.
Adjacent Tooth Structure	
ACC	There is no or minimal evidence of unwarranted or unnecessary removal, modification, or recontouring of tooth structure adjacent to the restoration. (Enameloplasty)
DEF	There is gross enameloplasty.
CONTOUR, CONTACT, AND OCCLUSION	
Interproximal Contact	
ACC	Interproximal contact is visually closed, and the contact is adequate in size, shape, or position but may demonstrate little resistance to dental floss.
DEF	A. The interproximal contact is visually open or concave/irregular, allowing for food impaction. B. The interproximal contact will not allow floss to pass.
Centric/Excursive Contacts	
ACC	When checked with articulating ribbon paper, all centric and excursive contacts on the restoration are consistent in size, shape, and intensity with such contacts on other teeth in that quadrant.
SUB	When checked with articulating paper, the restoration is in hyper-occlusion, making it inconsistent in size, shape, and intensity with the occlusal contacts on surrounding teeth, and it requires adjustment.
DEF	There is gross hyper-occlusion so that the restoration is the only point of occlusion in that quadrant.

TREATMENT MANAGEMENT	
Adjacent Tooth Damage	
ACC	Any damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.
DEF	There is evidence of gross damage and/or alteration to adjacent and/or opposing hard tissue inconsistent with the procedure.
Soft Tissue Damage	
ACC	The soft tissue is free from damage, or there is tissue damage that is consistent with the procedure.
DEF	There is gross iatrogenic damage to the soft tissue inconsistent with the procedure and pre-existing condition of the soft tissue.

REST 548A Operative Mock Boards Rubric Grade Conversion

For each tooth being treated (restoration and preparation combined)

All ACC = 100 points

Each non-highlighted SUB -5 points

Each highlighted SUB -11 points

DEF is -33 points (critical failure)

Students scoring 70 or below need to remediate that section (Anterior OR Posterior)

COMPETENCY EXAMINATION # 45

Title: Fixed Partial Denture #3-5; #9 all ceramic crown – Mock Board Simulation Exam
Course: REST 548B: Fixed Prosthodontics
Timing: D4
Category: Summative
Contact: Dr. Loana Tovar Suinaga, Dr. Chris Choi
ltovarsuinaga@umaryland.edu
cchoi@umaryland.edu

General Description

Description of Assessment

Using a typodont covered with a facial shroud that is attached to a clinic chair, students prepare abutment teeth #3 and #5 for a three-unit fixed partial denture (#3 abutment tooth is for an all-metal cast retainer and # 5 is for a porcelain-fused-to-metal retainer). In addition, students prepare # 9 for an all-ceramic crown. This competency is part of a two-clinic session examination in conjunction with endodontics to mimic the CDCA-ADEX examination.

Prerequisites

Completion of REST 538, Fixed Prosthodontics

Criteria for Evaluation

- Finish Line
- Axial Reduction
- Taper/Retention
- Finish of Preparation
- Occlusal, incisal, lingual reduction appropriate for the tooth preparation using the student fabricated PVS stent; occlusal clearance is not a graded criteria following the rubric
- Care of Soft tissues and adjacent teeth

Criteria follow the grading rubric.

Critical errors:

Critical errors follow the rubric description for tooth preparations. A critical error is defined as a DEF grade.

Setting

Clinic

Type of Competency Examination

Demonstration – clinical performance simulation (scheduled by block)

Time Allotted

1 clinic session

Remediation Required Under the Following Circumstances

A DEF grade in any critical category results in an automatic failure and requires remediation.

Students that had failed require 3 teeth practice on the tooth that is failed, prior to re-challenge the competency.

Maryland Competency Statements

- 7d. Restore missing or defective tooth structure to proper form, function, and esthetics and promote soft and hard tissue health.
- 7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.

Grading Information and Remediation**Examiners**

Dr. Tovar Suinaga and Dr. Choi.

Grading

Pass/Fail examination. A DEF grade of critical categories is a critical error which results in an automatic failure.

This competency is a P/F activity, and it is part of the REST 548B Clinical Fixed Prosthodontics Graded components. This Competency is required to complete the course and the students to graduate. Missing competency by the deadline of submission will referred a E grade in the final grade of the course.

Grading distribution for the competency 45 in the course REST 548B Clinical Fixed Prosthodontics:

1st attempt pass will earn a 100% of the maximum for the total points awarded for the competency.

2nd attempt pass will earn a 75% of the maximum for the total points awarded for the competency.

3rd attempt pass will earn a 70% of the maximum for the total points awarded for the competency.

Critical Errors

Critical errors are noted in the rubric as a DEF grade.

Description of Remediation

Students that had failed require 3 teeth practice on the tooth that is failed, prior to re-challenge the competency.

Students that failed on the 2 attempts will be referred to departmental counseling or course director to identify the problematic areas, students will be recommended on not taking the ADEX/CDCA exam in the Fall. Students that had failed will be require 3 teeth practice on the tooth that is failed, prior to re-challenge the competency.

Students that failed a 3rd attempt will be referred to Clinical Progression Committee. Students will be recommended on not taking the ADEX/CDCA exam in the Fall.

REST 548B Prosthodontic Mock Board Grading Sheet

Name: _____ Student #: S- _____

#3 Cast gold crown preparation**ACC SUB DEF*****CERVICAL MARGIN AND DRAW**

Margin/extension	.5mm supragingival	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Margin/definition/bevel	smooth, continuous & well defined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Line of draw	<10 degrees from parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WALLS, TAPER AND MARGIN

Axial tissue removal	1.5mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Axial walls-smoothness/undercuts		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taper	6-8 degrees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cervical finish line	.5mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occlusal reduction	1.5mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal line angles	rounded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occlusal anatomy	maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TREATMENT MANAGEMENT

Condition of adjacent/opposing teeth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of surrounding tissue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BRIDGE FACTOR

Path of insertion/line of draw	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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#5 Porcelain-fused-to-metal crown preparation**CERVICAL MARGIN AND DRAW**

Margin/extension	.5mm supragingival	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Margin/definition/bevel	smooth, continuous & well defined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Line of draw	<10 degrees from parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WALLS, TAPER AND MARGIN

Axial tissue removal	1.5mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Axial walls-smoothness/undercuts		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taper	6-8 degrees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cervical finish line	1.5mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occlusal reduction	2mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal line angles	rounded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occlusal anatomy	maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TREATMENT MANAGEMENT

Condition of adjacent/opposing teeth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of surrounding tissue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#9 Ceramic crown preparation

CERVICAL MARGIN AND DRAW

Margin/extension	.5mm supragingival	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Margin/definition/bevel	smooth, continuous & well defined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Line of draw	<10 degrees from parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WALLS, TAPER AND MARGIN

Axial tissue removal	1.5mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Axial walls-smoothness/undercuts		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taper	6-8 degrees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cervical margin width	1.0mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Incisal reduction	2.0mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
External/internal line angles	rounded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lingual wall height	2.0mm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TREATMENT MANAGEMENT

Condition of adjacent/opposing teeth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of surrounding tissue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Critical errors are noted by * and will result in an automatic failure

Critical errors are noted in the Rubric following the ADEX criteria for the prosthodontic section of the CDCA-ADEX examination

PFM CROWN PREPARATION

Mock Board Competency REST 548B Fixed Prosthodontics

Student name: _____

Student ID # (S#) _____

CRITICAL ERRORS

Wrong tooth/surface treated	No	Yes
Procedure not challenged	No	Yes

ACC = Adheres to Criteria SUB = Marginally Substandard DEF = Critical Deficiency

CERVICAL MARGIN AND DRAW

Margin/Extension

ACC	The cervical margin is ≤ 0.5 mm below to ≤ 1.5 mm above the simulated free gingival margin.
SUB	A. The cervical margin is over-extended > 0.5 mm below the simulated free gingival margin.
DEF	A. The cervical margin is over-extended by > 0.5 mm below the simulated free gingival margin, causing visual damage to the typodont. B. The cervical margin is under-extended by > 1.5 mm above the simulated free gingival margin.

Margin/Definition

ACC	The cervical margin is continuous but may be slightly rough and may lack some definition. The cervical bevel, when used, is ≤ 1.5 mm, and/or may lack some definition.
SUB	A. The cervical bevel, when used, is > 1.5 mm but ≤ 2.0 mm.
DEF	A. The cervical bevel, when used, is > 2.0 mm. B. The cervical margin has no continuity or definition. C. The cervical margin is cupped or J-shaped.

Margin/Facial Width

ACC	The facial shoulder is > 0.5 mm but ≤ 2.0 mm in width.
SUB	A. The facial shoulder is reduced > 2.0 mm but ≤ 2.5 mm.
DEF	A. The facial shoulder is > 2.5 mm in width. B. The facial shoulder is < 0.5 mm in width.

Margin/Lingual Width

ACC	The margin width varies slightly from visually & explorer detectable to ≤ 1.0 mm.
SUB	A. The lingual margin is > 1.0 mm but ≤ 2.0 mm.
DEF	A. The lingual margin is > 2.0 mm. B. The lingual margin is feathered and/or is not explorer detectable.

Line of Draw

ACC	The path of insertion/line of draw deviates $< 20^\circ$ from the long axis of the tooth.
SUB	The path of insertion/line of draw deviates 20° to $< 30^\circ$ from the long axis of the tooth.
DEF	The path of insertion/line of draw deviates $\geq 30^\circ$ from the long axis of the tooth.

WALLS, TAPER, AND SHOULDER**Axial Tissue Removal**

ACC The axial tissue removal is ≥ 0.5 mm but ≤ 2.0 mm.

SUB A. The axial tissue removal is > 2.0 mm but ≤ 2.5 mm.

DEF A. The axial tissue removal is > 2.5 mm.
B. The axial tissue removal is < 0.5 mm.

Axial Walls Smoothness/Undercut

ACC The walls may be slightly rough and may lack some definition.

DEF There is an undercut, which, when blocked out, would compromise margin width criteria and/or is > 0.5 mm deep.

Taper

ACC Taper is present, from nearly parallel to $\leq 12^\circ$ per wall.

SUB There is excessive taper that is $> 12^\circ$ and $\leq 16^\circ$ per wall.

DEF Taper is grossly over-reduced $> 16^\circ$ per wall.

Occlusal Reduction

ACC Occlusal reduction is ≥ 1.0 mm but ≤ 2.5 mm.

SUB A. Occlusal reduction is > 2.5 mm but ≤ 3.0 mm.

DEF A. Occlusal reduction is > 3.0 mm.
B. Occlusal reduction is < 1.0 mm.

Internal Line Angles

ACC Internal line angles and cusp tip areas may not be completely rounded and may show a slight tendency of being sharp.

DEF The internal line angles or cusp tip areas are excessively sharp with no evidence of rounding.

TREATMENT MANAGEMENT**Condition of Adjacent/Opposing Teeth**

ACC Any damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.

SUB A. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or position of the contact.
B. Opposing hard tissue shows minimal evidence of damage and/or alteration inconsistent with the procedure.

DEF A. There is gross damage to adjacent tooth/teeth requiring a restoration.
B. There is evidence of gross damage and/or alteration to opposing hard tissue inconsistent with the procedure.

Condition of Surrounding Tissue

ACC There may be slight damage to simulated gingiva and/or typodont consistent with the procedure.

SUB There is iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.

DEF There is gross iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.

CAST METAL CROWN PREPARATION

Mock Board Competency REST 548B Fixed Prosthodontics

Student name: _____

Student ID # (S#) _____

CRITICAL ERRORS

Wrong tooth/surface treated	No	Yes
Procedure not challenged	No	Yes

ACC = Adheres to Criteria SUB = Marginally Substandard DEF = Critical Deficiency

CERVICAL MARGIN AND DRAW	
Margin/Extension	
ACC	The cervical margin is at the level of or ≤ 1.5 mm occlusal to the simulated free gingival margin.
SUB	A. The cervical margin is over-extended > 0.5 mm below crest of the simulated free gingival margin.
DEF	A. The cervical margin is over-extended > 0.5 mm below the crest of the simulated free gingival margin and causes visual damage to the typodont. B. The cervical margin is under-extended > 1.5 mm above the simulated free gingival margin.
Margin/Definition/Bevel	
ACC	The cervical margin is continuous but may be slightly rough and/or may lack some definition. The cervical bevel, when used, is ≤ 1.5 mm and/or may lack some definition.
SUB	A. The cervical bevel, when used, is > 1.5 mm but ≤ 2.0 mm. B. The cervical bevel, when used, has very poor definition.
DEF	A. The cervical bevel, when used, is > 2.0 mm in length. B. The cervical margin has no continuity and/or definition. C. The cervical margin is cupped or J-shaped.
Margin/Width	
ACC	The margin varies slightly in width from visually and explorer detectable to ≤ 1.0 mm.
SUB	The margin width is > 1.0 mm but ≤ 2.0 mm.
DEF	A. The margin width is > 2.0 mm. B. The margin is not detectable and/or is feathered.
Line of Draw	
ACC	The path of insertion/line of draw deviates $< 20^\circ$ from the long axis of the tooth.
SUB	The path of insertion/line of draw deviates 20° to $< 30^\circ$ from the long axis of the tooth.
DEF	The path of insertion/line of draw deviates $\geq 30^\circ$ from the long axis of the tooth.
WALLS, TAPER, AND MARGIN	
Axial Tissue Removal	
ACC	The axial tissue removal is > 0.5 mm but ≤ 2.0 mm.
SUB	A. The axial tissue removal is > 2.0 mm but ≤ 2.5 mm.
DEF	A. The axial tissue removal is > 2.5 mm. B. The axial tissue removal is < 0.5 mm.
Axial Walls Smoothness/Undercut	
ACC	The walls may be slightly rough and may lack some definition.
DEF	There is an undercut, which, when blocked out, would compromise margin width criteria and/or is > 0.5 mm deep.

Taper	
ACC	Taper is present, from nearly parallel to $\leq 12^\circ$.
SUB	There is excessive taper that is $> 12^\circ$ or $\leq 16^\circ$.
DEF	The taper is grossly over-reduced $> 16^\circ$ per wall.
Occlusal Reduction	
ACC	Occlusal reduction is ≥ 1.0 mm but ≤ 2.0 mm.
SUB	A. Occlusal reduction is > 2.0 mm but ≤ 2.5 mm.
DEF	A. Occlusal reduction is > 2.5 mm. B. Occlusal reduction is < 1.0 mm.
Internal Line Angles	
ACC	Internal line angles and cusp tip areas may not be completely rounded and may show a slight tendency of being sharp.
DEF	Internal line angles or cusp tip areas are excessively sharp with no evidence of rounding.
BRIDGE FACTOR	
Path of Insertion/Line of Draw	
ACC	The line of draw or path of insertion is direct or may require altering the path of insertion from a direct vertical axis to allow full seating.
DEF	No line of draw or path of insertion exists through any plane of rotation without the removal of additional tooth structure in the apical $\frac{1}{2}$ of either/both of the preparations.
TREATMENT MANAGEMENT	
Condition of Adjacent/Opposing Teeth	
ACC	Any damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.
SUB	A. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or position of the contact. B. Opposing hard tissue shows minimal evidence of damage and/or alteration inconsistent with the procedure.
DEF	A. There is gross damage to adjacent tooth/teeth, requiring a restoration. B. There is evidence of gross damage and/or alteration to opposing hard tissue inconsistent with the procedure.
Condition of Surrounding Tissue	
ACC	There may be slight damage to simulated gingiva and/or typodont consistent with the procedure.
SUB	There is iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.
DEF	There is gross iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.

CERAMIC CROWN PREPARATION

Mock Board Competency REST 548B Fixed Prosthodontics

Student name: _____

Student ID # (S#) _____

CRITICAL ERRORS

Wrong tooth/surface treated	No	Yes
Procedure not challenged	No	Yes

ACC = Adheres to Criteria SUB = Marginally Substandard DEF = Critical Deficiency

CERVICAL MARGIN AND DRAW	
Margin/Extension	
ACC	The cervical margin is ≤ 0.5 mm below the simulated free gingival margin to ≤ 1.5 mm incisal to the simulated free gingival margin.
SUB	A. The cervical margin is over-extended > 0.5 mm below the crest of the simulated free gingival margin.
DEF	A. The cervical margin is over-extended > 0.5 mm below the simulated free gingival margin, causing visual damage to the typodont. B. The cervical margin is under-extended by > 1.5 mm above the simulated free gingival margin.
Margin/Definition/Unbeveled	
ACC	The cervical margin is continuous but may be slightly rough and may lack some definition.
DEF	A. The cervical margin has no continuity and/or definition. B. The margin is beveled. C. The margin is cupped or J-shaped.
Margin/Cervical Width	
ACC	The cervical margin width is ≥ 0.5 mm but ≤ 1.5 mm in width.
SUB	A. The cervical margin width is > 1.5 mm but ≤ 2.0 mm.
DEF	A. The cervical margin width is > 2.0 mm in width. B. The cervical margin width is < 0.5 mm.
Line of Draw	
ACC	The path of insertion/line of draw deviates $< 20^\circ$ from the long axis of the tooth.
SUB	The path of insertion/line of draw deviates 20° to $< 30^\circ$ from the long axis of the tooth.
DEF	The path of insertion/line of draw deviates $\geq 30^\circ$ from the long axis of the tooth.
WALLS, TAPER, AND MARGIN	
Axial/Lingual Tissue Reduction	
ACC	The axial/lingual tissue reduction is ≥ 1.0 mm but ≤ 2.0 mm.
SUB	A. The axial/lingual tissue reduction is > 2.0 mm but ≤ 2.5 mm.
DEF	A. The axial/lingual tissue reduction is > 2.5 mm. B. The axial/lingual tissue reduction is < 1.0 mm.
Axial Walls Smoothness/Undercut	
ACC	The walls may be slightly rough and may lack some definition.
DEF	There is an undercut, which, when blocked out, would compromise margin width criteria and/or is > 0.5 mm deep.

Taper

ACC	Taper is present, from nearly parallel to $\leq 12^\circ$ per wall.
SUB	There is excessive taper that is $> 12^\circ$ but $\leq 16^\circ$ per wall.
DEF	The taper is grossly over-reduced $> 16^\circ$ per wall.

Incisal Reduction

ACC	The incisal reduction is ≥ 1.0 mm but ≤ 3.0 mm.
SUB	The incisal reduction is > 3.0 mm but ≤ 3.5 mm.
DEF	A. The incisal reduction is > 3.5 mm. B. The incisal reduction is < 1.0 mm.

External/Internal Line Angles

ACC	External and/or internal line angles may be rounded but irregular.
DEF	The external and/or internal line angles are excessively sharp with no evidence of rounding.

Lingual Wall Height

ACC	The lingual wall height is ≥ 1.0 mm.
DEF	The lingual wall height is < 1.0 mm.

TREATMENT MANAGEMENT

Condition of Adjacent/Opposing Teeth

ACC	Any damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.
SUB	A. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or position of the contact. B. Opposing hard tissue shows minimal evidence of damage and/or alteration inconsistent with the procedure.
DEF	A. There is gross damage to adjacent tooth/teeth, requiring a restoration. B. There is evidence of gross damage and/or alteration to opposing hard tissue inconsistent with the procedure.

Condition of Surrounding Tissue

ACC	There may be slight damage to the simulated gingiva and/or typodont consistent with the procedure.
SUB	There is iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.
DEF	There is gross iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.

Competency Examination #47

Title: Single Fixed Dental Prosthesis tooth supported – Patient Based Competency Examination
Course: REST 548B: Fixed Prosthodontics
Timing: D4
Category: Summative
Contact: Dr. Loana Tovar Suinaga
ltovarsuinaga@umaryland.edu

General Description

Description of Assessment

Students will present a patient who needs a single tooth-supported fixed dental prosthesis. They will perform all the procedures independently, subject to faculty evaluation of critical stages. All the criteria for evaluation must be challenged in one patient. The competency objectives include:

- ☐ To identify and present a patient who requires a single tooth-supported fixed dental prosthesis.
- ☐ To prepare a tooth
- ☐ To fabricate a physiologically contoured provisional restoration
- ☐ To prepare a Lab work authorization to send to the lab for fabrication of the final restoration
- ☐ To deliver a definitive restoration

Prerequisites

REST 538B, D4 and a minimum of two units of fixed prosthodontics completed.

Criteria for Evaluation

1. Diagnosis
2. Preparation
3. Provisional restoration
4. Impression
5. Laboratory work authorization
6. Try-in and cementation

An accurate work authorization to the dental laboratory includes:

- **Completeness:** meets legal requirements for information to identify the patient, dentist/license needed, date of submission and request for return, and other legal requirements
- **Accuracy:** describes the restoration(s) to be fabricated, the items included with the case submission
- **Clarity:** the requests in the work authorization are organized and can be followed by a laboratory technician so they can fulfill the work authorization request

- **Inclusion of appropriate level of detail:** all information necessary for the laboratory technician to fabricate the restoration(s) is provided
- **Neatness:** work authorization is legible so that the information can be read and understood

Setting

UMSOD Clinic

Type of Competency Examination

Demonstration of patient-based clinical performance (student self-scheduled)

Time Allotted

Multiple clinic sessions as needed to complete the examination

Examiners

Calibrated prosthodontic faculty.

Grading

This competency is graded. Using the SANU Daily Grading System. See grading rubric for detailed description of each grade, critical errors are in bold and marked with an asterisk (*). One or more critical error(s) will result in failure.

S = Superior represents performance that is clearly above the standard and beyond what is expected. By definition, it is exceptional and stands out as distinctly different from the average. The S grade should be reserved for those circumstances in which the students' performance merits it and reflects superior delivery of patient care with no faculty assistance.

A = Acceptable represents standard performance, the level of performance that is expected of a student at a particular point in their professional development. This level of performance is expected to change as the student acquires more knowledge and experience. As the standard, the A grade reflects acceptable delivery of patient care with minimal faculty direction and/or assistance.

N = Needs improvement should be awarded when some aspect of the performance is lacking or minimally meets standards. In many cases, the general level of performance is acceptable, but is lacking in one or more aspects. The N grade is most appropriate for students in their initial efforts performing a procedure, or when a student requires several faculty's intervention to complete the procedure.

U = Unacceptable represents performance that is inadequate and clearly below standard stated above and below what is expected of a student at any level. The U grade also represents delivery of patient care that does not follow clinic protocol and/ or potentially jeopardizes patient safety.

Grade Grid:

Grade	Criteria
100	All Superior no other categories
95	All Superior except 1 Acceptable
90	All Superior except 2 Acceptable
85	All Superior except 3-4 Acceptable
80	All Superior except 5-6 Acceptable
75	All Superior or Acceptable with 1 Need improvement
70	All Superior or Acceptable with 2 Need improvement
F	3 or more Need improvement 1 or more Unacceptable

Critical Errors (U grade)**✦ Diagnosis, treatment plan and patient evaluation**

- ☐ Failure to recognize inadequate core restoration.
- ☐ Failure to recognize unresolved periodontal /pulpal issues.
- ☐ Missing or incomplete 2 or more diagnostic information.

✦ Preparation

- ☐ J-margins or margin placed on restorative material.
- ☐ Gross undercut.
- ☐ Excessive axial reduction or gross under reduction.
- ☐ Occlusal clearance - gross over or under reduction.
- ☐ Damage to adjacent/opposing teeth.
- ☐ Wrong tooth prepared.

✦ Provisional

- ☐ Provisional breaks during removal or insertion.
- ☐ Gross hyper occlusion or hypo occlusion.
- ☐ Open proximal contact.
- ☐ Gross marginal opening.
- ☐ Excessive voids/porosity.

✦ Impression

- ☐ Failure to recognize unacceptable impression.
- ☐ Partial impressions.

✦ Lab work authorization:

- ☐ Missing one of the followings: bite registration, shade, opposing cast, laboratory work authorization.
- ☐ Missing information in the lab work authorization write up: shade, materials to be used, tooth number.

✦ Delivery

- ☐ Incomplete seating upon cementation.
- ☐ Retained excess cement.
- ☐ Crown needs to be redone.

This competency is a graded activity, and it is part of the REST 548B Clinical Fixed Prosthodontics graded components. This competency is required to complete the course and

the students to graduate. Missing competency by the deadline of submission will receive an E grade in the final grade of the course.

Remediation Required Under the Following Circumstances

If the student has one or more critical deficient error(s) or accumulation of 3 N grades (need improvement) during the examination the attempt is Fail. The student will need to rechallenge the competency in another patient.

Critical errors on the preparation item will require the student to practice on a typodont and get approval of the faculty responsible, prior to rechallenging the competency.

Students that failed on the first 2 attempts will be referred to departmental counseling or course director to identify problematic areas and methods to improve clinical competency.

Students that failed a 3rd attempt will be referred to Clinical Progression Committee.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in-patient care.
- 3a. Communicate effectively with other professionals regarding the care of patients.
- 7d. Restore missing or defective tooth structure to proper form, function, and esthetics and promote soft and hard tissue health.

Rubric Competency #47: Single Fixed Dental Prosthesis Tooth Supported - Patient Based Examination

S= Exceptional above criteria A = Adheres to Criteria N = Marginally Substandard U = Critical Deficiency				
	S	A	N	U
1. DIAGNOSIS, TREATMENT PLAN AND PATIENT EVALUATION				
Diagnosis and Treatment plan	All diagnostic information is available: diagnostic casts (wax-up if applicable), pre-operative X-rays, EPR form fill correctly with all the 8 steps.	Adequate Treatment plan and diagnosis. All diagnostic information available: diagnostic casts (wax-up if applicable), pre-operative X-rays, EPR that requires minimal modifications.	One diagnostic information missing: diagnostic casts (wax-up if applicable), pre-operative X-rays not available or need to be retaken, EPR that requires several modifications.	Failure to recognize inadequate core restoration Failure to recognize unresolved periodontal /pulpal issues. Failure to remove all caries Missing or incomplete 2 or more diagnostic information (EPR, dx cast, pre-op x-ray) *
2. PREPARATION - CERVICAL MARGIN AND DRAW				
Margin Definition	The preparation configuration presented all the items of the A items described without faculty intervention	The cervical margin is continuous, smooth and has definition	The cervical margin is continuous but may be slightly rough and may lack some definition	A. The margin is cupped or J-shaped. B. Margin is placed on restorative material *
Margin Width		The cervical margin width is ≥ 0.7 mm but ≤ 1.5 mm in width.	A. The cervical margin width is > 1.5 mm but ≤ 2.0 mm.	A. The cervical margin width is > 2.0 mm in width. B. The cervical margin width is <0.7 mm.
Path of Draw		The path of insertion/line of draw deviates 20° to < 30° from the long axis of the tooth.	The path of insertion/line of draw deviates 20° to < 30° from the long axis of the tooth.	The path of Insertion/line of draw deviates ≥ 30° from the long axis of the tooth.
2. PREPARATION - WALLS, TAPER, AND MARGIN				
Axial/Lingual Tissue Reduction	The preparation configuration presented all the items of the A items described without faculty intervention.	The axial/lingual tissue reduction is ≥ 1 mm but ≤ 2.0 mm.	A. The axial/lingual tissue reduction is > 2.0 mm but ≤ 2.5 mm.	A. The axial/lingual tissue reduction is > 2.5 mm. B. The axial/lingual tissue reduction is < 1 mm. *
Axial Walls Smoothness/Undercut		The walls are smooth and has definition.	The walls may be slightly rough and may lack some definition.	There is an undercut, which, when blocked out, would compromise margin width criteria and/or is > 0.5 mm deep. *
Taper		Taper is present, from nearly parallel to ≤ 12° per wall.	There is excessive taper that is > 12° but ≤ 20° per wall.	The taper is grossly over-reduced > 20° per wall.
Occlusal / Incisal reduction		reduction is ≥ 1.0 mm but ≤ 3.0 mm.	reduction is > 3.0 mm but ≤ 3.5 mm.	A. The reduction is > 3.5 mm. B. The reduction is < 1.0 mm. *
External/Internal Line Angles		External and/or internal line angles are smooth and rounded	External and/or internal line angles may be rounded but irregular.	The external and/or internal line angles are excessively sharp with no evidence of rounding.
Wall Height		Anterior: The lingual wall height is ≥ 1.0 mm. Posterior axial walls are ≥ 4.0 mm.		Anterior: The lingual wall height is <1.0 mm. Posterior axial walls are < 4.0 mm.
2. TREATMENT SITE MANAGEMENT				
Condition of Adjacent/Opposing Teeth	The conditions of the adjacent, opposing teeth and surrounding tissue presented all the items of the A items described without faculty intervention. Matrices and protective methods are used during the tooth preparation.	Any damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.	A. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or position of the contact. B. Opposing hard tissue shows minimal evidence of damage and/or alteration inconsistent with the procedure.	A. There is gross damage to adjacent tooth/teeth, requiring a restoration. B. There is evidence of gross damage and/or alteration to opposing hard tissue inconsistent with the procedure. C. Wrong tooth prepared *

Condition of Surrounding Tissue		There is no damage to the gingiva, or very minor damage consistent with the procedure.	There is minor iatrogenic damage to the gingiva or surrounded oral tissues inconsistent with the procedure.	There is gross iatrogenic damage to the gingiva or surrounded oral tissues inconsistent with the procedure.
3. PROVISIONAL RESTORATION				
Anatomy	The provisional restoration presented all the items of the A items described without faculty intervention.	Well contoured, show proper occlusion, and are not irritating to the tissues. Follows the natural contour of the tooth	Provisional is generally acceptable, but differences exist in esthetics, occlusion, contour, and tissue reaction.	Provisional is poorly contoured (too bulk o too thin), it doesn't follow tooth contours. The provisional breaks during removal or insertion. *
Occlusion		Adequate occlusion, articulating paper marks are visible in the functional cusp	Light occlusion or require minimal adjustments	Hyper occlusion: no contact in the remaining teeth Hypo occlusion: visible space between provisional and opposing arch *
Proximal Contacts		Adequate interproximal contacts. Floss pass with similar resistance as neighboring/contralateral side	Light interproximal contacts or require minimal adjustments	Open proximal contact. *
Margins		Provisional and preparation margin are not detectable with the explorer; not irritating to the tissues.	Provisional and preparation margin are detectable with the explorer, space is the size of the tip of the explorer. Short margin.	Lack of proper marginal fit; open Margin, a probe can fit between the provisional and the margin. Irritating to the tissues, overhang. *
Finish/Polish/Density of Acrylic		Provisional is polished, esthetic, no voids.	Provisional intaglio is not well defined. Void <0.5mm are present	Excessive voids/porosity * (>0.5mm voids or multiple voids) Provisional intaglio does not represent the preparation of the tooth.
4. FINAL IMPRESSION				
Master impression	Student can identify independently a clinical acceptable impression with detectable margins and good overall details. Impression is disinfected properly.	Impression is clinical acceptable with detectable margins and good overall details. But student is unable to confirm the impression is adequate and request faculty verification. Impression is disinfected properly.	Impression could have a small void in the axial wall that can be blocked out and will not create any interference with the fabrication of final restoration. Margins are clear with no voids. Impression is not disinfected properly.	Impression has voids in the margin area, or axial wall voids that create an interference with the sitting of the final restoration. Failure to recognize unacceptable impression or partial impressions * Impression is not disinfected properly.
5. LABORATORY WORK AUTORIZATION DENTAL LABORATORY PHASE				
Labwork preparation	Student has an adequate bite registration that reproduce the patient bite. Shade selection is adequate and mimic neighboring teeth. Opposing arch: clean and free of any elements which would introduce errors.	Student is unable to identify an adequate bite registration that reproduce the patient bite. Shade selection is adequate and mimic neighboring teeth. Opposing arch: clean and free of any elements which would introduce errors.	Student is unable to unable to provide an adequate bite registration that reproduce the patient bite. Shade selection doesn't mimic neighboring teeth. Opposing cast is adequate but lack optimal quality.	Bite registration is not present. Shade was not selected. Opposing cast, lack essential elements for proper articulation. * Opposing cast with gross defects or missing cast.
Laboratory Work Authorization Write up	Student can adequately write a lab work authorization into Axium without assistance including the following information: pre-required steps for fabrication (mounting, die and ditch, etc.), tooth #, type of restoration and material, method of fabrication, margin design, occlusal contact, interproximal contact, shade, next step instructions (delivery, try-in, etc.)	All pertinent information is present and clearly described. Missing or incorrect pre-required steps, and/or next steps instructions.	Information is generally adequate, but some aspects are marginally covered. Missing or incorrect type of restoration, margin design, occlusal contact or interproximal contact, shade.	Student did not provide a Laboratory Work Authorization *
6. DELIVERY				
Labwork evaluation Quality control	Student evaluate quality of the labwork prior to the appt, shade, contours, occlusion has been check and approved.	Student evaluate quality of the labwork prior to the appt, shade, contours, occlusion has been check and	Student evaluate only 1 or 2 items for quality of the labwork, e.g. shade, contours, occlusion.	Student did not evaluate quality of the labwork prior to the appt. Student is not able to identify

	Student can identify possible errors or discrepancy in the labwork. (e.g. overhang, open margins, etc.) Shade verification.	approved. Student is not able to identify by themselves all possible errors or discrepancy in the labwork. (e.g. overhang, open margins, etc.) Shade verification	Student is not able to identify by themselves all areas of problems (e.g. overhang, open margins, etc.) Shade has not been verified.	by themselves areas of problems (e.g. overhang, open margins, etc.) Shade has not been verified.
Insertion	Student is prepared for delivery appointment, e.g.: cement to be use. Student can identify and deliver a restoration that is physiologically compatible and well-integrated with oral tissues: Well marginal fitting; adequate interproximal contacts contours and occlusion; acceptable esthetics; complete sitting upon cementation; properly cleaned cement. Try-in and final x-ray taken.	Student requires assistance on cementation method. Restoration is physiologically compatible and well-integrated with oral tissues: Well marginal fitting; adequate interproximal contacts contours and occlusion; acceptable esthetics; complete sitting upon cementation; properly cleaned cement. Try-in and final x-ray taken.	Students required assistance on cementation method. Restoration is marginally acceptable. One aspect exhibit less than desired physiologic compatibility, and requires additional intervention to fix it. Cement was partially removed. Missing final X-ray or is not adequate.	Students required assistance on cementation method. Restoration is no acceptable. Gross excess cement present, open margins, open interproximal contacts, restorations should be redone. * Missing final X-ray.

Department of Advanced Oral Sciences and Therapeutics
Division of Prosthodontics

REST 548B - Competency Clinical Assessment #47 Single Fixed Dental Prosthesis Tooth Supported – Patient Based

Student ID Number: _____

Date: _____

Patient Chart: _____

GP: _____

Grade:

	Criteria	S	A	N	U	Signature Faculty	Remed.
1	Diagnosis, Treatment Plan & Patient Eval				Fail/Critical Error	Covering the criteria	Insert Grade
	Diagnosis and Patient Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	EPR form	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Diagnostic cast/wax-up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Pre-op x-rays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2	Preparation						
	Cervical Margin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Draw	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Axial reduction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Taper/Retention/Undercut	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Occlusal/Incisal reduction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Care of Soft Tissues & Adjacent Teeth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3	Provisional Restoration						
	Anatomy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Occlusion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Proximal Contacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Margins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Finish/Polish/Density of Acrylic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4	Impressions						
	Detectable Margins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Overall details	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Infection control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5	Laboratory Phases						
	Lab work preparation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Lab work Authorization Write Up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6	Cementation						
	Lab work Evaluation/Quality control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Proximal contacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Marginal fit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Occlusion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Removal of cement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Esthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

COMMENTS: _____

Grade	Criteria
100	All Superior no other categories
95	All Superior except 1 Acceptable
90	All Superior except 2 Acceptable
85	All Superior except 3-4 Acceptable
80	All Superior except 5-6 Acceptable
75	All Superior or Acceptable with 1 Need improvement
70	All Superior or Acceptable with 2 Need improvement
F	3 or more Need improvement

	1 or more Unacceptable
--	------------------------

Faculty examiner: _____ F# _____

*Any critical error is an automatic failure for the examination and requires remediation/reexamination.

COMPETENCY EXAMINATION #48

(For the Class of 2025)

Title:	Prosthodontics Removable and Implant Competency Examinations Part 1 (Removable – OSCE examination) Part 2 (Removable - Patient Based examination) Part 3- (Implant- Clinical Simulation/OSCE examination)
Course:	IMPL 538; REST 548B; REST 548C: Fixed and Removable Prosthodontics
Timing:	D3 (Simulation Implant Impression); D4 (Implant OSCE Stations)
Category:	Summative
Contact:	Dr. Chris Choi (Part 1) Dr. Chris Choi (Part 2) cchoi@umaryland.edu Dr. Guadalupe Fay (Part 3) ggarcia@umaryland.edu

General Description

I. Description of Assessments

Part 1 (Removable – OSCE examination)

This component of the competency exam assesses the dental student's knowledge for diagnosis and treatment planning of removable prosthodontics, including partial dentures, complete dentures and implant retained dentures. The exam is an Objective Structured Clinical Examination (OSCE), using multiple examination stations with case-based questions utilizing casts, impressions, radiographs, and photographs. The competency objectives include:

- To diagnose, treatment plan and evaluate record-making for an edentulous patient cast
- To diagnose, treatment plan and evaluate record-making for a partially edentulous patient cast
- To properly write a laboratory prescription for removable prosthetic design
- To evaluate the components for the fabrication of a removable prosthesis as returned by the dental laboratory

- To diagnose and treat post-operative prosthesis delivery complications

Part 2 (Removable – Patient-based examination)

Removable Prosthodontics Clinical Competency, assesses the dental student's knowledge and skills of removable prosthodontics through clinical demonstration of the below described clinical techniques for student patient of record. The competency objectives include:

Sections 2A-E: Complete Denture

In *Comp 48-A through E: Complete Denture*, students are assessed to demonstrate their clinical and laboratory knowledge and skills in:

1. Diagnosis including proper assessment of patient's edentulous anatomy and treatment planning
2. Border-molding and impression-making on a properly designed and fabricated custom tray
3. Proper fabrication of master casts and record bases with occlusal wax rims for proper jaw relationship, teeth selection, and articulation of casts
4. Try-in of denture teeth for proper esthetics and occlusion
5. Adjustment of the completed prosthesis for patient's comfort, function, and esthetics

Sections 2F-H: Removable Partial Denture

In *Comp 48-F through H: Removable Partial Denture (RPD)*, students are assessed to demonstrate their clinical and laboratory knowledge and skills in:

1. Diagnosis including proper surveying of diagnostic casts and designing of RPD and treatment planning
2. Modification of teeth on casts and patient's teeth based on the RPD design and impression-making
3. Proper surveying of master casts and completion of the laboratory work authorization and assessment of returned RPD metal framework for proper retention, stability, and support

Part 3- Implant

Objective Structured Clinical Examination - OSCE Station examination

This component of the competency exam assesses the student's knowledge, skills and values required to achieve proper diagnosis, treatment planning and delivery of an implant supported prosthesis that maintains oral function and overall oral health. The exam is an Objective Structured Competency Examination OSCE, using multiple examination stations with case-based questions utilizing casts, 3D printed models, impressions, 3D printed surgical guides, radiographs, final implant restorations, implant overdentures, CBCT images, videos and photographs.

The competency objectives include:

1. Pre-surgical assessment of implant dentistry for fixed denture prosthesis and implant supported

overdentures

- a) To diagnose, treatment plan and evaluate implant placement for partially edentulous and fully edentulous arches
 - b) To understand the basic fundamentals and concepts of dental implant surgery, anatomy and physiology of the implant site
 - c) To understand the indication for a Cone Beam Computed Tomography CBCT
 - d) To evaluate and interpret Cone Beam Computed Tomography images
 - e) To evaluate the fundamentals of anatomy, maxillomandibular space, soft tissue and bone concepts prior to implant placement utilizing an Intraoral dental scan
 - f) To understand the indications, contraindications and limitations of implant surgery for single unit implant-supported restorations, a short span fixed denture prosthesis and implant-retained overdentures
 - g) To understand the concepts of static partially guided and fully guided surgery and dynamic navigation surgery
 - h) To evaluate and be able to preliminarily assess the bone volume, anatomical landmarks, soft tissue and restorative space using Interactive Implant Planning Software
 - i) To understand the concept of implant dentistry therapy being prosthetically driven and an interdisciplinary approach for a favorable implant therapy outcome
 - j) To be able to refer and communicate with multiple providers depending in the interdisciplinary approach
 - k) To plan a single unit restoration and a 2 unit implant-retained mandibular overdenture utilizing Interactive Implant Planning Software
 - l) To design and understand the protocols and sequence involved in the fabrication of a 3D printed surgical guide for single unit implant-supported restorations and implant-retained mandibular overdentures
 - m) To be able to analyze an implant surgical plan and surgical guide report and write the corresponding prescription to the lab for the fabrication of the surgical guide
 - n) To evaluate a properly fitted overdenture surgical guide, corresponding surgical guided sleeves and guided anchor pin sleeves and pins
 - o) To evaluate an ideal 3D printed surgical guide for single and multiple implant supported restorations
 - p) To evaluate an ideal 3D printed surgical guide for an implant supported overdenture prosthesis
2. Restorative Post-surgical assessment of implant dentistry for fixed denture prosthesis and implant supported overdentures
- a) To diagnose, treatment plan and evaluate the fundamental concepts of implant restorations for partially edentulous and fully edentulous arches
 - b) To evaluate and be able to assess the soft tissue, bone volume and restorative space using and Intraoral dental scan
 - c) To evaluate, treatment plan and sequence fixed and removable implant supported restorations
 - d) To evaluate interproximal, anterior posterior spread, maxilla mandibular space and occlusal spatial parameters for implant supported restorations
 - e) To diagnose and evaluate the need for implant supported fixed provisional restorations
 - f) To understand the indications of an implant analog impression utilizing a custom tray and elastomeric material
 - g) To understand the indications of a digital implant impression utilizing an intraoral scan
 - h) To be able to design single cement retained and screw retained implant crowns utilizing Restorative Design Software

- i) To understand the concept and indication for angle screw channel implant restorations
- j) To understand the advantages and indications of using digital technology in implant dentistry, 3D Printing and Milling of abutments and implant crowns and implant supported overdentures
- k) To understand and become familiar with fixed and removable implant restorative components
- l) To understand and be able to write a laboratory prescription with the indicated restorative design and materials for implant supported single unit restorations and implant supported overdentures
- m) To assess the restorative digital workflow sequence for a single unit restoration and a short span FDP, including but not limited to scanning, designing, milling/printing and final delivery of the restoration
- n) To assess the restorative digital workflow sequence for an implant supported overdenture, including but not limited to scanning, designing, milling/printing and final delivery of locator abutments and the implant supported overdenture
- o) To evaluate the proper locator abutment and relief required at the intaglio surface of an implant overdenture prior to picking up locator housings during the delivery visit of the prosthesis
- p) To evaluate a cement retained restoration and a screw retained restoration, including the delivery visit steps of the implant supported restoration

II. Prerequisites

- **Part 1:** REST 538C
- **Part 2 Sections A and H:** REST 538C - D3 or D4 student with a minimum of two units, one complete and one RPD, completed (this patient-based examination if completed in D3 year will be carried over to D4 REST 548C)
- **Part 3 Section A** (clinical simulation implant impression): is completed as part of IMPL 538 and will be carried over to D4 REST 548B.
- **Part 3 Section B** (OSCE station examination): REST 538B, REST 538C, IMPL 538, D4 student

Part 1 and Part 3 Section B (OSCE station examination) is administered during the same session as a block on D4 year.

III. Criteria for Evaluation

Part 1 (Removable – OSCE Station exam)

1. Diagnosis - clinical assessment of soft tissue and anatomic considerations in planning a prosthesis to include periodontal condition of teeth (when present), prognosis of remaining teeth as it relates to planned prosthesis, occlusion, spaces and anatomic relationship of missing teeth. For patients with existing prosthesis evaluation of acceptable and unacceptable prosthesis
2. Treatment planning using records obtained
 - Evaluation of diagnostic casts, clinical mountings and planning final prosthesis
 - Evaluation of complete denture design
 - Evaluation of removable partial denture design
3. Treatment goals and clinical techniques for the fabrication of removable prostheses to include clinical assessments
 - a. Evaluation of impression trays
 - b. Evaluation of occlusal rims

- c. Evaluation of tooth preparations in the design of a removable partial denture
 - d. Evaluation of impressions for final prosthesis
 - e. Tooth selection for prosthesis
- 4. Evaluation of work products returned by the dental laboratory
- 5. Final prosthesis evaluation
 - a. Evaluation of function of completed prosthesis
 - b. Evaluation and treatment of post-operative delivery complications

Part 2A-H (Removable - Clinical Patient based):

48-2A: Diagnosis and treatment planning in complete denture prosthodontics

In this competency exam, students must be able to:

- determine prognosis of complete denture treatment considered based on:
 - factors in patient's medical and dental history
 - assessment of patient's edentulous anatomy, which may require pre-prosthetic surgical modifications (e.g. immediate denture treatment)
- accurately make a diagnostic impression for fabrication of custom tray

48-2B: Border-molding and impression-making (formerly, 48-2A)

In this competency exam, students must be able to:

- properly design and fabricate custom tray
- demonstrate knowledge of critical landmarks in edentulous anatomy to be captured during border-molding and impression-making
- demonstrate proper handling of the custom tray and border-molding material to accurately border-mold the tray, producing retention, stability, and support (except in atrophic edentulous arch)
- demonstrate proper impression-making technique using elastomeric impression material
- box the master impression and produce a master cast in an appropriate dimension
- fabricate record bases and add occlusal wax rims to them for proper jaw relationship

48-2C: Jaw relationship, teeth selection, and articulation of master casts (formerly, 48-2B)

In this competency exam, students must be able to:

- determine the patient's vertical dimension at rest and occlusion (VDR and VDO, respectively)
- adjust the maxillary occlusal wax rim to proper lip support, phonetics, esthetics, and occlusal plane
- adjust the mandibular occlusal wax rim to the determined VDO
- determine the denture teeth mould using various anatomical landmarks
- determine the denture teeth and base shade
- make a facebow record using a Hanau earbow
- demonstrate a proper technique to obtain a centric relationship (CR) record
- mount and articulate the casts on Hanau Modular articulator using the earbow and CR

records

- arrange the selected denture teeth for proper esthetics (lip support, midline, and smile line) and function (balanced occlusion)

48-2D: Esthetic and functional try-in of the denture teeth; laboratory work

In this competency exam, students must be able to:

- assess esthetic and functional quality of the arranged teeth clinically using:
 - visual and tactile examination
 - phonetics
 - articulating paper
- adjust the arranged teeth and wax around the teeth to re-evaluate esthetics and function (if necessary)
- achieve balanced occlusion both in the patient's mouth and on the casts
- confirm articulation of the casts clinically
- receive patient's approval of the esthetics and comfort
- determine the posterior palatal seal clinically and transfer it onto the maxillary master cast

48-2E: Quality assessment and adjustment of the completed prosthesis for insertion

In this competency exam, students must be able to:

- evaluate the finished denture(s) returned from the laboratory prior to trying them in the patient's mouth to ensure the prosthetic quality is acceptable
- assess esthetic quality of the finished denture(s) clinically
- assess functional quality of the finished denture(s) clinically
 - retention
 - stability, including balanced occlusion
 - support
- adjust the denture base for patient's comfort
- adjust the denture teeth for balanced occlusion
- receive patient's approval of the esthetics and comfort
- give patient proper home care instructions

48-2F: Diagnosis and treatment planning in removable partial denture prosthodontics

In this competency examination, students must be able to:

- determine prognosis of RPD treatment based on:
 - factors in patient's medical and dental history
- accurately make a diagnostic impression for:
 - surveying the diagnostic cast
 - determining an appropriate RPD design based on the surveying
 - fabrication of custom tray

48-2G: Modification of teeth

In this competency exam, students must be able to:

- prior to modifying teeth according to the RPD design, confirm all details of the design in the context of clinical limitations if present
 - anatomical features such as frenum and soft tissue undercut vs. type of retentive clasp (infra- and suprabulge)
 - existing restorations coinciding with the location of rest seat preparation
- modify teeth on both casts and patient's teeth based on the RPD design to include all or any of the following:
 - proximal planes
 - rest seats
 - undercut areas in the form of dimple or area of enameloplasty based on the surveying
- demonstrate proper impression-making technique, capturing both tooth modifications and relevant edentulous anatomy
- evaluate the quality of the master impression
- properly pour the impression and trim the resulting master cast to appropriate dimensions and quality (i.e. cast size allows proper flasking and free of negative or positive errors)

48-2H: Proper surveying of master casts and completion of the laboratory work authorization

In this competency exam, students must be able to:

- survey the master cast, confirming the path of insertion/draw that makes the determined RPD design feasible
- make tripod marks on the cast
- draw the design on the master cast
- draw the design on laboratory work authorization form
- enter all RPD design details in the electronic patient chart under the "lab" tab to complete the laboratory work authorization
- try in the returned metal framework, assessing its quality

Part 3 (Implant- Clinical Simulation/OSCE Station Examination)

Section A: Clinical Simulation

1. Identification and demonstration of proper restorative assessment, anatomical landmarks and impression techniques and implant componentry
2. Custom tray fabrication
3. Proper isolation of anatomical structures including infection control protocol
4. Demonstration and understanding of a transfer and pick up impression and correct connection of components prior to sending it out to the laboratory

Section B: OSCE Station Examination

1. Diagnosis and Treatment Planning
2. Clinical Sequence of Treatment Presurgical
3. Identification of anatomic structures and assessment of a Cone Beam Volumetric Tomography prior to implant placement
4. Digital interactive implant planning assessment and surgical guide design
5. 3D Printed surgical guide assessment
6. Clinical Sequence of Treatment Postsurgical
7. Assessment of impression techniques and armamentarium
8. Treatment clinical techniques for the fabrication of a final implant supported restoration
9. Evaluation of work products returned by the dental laboratory
10. Final prosthesis evaluation

IV. Setting

- Part 3 Section A (Clinical Simulation): Simulation Lab - during IMPL 538
- Part 1 and Part 3 Section B (OSCE Station Exam) Simulation Lab - Scheduled as a block
- Part 2 section A through H: predoctoral clinic

V. Type of Competency Examination

- Part 1: Removable Prosthodontics OSCE station examination written (scheduled by block)
- Part 2 Sections A and H: demonstration – patient-based clinical performance (self-scheduled by student)
- Part 3 Section A: Demonstration – clinical performance simulation (scheduled by block)
- Part 3 Section B: Implant Prosthodontics OSCE station examination written (scheduled by block)

VI. Time Allotted

- Part 1 & Part 3 Section B: 90 minutes
- Part 2: clinic sessions based on the number of competency topics (see the rubric)
- Part 3 Section A: 30 minutes; Section B: 50 minutes

VII. Remediation Required Under the Following Circumstances

- Part 1:
Two attempts and failure.
- Part 2 Sections A through H:
Two attempts and failure.

- Part 3 Sections A and B:
Two attempts and failure.

If a student is unsuccessful on the first attempt of Part 1, 2, or 3, an opportunity will be offered to the student to retake the competency examination. If the second attempt is not successful, the student will receive remediation as departmental counseling to identify the areas of difficulty and will be given one final attempt. Should this final attempt also be unsuccessful, the student will be referred to the Clinical Progression Committee for further evaluation.

VIII. Maryland Competency Statements

7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.

IX. Grading Information and Remediation

1. Examiners

Prosthodontic clinical faculty: Drs. Barndt, Chandy, Choi, Cope, Cross, Fay, Orta, Park, and Tovar

Faculty calibration is done by competency directors Dr. Choi and Dr. Fay.

2. Grading

Final grade for all sections combined is Pass-Fail.

Part 1 (Removable Prosthodontics OSCE station examination)

- Grading is numerically based. A student must pass all with a grade of 70% for each section. Final grade is P/F

Part 2 (Clinical-Patient based)

- Grading is S-A-N-U as based on the rubric. See grading rubric for detailed description of critical errors.

Part 3 (Implant Prosthodontics OSCE station examination)

- Grading is numerically based. A student must pass all sections with a grade of 70% for each section. Final grade is P/F

3. Critical Errors

Part 1 (Removable – OSCE examination)

1. Inaccurate diagnosis
2. Incorrect decisions and decision-making for treatment planning and assessment of record-making
3. Incorrect treatment goals and clinical techniques
4. Inability to accurately assess dental laboratory work products
5. Incorrect final prosthesis evaluation and inability to identify and treat post-operative complications

Part 2 (Removable - Patient Based examination)

Refer to the grading rubric for critical errors.

Part 3 (Implant- Clinical Simulation/OSCE Station Examination)

Section A (Clinical Simulation)

Refer to the grading rubric for critical errors

Section B (OSCE Station Examination)

- Inaccurate diagnosis and treatment planning of pre-surgical assessment of a CBVT
- Incorrect decisions and decision-making for treatment planning and assessment of implant restorative goals
- Inability to accurately assess interactive implant treatment planning software for a surgical guide
- Incorrect treatment goals and clinical techniques
- Incorrect evaluation and selection of implant componentry
- Inability to accurately assess 3D printed surgical guides
- Inability to accurately assess dental laboratory work products
- Incorrect final prosthesis evaluation including provisional restorations

X. Description of Remediation

Part 1:

If after two attempts the student does not pass the competency (scores less than 70% overall, or fails one or more of the sections), there is departmental counseling to identify and counsel the student for problematic areas. The student repeats the examination. If the student does not pass the competency examination at the 3rd and final attempt, the student will be referred to the Clinical Progression Committee for further evaluation.

Part 2:

If after two attempts the student fails the examination, a one-on-one meeting with predoctoral director of removable prosthodontics to review areas as identified as critical errors. The student repeats the section of the examination that was failed.

Part 3:

Section A: If after one attempt the student fails the examination, a one-on-one meeting with the faculty examiner is done to review areas identified as critical errors. The student repeats the section of the examination that was failed at the same scheduled time of the examination. If after two attempts the student fails the examination, a one-on-one meeting with the faculty competency director is done to review areas identified as critical errors. The student repeats the full examination at a different scheduled time.

Section B: If after one attempt the student fails the examination, a one-on-one meeting with the course director is scheduled to review areas as identified as critical errors. The student repeats the full examination.

If after two attempts the student fails the examination, a one-on-one meeting with the course director is done to review areas identified as critical errors. The student repeats the section of the examination that was failed.

XI. Rubric and Evaluation Form – *what is the critical error?*

3 or more “N” grades is considered a failing grade. 1 “U” grade is also considered a failing grade. All failing grade requires a counseling and re-examination with the director of removable prosthodontics. Any one of the following critical errors is equal to a “U” grade (i.e. one critical error is a failing grade).

Critical errors:

48-2A: Diagnosis and Treatment Planning

- Classifications are missing and/or incorrect: House’s Soft Palatal Form, Neil’s Lateral Throat Form, and Wright’s Tongue Position.
- Treatment codes are missing and/or incorrect.

2B: Border-molding and impression-making

- Custom tray is missing/grossly inadequate, requiring a new custom tray to be fabricated (critical anatomical areas cannot be captured even with border-molding compound).
- Border-molded custom tray does not include critical anatomical areas: hamular notch, posterior palatal seal area, retromolar pad (at least 50%), retromylohyoid area, and buccal shelf.
- Border-molded custom tray does not show proper seal (maxillary arch).
- Negative (voids) and/or positive (blebs) in the impression.
- Impression material shows inconsistent and/or incomplete quality.

2C: Jaw Relationship, Teeth Selection, and Articulation of Master Casts

- Record bases with occlusal wax rims are missing/grossly miss fitting, making them too unstable in the patient's mouth to use them during the jaw relationship procedure.
- Student is unable to assess and/or obtain lip support and/or incisal edge position.
- Student is unable to assess and/or obtain proper occlusal plane on the maxillary occlusal wax rim.
- Student shows no understanding of the concepts in assessing and determining vertical dimension of rest (VDR) and occlusion (VDO).
- Student is unable to adjust the occlusal wax rims to proper VDO.
- Student shows no understanding of the concept in centric relation (CR).
- Student is unable to demonstrate how to position patient's mandible in CR.
- Student is unable to demonstrate how to obtain proper records—facebow and CR.

2D: Esthetic and Functional Denture Teeth Try-in; Laboratory Work Authorization

- Student is unable to assess the esthetic quality/deficiency of the arranged denture teeth.
- Student is unable to assess the occlusion/malocclusion of the arranged denture teeth.
- Student is unable to demonstrate how to properly complete the laboratory work authorization prior to returning the teeth arrangement for processing.

2E: Quality Assessment and Adjustment of Complete Denture

- Student did not evaluate the quality of finished denture prior to the appointment.
- Student is unable to determine and/or properly adjust pressure spots from the intaglio of the denture.
- Student is unable to determine occlusal problems and/or properly adjust the denture teeth for proper occlusion.
- Student is unable to check lip support, incisal edge position, and/or occlusal plane as esthetic parameters.
- Student did not provide the patient with proper home care instructions.

2F: Diagnosis and Treatment Planning

- Student did not survey the diagnostic cast and/or generate a clinically acceptable RPD design.
- Treatment codes are missing and/or incorrect.

2G: Modification of Teeth and Master Impression

- Student did not bring surveyed diagnostic cast and/or RPD design to the appointment.
- Student did not prepare the teeth on the cast prior to the appointment.
- Student did not prepare the teeth (patient) based on the approved RPD design (i.e. prepared a wrong tooth).
- Student did not show proper understanding of the patient's RPD design.
- The impression did not capture the modified teeth and/or edentulous areas properly.

2H: Master Cast, Laboratory Work Authorization, and RPD Metal Framework Try-in

- Student did not survey and/or draw the RPD design the master cast prior to completing the laboratory work authorization.
- Student did not properly tripod the master cast.
- Student did not complete the laboratory work authorization with RPD design information, and/or the details of the RPD design included Class 1 Lever and/or 3 or more inaccurate details.
- Student did not assess the quality of the finished RPD metal framework prior to the appointment.
- Student did not demonstrate how to diagnose and/or adjust pressure spots from the RPD metal framework.

Please see the appendix for detailed grading rubric.

Custom tray fabrication is completed prior to challenging the clinical simulation implant impression competency to allow for impression time in assigned blocks. A preliminary grade Pass/Fail is posted on Blackboard to provide feedback to the student.

Implant Custom Tray Rubric and Grade Sheet
Project Photos to be uploaded in Blackboard

1. Student name: _____ GP: _____
2. Student ~~axium~~ ID Number: _____ Date: _____
3. Faculty signature: _____ F# _____

Grade:

- ☐ Needs improvements
☐ Pass -Acceptable
☐ Fail



Criteria being evaluated	Pass	Needs improvement (2 critical errors)*
1.Cast	Cast has proper extensions, buccal, lingual and distal extensions	Cast is under extended, vestibule was not capture, cast is not suitable to make a custom tray
2.Relief	Space relief is adequate for the impression coping.	<ul style="list-style-type: none"> • Tray does not provide good relief for the implant impression coping (#13). • Tray is contacting gingiva or lingual soft tissue • Tray is over relief : greater than 7 mm clearance or contact between teeth and tray (other than stops)
3.Handle	The handle doesn't interfere with the soft tissue, has a proper dimensions and retention.	Handle is in the way of soft tissue. Handle is too small or too large
4.Tissue Stops	Presence of at least 3 tissue stops, one anterior and two posterior stops	<ul style="list-style-type: none"> • Tissue stops are located in the area of other teeth, ignoring one anterior and two posterior stops • Tray is not stable/fewer than 3 stops or no stops present
5.Extensions	Custom tray has proper extensions for a close tray impression to properly capture the implant position and anatomical landmarks.	<ul style="list-style-type: none"> • Tray Extension is <1mm, at or occlusal to the gingival margin in area of prepared teeth. • Tray is short of anatomical extensions including the implant site. • Tray is short of most distal tooth or extends/overlaps beyond distal tooth onto the side of cast. • Extension beyond soft tissue undercut
6. Stability	Stable on cast; 2 finger test Ease of seating Minor rocking in seating on cast	Unstable on cast, cannot seat the tray without rocking
7. Borders and Finishing	Smooth with no sharp edges Minor scratches, irregularities	Borders of the tray are rough, gross , too thin, has multiple irregularities

*More than two critical errors is an automatic failure and requires remaking of the tray

Rubric and Grade Sheet for Implant Clinical Simulation

– Implant Level Impression, close tray technique

Student name: _____

GP: _____

Student aXium ID Number: _____

Date: _____

Grade: (circle one)

- ☐ Needs improvements
- ☐ Pass -Acceptable (good work)
- ☐ Pass-Superior (exceptional work)

Attempt Number:

1 2 3 4

Criteria being evaluated	Acceptable	Needs Improvement (critical error)*
1.Custom tray	<input type="checkbox"/> Proper fabrication of a custom tray for a close tray implant level impression. <input type="checkbox"/> Custom tray has proper extensions for a close tray impression to properly capture the implant position and anatomical landmarks. <input type="checkbox"/> Space relief is adequate for the impression coping.	<input type="checkbox"/> Unable to fabricate a custom tray for a single unit implant restoration. <input type="checkbox"/> Student presents without a custom tray. <input type="checkbox"/> Tray is short of anatomical extensions including the implant site. <input type="checkbox"/> Tray does not provide good relief for the impression coping. <input type="checkbox"/> Tray is overextended.
2.Impression coping placement	<input type="checkbox"/> Demonstrates understanding of anatomy, implant placement angulation and alignment, clinical and laboratory implant components necessary prior to a final impression. Able to remove the healing abutment with proper use of the implant driver, place and connect a close tray impression coping to the implant platform ready for making a final impression.	<input type="checkbox"/> Unable to demonstrate understanding of anatomy, implant placement angulation MD, BL in relation to the adjacent teeth. <input type="checkbox"/> Unable to demonstrate an understanding for selection of components for an implant impression and ability to accurately place the impression coping. <input type="checkbox"/> Unable to use the implant driver to remove the healing abutment. Forgets to attach floss to the driver.
3.Implant Impression	<input type="checkbox"/> Student is able to demonstrate correct impression technique. Proper dispense and use of the impression material. <input type="checkbox"/> Impression lacks bubbles and shows implant anatomical landmarks.	<input type="checkbox"/> Student is unable to demonstrate a correct impression technique, dispensing and managing of impression material. <input type="checkbox"/> Impression has bubbles or voids around the implant site.
4.Transfer coping preparation for Lab	<input type="checkbox"/> Demonstrates an understanding for selection of components for the implant impression and ability to place and connect the corresponding analog replica to the impression coping with the implant driver. <input type="checkbox"/> Removes the impression coping and places the healing abutment back into the sim patient.	<input type="checkbox"/> Unable to demonstrate an understanding for selection of components for implant impression and ability to accurately transfer and place the corresponding analog replica to the impression coping prior to sending it to the Lab for soft tissue cast fabrication. <input type="checkbox"/> Unable to use the implant driver. <input type="checkbox"/> Forgets to place the healing abutment back into the sim patient.
5.Professionalism	<input type="checkbox"/> Keeps implant materials and set-up organized, keeps the station clean after the impression is made. <input type="checkbox"/> Follows infection control guidelines.	<input type="checkbox"/> Unable to keep implant materials and set-up organized, does not keep the station clean after the impression is made. <input type="checkbox"/> Does not follow infection control guidelines.

*Any two critical errors is an automatic failure for the examination and requires remediation/reexamination

Faculty examiner: _____ F# _____

Grade Sheet for Competency #48 OSCE Implants

Clinical Simulation– Implant Level Impression, close tray technique

Student name: _____

GP: _____

Student aXium ID Number: _____

Date: _____

Grade: (circle one)

- ☐ Needs improvements
- ☐ Pass -Acceptable (good work)
- ☐ Pass-Superior (exceptional work)

Attempt Number:

Grading /Feedback form:

Criteria being evaluated	Pass	Fail (critical error)*
Custom tray		
Impression coping placement		
Implant Impression		
Transfer coping preparation for Lab		
Professionalism		

*Any two critical errors is an automatic failure for the examination and requires remediation/reexamination

Faculty examiner: _____ F# _____

48-2A
CD-1

Clinical Competency Examination 48-2A: Complete Denture Section 1 (CD-1)
Diagnosis and Treatment Planning

Grade
(circle one)

P/F

Date: _____

Student S#: _____

Patient x-ray record #: _____

☐

maxillary

☐

mandibular

Faculty member: please record detailed grading on reverse prior to marking the final grades below.

i. medical and dental history	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
-------------------------------	-------------------------------	-------------------------------

ii. diagnosis	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
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iii. treatment planning	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
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Faculty examiner: Dr. _____ (print name) _____ (signature) ____/____/____ (date)

Comments:

48-2A

CD-1

Clinical Competency Examination 48-2A: Complete Denture Section 1 (CD-1)

Diagnosis and Treatment Planning

Grading Guidelines for CD-1

Grade

(circle one)

P/F

***Faculty member: please circle the grade from
S/A/N/U below prior to circling the final grade.***

The following is a failing grade:

- 3 or more "N"
- Any 1 "U"
- Any faculty intervention

All failing grade requires a counseling with the director of removable prosthodontics and re-examination of the specific part the student failed.

i. medical and dental history – The student was able to:

S A N U : document significant medical and/or dental history;

S A N U : relate medical and/or dental conditions to treatment and prognosis

ii. diagnosis – The student was able to:

S A N U : document patient's chief complaint;

S A N U : accurately evaluate patient's critical edentulous anatomy;

S A N U : recognize limitation posed by the patient's existing edentulous anatomy;

S A N U : independently record the details above in the patient's electronic health record.

iii. treatment planning – The student was able to:

S A N U : inform the patient benefits and limitations of possible treatment options

S A N U : put appropriate treatment code(s) in the patient's electronic health chart

S A N U : help patient form realistic expectations toward the treatment process and outcome

48-2B**CD-2****Clinical Competency Examination 48-2B: Complete Denture Section 2 (CD-2)**
*Border-molding and Impression-making*Grade
(circle one)**P/F**

Date: _____

Student S#: _____

Patient axiUm record #: _____ ☐ maxillary ☐ mandibular*Faculty member: please record detailed grading on reverse prior to marking the final grades below.*

i. custom tray	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
ii. border-molding	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
iii. impression-making	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
iv. master cast	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL

Faculty examiner: Dr. _____ (print name) _____ (signature) ____/____/____ (date)

Comments:

48-2A

CD-2

Clinical Competency Examination 48-2B: Complete Denture Section 2 (CD-2)
Border-molding and Impression-making
Grading Guidelines for CD-2

Grade
(circle one)

P/F

***Faculty member: please circle the grade from
S/A/N/U below prior to circling the final grade.***

The following is a failing grade:

- 3 or more "N"
- Any 1 "U"
- Any faculty intervention

All failing grade requires a counseling with the director of removable prosthodontics and re-examination of the specific part the student failed.

Students are expected to uphold professionalism and proper infection control during this competency examination though these aspects are recorded separately in the appointment grading in axiUm.

iii. custom tray – The student was able to:

S A N U : design and fabricate the custom tray prior to the appointment;

S A N U : the custom tray included all critical anatomical landmarks; either adjustment or addition of the border-molding material, all critical anatomical landmarks could be accurately captured.

iv. border-molding – The student was able to:

S A N U : accurately extend the custom tray to the peripheral border, outlining the edentulous arch accurately;

S A N U : show retention, stability, and support at the conclusion of the border-molding step. Note: severely resorbed ridges may not show much retention and/or stability and would be assessed in terms of the peripheral border and support.

v. impression-making – The student was able to:

S A N U : make an impression using the border-molded custom tray, capturing all critical anatomical landmarks without any error (positive or negative, e.g. clumps or voids, respectively).

vi. master cast – The student was able to:

S A N U : properly produce a master cast in an appropriate dimension in a neat, clean fashion from the completed impression.

48-2C**CD-3****Clinical Competency Examination 48-2C: Complete Denture Section 3 (CD-3)**
Jaw Relationship, Teeth Selection, and Articulation of Master Casts

Date: _____

Student S#: _____

Patient x-ray record #: _____

Grade
(circle one)**P/F*****Faculty member: please record detailed grading on reverse prior to marking the final grades below.***

i. jaw relationship – occlusal wax rims	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
-----------------------------------------	-------------------------------	-------------------------------

ii. jaw relationship – records	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
--------------------------------	-------------------------------	-------------------------------

iii. teeth and denture base selection	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
---------------------------------------	-------------------------------	-------------------------------

iv. master cast articulation	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
------------------------------	-------------------------------	-------------------------------

Faculty examiner: Dr. _____ (print name) _____ (signature) ____/____/____ (date)

Comments:

48-2C

CD-3

Clinical Competency Examination 48-2C: Complete Denture Section 3 (CD-3)
Jaw Relationship, Teeth Selection, and Articulation of Master Casts
Grading Guidelines for CD-3

Grade
(circle one)

P/F

***Faculty member: please circle the grade from
S/A/N/U below prior to circling the final grade.***

The following is a failing grade:

- 3 or more "N"
- Any 1 "U"
- Any faculty intervention

All failing grade requires a counseling with the director of removable prosthodontics and re-examination of the specific part the student failed.

Students are expected to uphold professionalism and proper infection control during this competency examination though these aspects are recorded separately in the appointment grading in axiUm.

i. jaw relationship – occlusal wax rims – The student was able to:

S A N U : adjust the maxillary occlusal wax rim (OWR) properly, confirming proper lip support, incisal edge position, and occlusal plane;

S A N U : determine and mark patient's vertical dimension at rest (VDR) and adjust the mandibular OWR to patient's vertical dimension of occlusion (VDO).

ii. jaw relationship – record – The student was able to make:

S A N U : the facebow record properly;

S A N U : the centric relation (CR) record properly.

iii. teeth and denture base selection – The student was able to select:

S A N U : denture teeth mould based on the markings on the OWR (i.e. midline, ala width, and smile line);

S A N U : tooth and denture base shade to patient's satisfaction

iv. master cast articulation – The student was able to properly:

S A N U : mount and articulate the casts on the articulator using the facebow and CR records

48-2D**CD-4****Clinical Competency Examination 48-2D: Complete Denture Section 4 (CD-4)**
*Esthetic and Functional Denture Teeth Try-in; Laboratory Work Authorization*Grade
(circle one)**P/F**

Date: _____

Student S#: _____

Patient x-ray record #: _____

☐

maxillary

☐

mandibular

Faculty member: please record detailed grading on reverse prior to marking the final grades below.**i. esthetics**☐**PASS**☐**FAIL****ii. occlusion**☐**PASS**☐**FAIL****iii. laboratory work authorization**☐**PASS**☐**FAIL**

Faculty examiner: Dr. _____ (print name) _____ (signature) ____/____/____ (date)

Comments:

48-2D**CD-4**

Clinical Competency Examination 48-2D: Complete Denture Section 4 (CD-4)
Esthetic and Functional Denture Teeth Try-in; Laboratory Work Authorization
Grading Guidelines for CD-4

Grade
(circle one)

P/F

***Faculty member: please circle the grade from
S/A/N/U below prior to circling the final grade.***

The following is a failing grade:

- 3 or more "N"
- Any 1 "U"
- Any faculty intervention

All failing grade requires a counseling with the director of removable prosthodontics and re-examination of the specific part the student failed.

Students are expected to uphold professionalism and proper infection control during this competency examination though these aspects are recorded separately in the appointment grading in axiUm.

i. esthetics

S A N U : The student was able to assess the esthetic quality of the denture teeth arrangement by checking/confirming (all of the following were confirmed = S; 3 confirmed = A; 2 = N; 1 or none = U):

- ☐ midline placement;
- ☐ lip support;
- ☐ tooth proportion and display (smile line);
- ☐ denture teeth color.

ii. occlusion

S A N U : The student was able to assess the functional quality of the arranged denture teeth by checking/confirming (all of the following were confirmed = S; 3 confirmed = A; 2 = N; 1 or none = U):

- ☐ proper occlusal plane;
- ☐ phonetics;
- ☐ balanced occlusion.

iii. laboratory work authorization – The student was able to:

S A N U : modify the maxillary cast for proper posterior palatal seal;

S A N U : finalize the occlusion and gingival esthetics to acceptable quality (i.e. accurate, neat, and ready for laboratory processing);

S A N U : properly complete the laboratory work authorization form, clearly communicating to the laboratory to ensure quality processing of the denture.

48-2E**CD-5****Clinical Competency Examination 48-2E: Complete Denture Section 1 (CD-5)**
Quality Assessment and Adjustment of Complete DentureGrade
(circle one)**P/F**

Date: _____

Student S#: _____

Patient x-ray record #: _____

☐

maxillary

☐

mandibular

Faculty member: please record detailed grading on reverse prior to marking the final grades below.**i. prosthetic quality assessment prior to the insertion
appointment**☐**PASS**☐**FAIL****ii. insertion**☐**PASS**☐**FAIL****iii. patient education**☐**PASS**☐**FAIL**

Faculty examiner: Dr. _____ (print name) _____ (signature) ____/____/____ (date)

Comments:

48-2E

CD-5

Clinical Competency Examination 48-2E: Complete Denture Section 1 (CD-5)
Quality Assessment and Adjustment of Complete Denture
Grading Guideline for CD-5

Grade
(circle one)

P/F

*Faculty member: please circle the grade from
S/A/N/U below prior to circling the final grade.*

The following is a failing grade:

- 3 or more "N"
- Any 1 "U"
- Any faculty intervention

All failing grade requires a counseling with the director of removable prosthodontics and re-examination of the specific part the student failed.

Students are expected to uphold professionalism and proper infection control during this competency examination though these aspects are recorded separately in the appointment grading in axiUm.

i. prosthetic quality assessment prior to the insertion appointment - The student was able to:

S A N U : assess the quality of the finished denture returned from the laboratory prior to the insertion appointment.

ii. insertion - The student was able to adjust:

S A N U : the denture base (intaglio) to ensure patient was comfortable with the fit;

S A N U : the denture teeth for proper occlusion in both CO/MI and excursive movements;

The student was also able to evaluate:

S A N U : the esthetic quality of the denture.

iii. patient education - The student:

S A N U : demonstrated to the patient clearly a proper way to take care of the denture at home;

S A N U : provided the patient with home care items for the denture.

Clinical Competency Examination 48-2F: Removable Partial Denture Section 1 (RPD-1)
Diagnosis and Treatment Planning

48-2F

RPD-1

Date: _____

Student S#: _____

Patient x-ray record #: _____

☐ maxillary ☐ mandibular

☐ resin-based

☐ metal framework-based

Grade
(circle one)

P/F

Faculty member: please record detailed grading on reverse prior to marking the final grades below.

i. medical and dental history	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
ii. diagnosis	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
iii. RPD design	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
iv. treatment planning	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL

Faculty examiner: Dr. _____ (print name) _____ (signature) ____/____/____ (date)

Comments:

Clinical Competency Examination 48-2F: Removable Partial Denture Section 1 (RPD-1)

48-2F

RPD-1

Diagnosis and Treatment Planning

Grading Guidelines for RPD-1

Faculty member: please circle the grade from S/A/N/U below prior to circling the final grade.

Grade
(circle one)

P/F

The following is a failing grade:

- 3 or more "N"
- Any 1 "U"
- Any faculty intervention

All failing grade requires a counseling with the director of removable prosthodontics and re-examination of the specific part the student failed.

Students are expected to uphold professionalism and proper infection control during this competency examination though these aspects are recorded separately in the appointment grading in axiUm.

i. medical and dental history – The student was able to:

S A N U : document significant medical and/or dental history;

S A N U : relate medical and/or dental conditions to treatment and prognosis

ii. diagnosis – The student was able to:

S A N U : document patient's chief complaint;

S A N U : accurately evaluate patient's critical edentulous anatomy;

S A N U : recognize limitation posed by the patient's existing edentulous anatomy;

S A N U : independently record the details above in the patient's electronic health record.

iii. RPD design – The student was able to:

S A N U : survey the diagnostic cast and find undercut areas properly;

S A N U : generate a clinically acceptable RPD design and complete the design form independently (please see attached).

iv. treatment planning – The student was able to:

S A N U : inform the patient benefits and limitations of possible treatment options

S A N U : put appropriate treatment code(s) in the patient's electronic health chart

S A N U : help patient form realistic expectations toward the treatment process and outcome

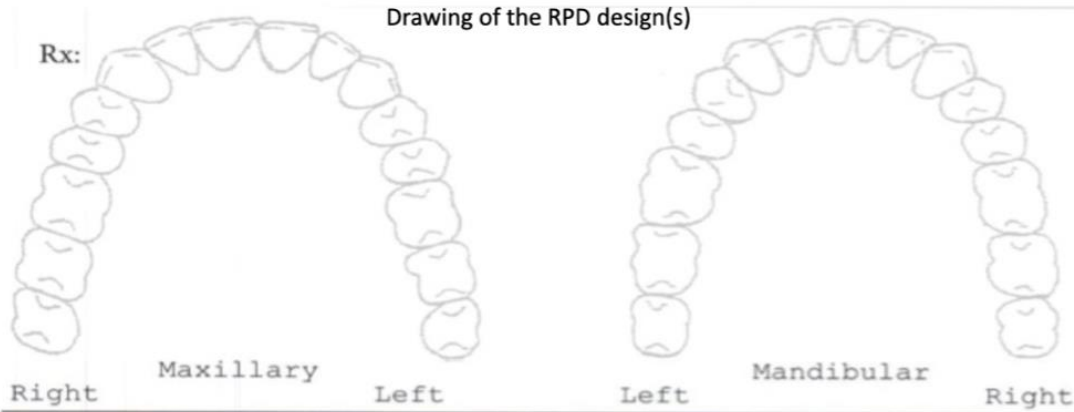
48-2F

RPD-1

Class 1 Lever = "U"
3 or more incorrect/inaccurate
detail = "N"

Grade
(circle one)

P/F



Please fabricate the RPD based on the designs drawn above and the checked details below:

☐ maxillary ☐ mandibular ☐ metal framework ☐ resin-based

retentive areas (indicate tooth #s and surfaces): _____

metal framework RPDs (indicate tooth # and surfaces):

rests: _____

proximal plates: _____

base:

☐ acrylic retention lattice with tooth #s: _____

☐ tube tooth: tooth #/#s _____

major connector:

☐ A-P palatal strap ☐ palatal strap ☐ palatal plate

☐ lingual bar ☐ lingual plate ☐ swinglock (must be approved by the predoctoral director)

metal alloy: ☐ ticonium ☐ vitallium (nickel free)

tissue stop(s) (for mandibular only) - indicate approximate areas: _____

Clinical Competency Examination 48-2G: Removable Partial Denture Section G (RPD-2)
Modification of Teeth and Master Impression

48-2G

RPD-2

Date: _____

Student S#: _____

Patient x-ray record #: _____

☐

maxillary

☐

mandibular

Grade

(circle one)

P/F

Faculty member: please record detailed grading on reverse prior to marking the final grades below.

i. tooth modification

☐

PASS

☐

FAIL

ii. master impression

☐

PASS

☐

FAIL

Faculty examiner: Dr. _____ (print name) _____ (signature) ____/____/____ (date)

Comments:

Clinical Competency Examination 48-2G: Removable Partial Denture Section G (RPD-2)

48-2G

RPD-2

Modification of Teeth and Master Impression

Grading Guidelines for RPD-2

Faculty member: please circle the grade from S/A/N/U below prior to circling the final grade.

Grade

(circle one)

P/F

The following is a failing grade:

- 3 or more "N"
- Any 1 "U"
- Any faculty intervention

All failing grade requires a counseling with the director of removable prosthodontics and re-examination of the specific part the student failed.

Students are expected to uphold professionalism and proper infection control during this competency examination though these aspects are recorded separately in the appointment grading in axiUm.

i. tooth modification - The student was able to modify:

S A N U : modify the teeth on the cast based on the RPD design prior to the appointment;

S A N U : modify patient's teeth based on the RPD design.

ii. master impression - The student was able to:

S A N U : make a master impression, capturing all critical details, including both modified teeth and relevant edentulous areas (i.e. without any error, such as voids, clumps, etc.).

Clinical Competency Examination 48-2H: Removable Partial Denture Section 3 (RPD-3)
Master Cast, Laboratory Work Authorization, and RPD Metal Framework Try-in

48-2H
RPD-3

Date: _____

Student S#: _____

Patient axiUm record #: _____

☐

maxillary

☐

mandibular

Grade
(circle one)

P/F

Faculty member: please record detailed grading on reverse prior to marking the final grades below.

i. master cast	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
----------------	-------------------------------	-------------------------------

ii. RPD metal framework try-in	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
--------------------------------	-------------------------------	-------------------------------

Faculty examiner: Dr. _____ (print name) _____ (signature) ____/____/____ (date)

Comments:

Clinical Competency Examination 48-2H: Removable Partial Denture Section 3 (RPD-3)
Master Cast, Laboratory Work Authorization, and RPD Metal Framework Try-in

Grading Guidelines for RPD-3

48-2H

RPD-3

*Faculty member: please circle the grade from
S/A/N/U below prior to circling the final grade.*

Grade
(circle one)

P/F

The following is a failing grade:

- 3 or more "N"

- Any 1 "U"

- Any faculty intervention

All failing grade requires a counseling with the director of removable prosthodontics and re-examination of
the specific part the student failed.

i. master cast - The student was able to independently:

S A N U : survey the master cast properly, confirming the RPD design from the diagnosis and treatment plan phase would work clinically;

S A N U : properly tripod the cast;

S A N U : draw the RPD design on the cast;

S A N U : complete the RPD design details in the patient's electronic health chart.

ii. RPD metal framework try-in - The student was able to:

S A N U : evaluate the quality of the returned RPD metal framework prior to the appointment, ensuring it was the same as the design in the laboratory work authorization;

S A N U : adjust the metal framework properly during the patient try-in.

IMPLANT COMPETENCY EXAMINATION #48A

(For the Class of 2025)

Title:	Prosthodontics Implant Competency Examinations Part 3- Implant- Clinical Simulation/OSCE examination
Course:	IMPL 538; REST 548B; REST 548C: Fixed and Removable Prosthodontics
Timing:	D3 (Simulation Implant Impression); D4 (Implant OSCE Stations)
Category:	Summative
Contact:	Dr. Guadalupe Fay ggarcia@umaryland.edu

General Description

I. Description of Assessments

Part 3- Implant- Clinical Simulation/OSCE Station Examination)

Section A: Clinical Simulation Implant Impression

This component of the competency exam assesses the dental student's knowledge and skills of implant prosthodontics thru simulated typodont demonstration of the clinical techniques described below.

The competency objectives include:

1. To fabricate the proper custom tray for an implant level impression for a single fixed restoration
2. To demonstrate the proper selection of implant impressions copings for a restorative single unit case and connect the impression coping
3. To demonstrate proper impression technique for a single fixed restoration
4. To demonstrate the proper connection of implant analogs after transfer and pick up implant impressions so the impressions can be sent out to the laboratory

Section B: Objective Structured Clinical Examination - OSCE Station examination

This component of the competency exam assesses the student's knowledge, skills and values required to achieve proper diagnosis, treatment planning and delivery of an implant supported prosthesis that maintains oral function and overall oral health care. The exam is an Objective Structured Competency Examination OSCE, using multiple examination stations with case based questions utilizing casts, 3D printed models, impressions, 3D printed surgical guides, radiographs, final implant restorations, implant

overdentures, CBCT images, videos and photographs.

The competency objectives include:

1. Pre-surgical assessment of implant dentistry

- a) To diagnose, treatment plan and evaluate implant placement for a partially edentulous and fully edentulous arches
- b) To understand the basic fundamentals and concepts of dental implant surgery and evaluation of a Cone Beam Computed Tomography CBCT
- c) To evaluate basic anatomy of maxillomandibular space, soft tissue and bone concepts prior to implant placement utilizing an Intraoral dental scan
- d) To understand the indications, contraindications and limitations of implant surgery for single unit implant-supported restorations and implant-retained overdentures
- e) To evaluate and be able to preliminarily assess the bone volume, anatomical landmarks and restorative space using Interactive Implant Planning Software
- f) To understand that implant dentistry therapy is prosthetically driven and it requires an interdisciplinary approach communicating with multiple specialists
- g) To design a single unit restoration and a 2 unit implant-retained mandibular overdenture utilizing Interactive Implant Planning Software
- h) To understand the protocols or steps involved in fabrication of a 3D printed surgical guide for single unit implant-supported restorations and implant-retained mandibular overdentures
- i) To evaluate an ideal 3D printed surgical guide for single and multiple implant-supported restorations

2. Restorative Post-surgical assessment of implant dentistry

- a) To diagnose, treatment plan and evaluate the basic fundamentals and concepts of implant restorations for a partially edentulous and fully edentulous arches
- b) To evaluate and be able to preliminarily assess the soft tissue volume and restorative space using and Intraoral dental scan
- c) To evaluate, treatment plan and sequence fixed and removable implant supported restorations
- d) To evaluate interproximal, interarch distance and occlusion spatial parameters for implant supported restorations
- e) To diagnose and evaluate need for implant supported fixed provisional restorations
- f) To design single implant crowns utilizing Restorative Design Software
- g) Understand the advantages and indications of using digital technology in implant dentistry, 3D Printing and Milling of abutments and implant crowns
- h) Understand and become familiar with fixed and removable implant restorative components
- i) Understand and be able to communicate to the laboratory the various restorative designs for implant supported single unit restorations and overdentures
- j) To evaluate the proper locator abutment and relief required at the intaglio surface of an implant overdenture prior to picking up locator housings
- k) To evaluate a cement retained restoration and a screw retained restoration prior to delivery of the case

II. Prerequisites

- **Part 3 Section A** (clinical simulation implant impression): is completed as part of IMPL 538 and will be carried over to D4 REST 548B.

- **Part 3 Section B** (OSCE station examination): REST 538B, REST 538C, IMPL 538, D4 student

Section B (OSCE station examination) is administered as a block on D4 year

III. Criteria for Evaluation

Section A: Clinical Simulation

1. Identification and demonstration of proper restorative assessment, anatomical landmarks and impression techniques and implant componentry
2. Custom tray fabrication
3. Proper isolation of anatomical structures including infection control protocol
4. Demonstration and understanding of a transfer and pick up impression and correct connection of components prior to sending it out to the laboratory

Section B: OSCE Station Examination

1. Diagnosis and Treatment Planning
2. Clinical Sequence of Treatment Presurgical
3. Identification of anatomic structures and assessment of a Cone Beam Volumetric Tomography prior to implant placement
4. Digital Surgical Guide assessment
5. Clinical Sequence of Treatment Postsurgical
6. Assessment of impression techniques and armamentarium
7. Treatment clinical techniques for the fabrication of a final implant supported restoration
8. Evaluation of work products returned by the dental laboratory
9. Final prosthesis evaluation

IV. Setting

- Section A (Clinical Simulation): Simulation Lab- during IMPL 538
- Section B (OSCE Station Exam) Simulation Lab - Scheduled as a block

V. Type of Competency Examination

Section A: Demonstration – clinical performance simulation (scheduled by block)

Section B: OSCE station examination written (scheduled by block)

VI. Time Allotted

- Section A: 30 minutes
- Section B: 50 minutes

VII. Remediation Required Under the Following Circumstances

- Part 3 Section A and B:
Two attempts and failure.

VIII. Maryland Competency Statements

7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.

IX. Grading Information and Remediation

1. Examiners

Prosthodontic clinical faculty: Drs. Fay, Cope, Kanikicharla, Orta, Park, Tovar and Choi.

Faculty calibration by competency director Dr. Fay.

2. Grading

Final grade for all sections combined is Pass-Fail.

- **Part 3**
 - Section A (Clinical simulation)
Grading is Pass/Fail, as based on the rubric. See grading rubric for detailed description of critical errors. Critical error(s) result in automatic failure. Final grade is P/F
 - Section B (OSCE station examination)
Grading is numerically based. A student must pass all sections with a grade of 70% for each section. Final grade is P/F

3. Critical Errors

Implant- Clinical Simulation/OSCE Station Examination

Section A (Clinical Simulation)

Refer to the grading rubric for critical errors

Section B (OSCE Station Examination)

- Inaccurate diagnosis and treatment planning of pre-surgical assessment
- Incorrect decisions and decision-making for treatment planning and assessment of implant restorative goals
- Incorrect treatment goals and clinical techniques
- Incorrect evaluation and selection of implant componentry
- Inability to accurately assess surgical guides
- Inability to accurately assess dental laboratory work products

- Incorrect final prosthesis evaluation including provisional restorations

X. Description of Remediation

Part 1:

If after two attempts the student does not pass the competency (scores less than 70% overall, or fails one or more of the sections), there is departmental counseling to identify and counsel the student for problematic areas. The student repeats the examination.

Part 2:

If after two attempts the student fails the examination, a one-on-one meeting with department faculty to review areas as identified as critical errors. The student repeats the section of the examination that was failed

Section A: If after one attempt the student fails the examination, a one-on-one meeting with the faculty examiner is done to review areas identified as critical errors. The student repeats the section of the examination that was failed at the same scheduled time of the examination. If after two attempts the student fails the examination, a one-on-one meeting with the course director is done to review areas identified as critical errors. The student repeats the full examination at a different scheduled time.

Section B: If after one attempt the student fails the examination, a one-on-one meeting with the course director is scheduled to review areas as identified as critical errors. The student repeats the full examination.

If after two attempts the student fails the examination, a one-on-one meeting with the course director is done to review areas identified as critical errors. The student repeats the section of the examination that was failed.

XI. Rubric and Evaluation Form

Custom tray fabrication is completed prior to challenging the clinical simulation implant impression competency to allow for impression time in assigned blocks. A preliminary grade Pass/Fail is posted on Blackboard to provide feedback to the student.

Implant Custom Tray Rubric and Grade Sheet
Project Photos to be uploaded in Blackboard

1. Student name: _____ GP: _____
2. Student ~~aXium~~ ID Number: _____ Date: _____
3. Faculty signature: _____ F# _____

Grade:

- ☐ Needs improvement
☐ Pass -Acceptable
☐ Fail (more than 2 critical errors)



Criteria being evaluated	Pass	Needs improvement (2 critical errors)*
1.Cast	Cast has proper extensions, buccal, lingual and distal extensions	Cast is under extended, vestibule was not capture, cast is not suitable to make a custom tray
2.Relief	Space relief is adequate for the impression coping.	<ul style="list-style-type: none"> • Tray does not provide good relief for the implant impression coping (#13). • Tray is contacting gingiva or lingual soft tissue • Tray is over relief : greater than 7 mm clearance or contact between teeth and tray (other than stops)
3.Handle	The handle doesn't interfere with the soft tissue, has a proper dimensions and retention.	Handle is in the way of soft tissue. Handle is too small or too large
4.Tissue Stops	Presence of at least 3 tissue stops, one anterior and two posterior stops	<ul style="list-style-type: none"> • Tissue stops are located in the area of other teeth, ignoring one anterior and two posterior stops • Tray is not stable/fewer than 3 stops or no stops present
5.Extensions	Custom tray has proper extensions for a close tray impression to properly capture the implant position and anatomical landmarks.	<ul style="list-style-type: none"> • Tray Extension is <1mm, at or occlusal to the gingival margin in area of prepared teeth. • Tray is short of anatomical extensions including the implant site. • Tray is short of most distal tooth or extends/overlaps beyond distal tooth onto the side of cast. • Extension beyond soft tissue undercut
6. Stability	Stable on cast; 2 finger test Ease of seating Minor rocking in seating on cast	Unstable on cast, cannot seat the tray without rocking
7. Borders and Finishing	Smooth with no sharp edges Minor scratches, irregularities	Borders of the tray are rough, gross , too thin, has multiple irregularities

*More than two critical errors is an automatic failure and requires remaking of the tray

Rubric and Grade Sheet for Implant Clinical Simulation

Implant Level Impression, close tray technique

Criteria being evaluated	Acceptable	Needs Improvement (critical error)*
1. Custom tray	<input type="checkbox"/> Proper fabrication of a custom tray for a close tray implant level impression. <input type="checkbox"/> Custom tray has proper extensions for a close tray impression to properly capture the implant position and anatomical landmarks. <input type="checkbox"/> Space relief is adequate for the impression coping.	<input type="checkbox"/> Unable to fabricate a custom tray for a single unit implant restoration. <input type="checkbox"/> Student presents without a custom tray. <input type="checkbox"/> Tray is short of anatomical extensions including the implant site. <input type="checkbox"/> Tray does not provide good relief for the impression coping, lacks tissue stops. <input type="checkbox"/> Tray is overextended.
2. Impression coping placement	<input type="checkbox"/> Demonstrates understanding of anatomy, implant placement angulation and alignment, clinical and laboratory implant components necessary prior to a final impression. Able to remove the healing abutment with proper use of the implant driver, place and connect a close tray impression coping to the implant platform ready for making a final impression.	<input type="checkbox"/> Unable to demonstrate understanding of anatomy, implant placement angulation MD, BL in relation to the adjacent teeth. <input type="checkbox"/> Unable to demonstrate an understanding for selection of components for an implant impression and ability to accurately place the impression coping. <input type="checkbox"/> Unable to use the implant driver to remove the healing abutment. Forgets to attach floss to the driver.
3. Implant Impression	<input type="checkbox"/> Student is able to demonstrate correct impression technique. Proper dispense and use of the impression material. <input type="checkbox"/> Impression lacks bubbles and shows implant anatomical landmarks.	<input type="checkbox"/> Student is unable to demonstrate a correct impression technique, dispensing and managing of impression material. <input type="checkbox"/> Impression has bubbles or voids around the implant site.
4. Transfer coping preparation for Lab	<input type="checkbox"/> Demonstrates an understanding for selection of components for the implant impression and ability to place and connect the corresponding analog replica to the impression coping with the implant driver. <input type="checkbox"/> Removes the impression coping and places the healing abutment back into the sim patient.	<input type="checkbox"/> Unable to demonstrate an understanding for selection of components for implant impression and ability to accurately transfer and place the corresponding analog replica to the impression coping prior to sending it to the Lab for soft tissue cast fabrication. <input type="checkbox"/> Unable to use the implant driver. <input type="checkbox"/> Forgets to place the healing abutment back into the sim patient.
5. Professionalism	<input type="checkbox"/> Keeps implant materials and set-up organized, keeps the station clean after the impression is made. <input type="checkbox"/> Follows infection control guidelines.	<input type="checkbox"/> Unable to keep implant materials and set-up organized, does not keep the station clean after the impression is made. <input type="checkbox"/> Does not follow infection control guidelines.

Grade Sheet for Competency #48A OSCE Implants

Clinical Simulation– Implant Level Impression, close tray technique

Student name: _____

GP: _____

Student aXium ID Number: _____

Date: _____

Grade: (circle one)

- ☐ Needs improvements
- ☐ Pass -Acceptable (good work)
- ☐ Pass-Superior (exceptional work)

Attempt Number:

1 2 3 4

Grading /Feedback form

Criteria being evaluated	Pass	Fail (critical error)*
1. Custom tray fabrication		
2. Impression coping placement		
3. Implant Impression		
4. Transfer coping preparation for Lab		
5. Professionalism		

***Any two critical errors is an automatic failure for the examination and requires remediation/reexamination**

Faculty examiner: _____

F# _____

IMPLANT COMPETENCY EXAMINATION #48A

(For the Class of 2026)

Title:	Prosthodontics Implant Competency Examinations Part 3- Implant- OSCE examination
Course:	IMPL 538; REST 548B; REST 548C: Fixed and Removable Prosthodontics
Timing:	D4 (Implant OSCE Stations)
Category:	Summative
Contact:	Dr. Guadalupe Fay ggarcia@umaryland.edu

General Description

I. Description of Assessments

Part 3- Implant- OSCE Station Examination)

Objective Structured Clinical Examination - OSCE Station examination

This component of the competency exam assesses the student's knowledge, skills and values required to achieve proper diagnosis, treatment planning and delivery of an implant supported prosthesis that maintains oral function and overall oral health. The exam is an Objective Structured Competency Examination OSCE, using multiple examination stations with case based questions utilizing casts, 3D printed models, impressions, 3D printed surgical guides, radiographs, final implant restorations, implant overdentures, CBCT images, videos and photographs.

The competency objectives include:

1. Pre-surgical assessment of implant dentistry for fixed denture prosthesis and implant supported overdentures
 - a) To diagnose, treatment plan and evaluate implant placement for partially edentulous and fully edentulous arches
 - b) To understand the basic fundamentals and concepts of dental implant surgery, anatomy and physiology of the implant site
 - c) To understand the indication for a Cone Beam Computed Tomography CBCT
 - d) To evaluate and interpret Cone Beam Computed Tomography images
 - e) To evaluate the fundamentals of anatomy, maxillomandibular space, soft tissue and bone concepts prior to implant placement utilizing an Intraoral dental scan

- f) To understand the indications, contraindications and limitations of implant surgery for single unit implant-supported restorations, a short span fixed denture prosthesis and implant-retained overdentures
- g) To understand the concepts of static partially guided and fully guided surgery and dynamic navigation surgery
- h) To evaluate and be able to preliminarily assess the bone volume, anatomical landmarks, soft tissue and restorative space using Interactive Implant Planning Software
- i) To understand the concept of implant dentistry therapy being prosthetically driven and an interdisciplinary approach for a favorable implant therapy outcome
- j) To be able to refer and communicate with multiple providers depending in the interdisciplinary approach
- k) To plan a single unit restoration and a 2 unit implant-retained mandibular overdenture utilizing Interactive Implant Planning Software
- l) To design and understand the protocols and sequence involved in the fabrication of a 3D printed surgical guide for single unit implant-supported restorations and implant-retained mandibular overdentures
- m) To be able to analyze an implant surgical plan and surgical guide report and write the corresponding prescription to the lab for the fabrication of the surgical guide
- n) To evaluate a properly fitted overdenture surgical guide, corresponding surgical guided sleeves and guided anchor pin sleeves and pins
- o) To evaluate an ideal 3D printed surgical guide for single and multiple implant supported restorations
- p) To evaluate an ideal 3D printed surgical guide for an implant supported overdenture prosthesis

2. Restorative Post-surgical assessment of implant dentistry for fixed denture prosthesis and implant supported overdentures

- a) To diagnose, treatment plan and evaluate the fundamental concepts of implant restorations for partially edentulous and fully edentulous arches
- b) To evaluate and be able to assess the soft tissue, bone volume and restorative space using and Intraoral dental scan
- c) To evaluate, treatment plan and sequence fixed and removable implant supported restorations
- d) To evaluate interproximal, anterior posterior spread, maxilla mandibular space and occlusal spatial parameters for implant supported restorations
- e) To diagnose and evaluate the need for implant supported fixed provisional restorations
- f) To understand the indications of an implant analog impression utilizing a custom tray and elastomeric material
- g) To understand the indications of a digital implant impression utilizing an intraoral scan
- h) To be able to design single cement retained and screw retained implant crowns utilizing Restorative Design Software
- i) To understand the concept and indication for angle screw channel implant restorations
- j) To understand the advantages and indications of using digital technology in implant dentistry, 3D Printing and Milling of abutments and implant crowns and implant supported overdentures
- k) To understand and become familiar with fixed and removable implant restorative components
- l) To understand and be able to write a laboratory prescription with the indicated restorative design and materials for implant supported single unit restorations and implant supported overdentures
- m) To assess the restorative digital workflow sequence for a single unit restoration and a short span FDP, including but not limited to scanning, designing, milling/printing and final delivery of the restoration
- n) To assess the restorative digital workflow sequence for an implant supported overdenture,

including but not limited to scanning, designing, milling/printing and final delivery of locator abutments and the implant supported overdenture

- o) To evaluate the proper locator abutment and relief required at the intaglio surface of an implant overdenture prior to picking up locator housings during the delivery visit of the prosthesis
- p) To evaluate a cement retained restoration and a screw retained restoration, including the delivery visit steps of the implant supported restoration

II. Prerequisites

- **Part 3- Implant:** OSCE station examination: REST 538B, REST 538C, IMPL 538, D4 student

The OSCE station examination is administered as a block in the fall of the D4 year

III. Criteria for Evaluation

Implant: OSCE Station Examination

- a. Diagnosis and Treatment Planning Implants
- b. Clinical Sequence of Treatment Presurgical
- c. Identification of anatomic structures and assessment of a Cone Beam Volumetric Tomography prior to implant placement
- d. Digital Surgical Guide assessment
- e. Surgical implant planning report assessment
- f. Clinical Sequence of Treatment Postsurgical
- g. Assessment of impression techniques and armamentarium
- h. Treatment clinical techniques for the fabrication of a final fixed implant supported restoration
- i. Treatment clinical techniques for the fabrication of a final mandibular implant supported overdenture
- j. Laboratory prescriptions including restorative designs and materials
- k. Evaluation of work products returned by the dental laboratory
- l. Final prosthesis evaluation and delivery protocol

IV. Setting

- Implant: OSCE Station Exam- Simulation Lab - Scheduled as a block

V. Type of Competency Examination

Implant: OSCE station examination written (scheduled by block)

VI. Time Allotted

- OSCE Station Exam: 50 minutes

VII. Remediation Required Under the Following Circumstances

- Implant: OSCE Examination

One attempt and failure.

VIII. Maryland Competency Statements

7e. Replace missing teeth and surrounding oral tissues to proper form, function, and esthetics, and promote soft and hard tissue health.

IX. Grading Information and Remediation

1. Examiners

Prosthodontic clinical faculty: Dr. Fay

Faculty calibration by competency director Dr. Fay.

2. Grading

Final grade for all sections combined is Pass-Fail.

- **Part 3**

- Implant: OSCE station examination

Grading is numerically based. A student must pass all sections with a grade of 70% for each section. Final grade is P/F

3. Critical Errors

Implant: OSCE Station Examination

- Inaccurate diagnosis and treatment planning of pre-surgical assessment
- Inaccurate diagnosis and treatment planning of post-surgical assessment
- Incorrect decisions and decision-making for treatment planning and assessment of implant restorative goals
- Incorrect treatment goals and clinical techniques
- Incorrect evaluation and selection of implant componentry
- Inability to accurately assess surgical guides
- Inability to accurately assess dental laboratory work products
- Incorrect final prosthesis evaluation including provisional restorations

X. Description of Remediation

Implant: OSCE Examination

If after one attempt the student fails the examination scoring less than 70%, a one-on-one meeting with the course director is scheduled to review areas as identified as critical errors. The student repeats the full examination.

If after two attempts the student does not pass the competency (scores less than 70% overall, or fails one or more of the sections), there is departmental counseling with the director to identify and counsel the student for problematic areas after reviewing the first and second attempts. The student repeats the problematic areas of the examination.

XI. Rubric and Evaluation Form

A DEMO examination guide is provided on Blackboard, including the rubric and feedback to the student on the question set up.

Rubric Implant OSCE Station Examination			
Criteria for evaluation	Percentage in exam	Acceptable pass	Fail
1. Diagnosis and Treatment Planning Implants	10%	<ul style="list-style-type: none">- To diagnose, treatment plan and evaluate the fundamental concepts of implant restorations for partially edentulous and fully edentulous arches- To evaluate and be able to assess the soft tissue, bone volume and restorative space using and Intraoral dental scan	<ul style="list-style-type: none">- Incorrect decisions and decision-making for treatment planning and assessment of implant restorative goals- Incorrect treatment goals and clinical techniques
2. Clinical Sequence of Treatment Presurgical	5%	<ul style="list-style-type: none">- To evaluate, treatment plan and sequence fixed and removable implant supported restorations- To evaluate interproximal, anterior posterior spread, maxilla mandibular space and occlusal spatial parameters for	Inaccurate diagnosis and treatment planning of pre-surgical assessment

		<p>implant supported restorations</p> <ul style="list-style-type: none"> - To understand the indications, contraindications and limitations of implant surgery for single unit implant-supported restorations, a short span fixed denture prosthesis and implant-retained overdentures - To understand the concepts of static partially guided and fully guided surgery and dynamic navigation surgery 	
3. Identification of anatomic structures and assessment of a Cone Beam Volumetric Tomography (CBVT)	10%	<ul style="list-style-type: none"> - To understand the indication for a Cone Beam Computed Tomography CBCT - To evaluate and interpret Cone Beam Computed Tomography images 	Incorrect analysis and interpretation of anatomical landmarks in the 3D assessment
4. Digital Surgical Guide assessment	10%	<ul style="list-style-type: none"> - To evaluate an ideal 3D printed surgical guide for single and multiple implant supported restorations - To evaluate an ideal 3D printed surgical guide for an implant supported overdenture prosthesis 	Inability to accurately assess surgical guides
5. Surgical implant planning report assessment	5%	<ul style="list-style-type: none"> - To be able to analyze an implant surgical plan and surgical guide report and write the corresponding prescription to the lab 	Inability to assess the interactive implant planning report

		for the fabrication of the surgical guide	
6. Clinical Sequence of Treatment Postsurgical	5%	<ul style="list-style-type: none"> - To diagnose, treatment plan and evaluate the fundamental concepts of implant restorations for partially edentulous and fully edentulous arches - To evaluate and be able to assess the soft tissue, bone volume and restorative space using and Intraoral dental scan -To evaluate, treatment plan and sequence fixed and removable implant supported restorations 	Inaccurate diagnosis and treatment planning of post-surgical assessment
7. Assessment of impression techniques and armamentarium Treatment Postsurgical	10%	<ul style="list-style-type: none"> - To understand the indications of an implant analog impression utilizing a custom tray and elastomeric material - To understand the indications of a digital implant impression utilizing an intraoral scan 	Incorrect evaluation and selection of implant componentry
8. Treatment clinical techniques for the fabrication of a final fixed implant supported restoration	10%	<ul style="list-style-type: none"> - To be able to design single cement retained and screw retained implant crowns utilizing Restorative Design Software - To understand the concept and indication for angle screw channel implant restorations - To understand the advantages and indications of using digital technology in 	Incorrect restorative design planning for the final restoration and clinical techniques

		implant dentistry, 3D Printing and Milling of abutments and implant crowns	
9. Treatment clinical techniques for the fabrication of a final mandibular implant supported overdenture	10%	- To assess the restorative digital workflow sequence for an implant supported overdenture, including but not limited to scanning, designing, milling/ 3D printing and final delivery of locator abutments and the implant supported overdenture	Incorrect restorative design goals and clinical techniques, including assessment of locator abutments
10. Laboratory prescriptions including restorative designs and materials	5%	- To understand and be able to write a laboratory prescription with the indicated restorative design and materials for implant supported single unit restorations and implant supported overdentures	- Inability to follow prescription assessment after surgical report - Inability to understand the digital workflow for final fabrication of the prosthesis and its corresponding materials
11. Evaluation of work products returned by the dental laboratory	10%	- To assess the restorative digital workflow sequence for a single unit restoration and a short span FDP, including but not limited to scanning, designing, milling/printing and final inspection for delivery of the final restoration - To assess the restorative digital workflow sequence for an implant supported overdenture, including	Inability to accurately assess dental laboratory work products

		but not limited to scanning, designing, milling/printing and final inspection for delivery of locator abutments and the implant supported overdenture	
12. Final prosthesis evaluation and delivery protocol	10%	<p>- To evaluate the proper locator abutment and relief required at the intaglio surface of an implant overdenture prior to picking up locator housings during the delivery visit of the prosthesis</p> <p>- To evaluate a cement retained restoration and a screw retained restoration, including the delivery visit steps of the implant supported restoration</p>	Incorrect final prosthesis evaluation including provisional restorations
	Total= 100%		

COMPETENCY EXAMINATION #49

Title: Comprehensive Treatment Planning of a simulated patient competency exam.
Course: TXPL 528; Treatment Planning I/ General Dentistry
Timing: D2
Category: Formative
Contact: Dr. Nisha Ganesh
Nganesh@umaryland.edu

Dr. Christina Platia
Cplatia@umaryland.edu

General Description

Description of Assessment

This competency exam is a computer based didactic examination to assess the knowledge and values required to establish diagnosis and treatment planning. Case Based treatment planning competency exam – students will write a treatment plan for a simulated patient case, that will include Diagnoses, Prognosis and Treatment options divided into 5 Phases of Treatment and sequenced within each phase.

Prerequisites

none

Criteria for Evaluation

As described in rubric

Setting

Classroom examination

Type of Competency Examination

Computer based written (Questionmark) (case-based; on the academic class calendar)

Time Allotted

3 hours for written examination

Remediation Required Under the Following Circumstances

A grade of less than 70% requires the student be remediated.

Maryland Competency Statements

- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.

Grading Information and Remediation

Examiner

Dr. Ganesh

Dr. Platia

Grading

0-100%, a passing grade is 70% or above

Critical Errors

A passing grade of 70% is required.

Description of Remediation

In the event of failure of the exam the student needs to inform the course director how he/she has planned to review the course material before the student will be allowed to challenge the exam again. The grade for an exam passed on the second attempt may not be higher than 70%. The student has only two attempts to pass the exam.

Grading rubric

Demonstrates understanding in establishing Diagnoses of: 1) Dental caries 2) Periodontal disease 3) Pulpal and periapical pathology 4) Oral pathology 5) Occlusion	<u>Student established Diagnosis of:</u> 10 Caries Periodontal Disease Pulpal and Periapical pathology Oral pathology Occlusion	Points are deducted if any diagnosis is missing or incorrect.
Demonstrate understanding in establishing General Prognosis and Periodontal Prognosis	<u>Student established:</u> General prognosis 5 Periodontal prognosis 5	Points are deducted if prognosis is not considered.
Demonstrate understanding in establishing Treatment plan, with options, sequenced with each phase of treatment, based upon patient's Chief Complaint and expectations.	Student placed procedures into phases and each treatment was sequenced in order by its priority within each phase. CC, patient expectations and risk factors were considered. Treatment options presented. Systemic Phase 10 Acute phase 10 Disease Control Phase 30 Definitive Phase 20 Maintenance Phase 10	Points are deducted if treatment procedures are missing or sequenced incorrectly. Bonus points are given for alternative options (Max. points:5)

COMPETENCY EXAMINATION #50

Title: Comprehensive treatment planning of a clinical patient competency exam #1
Course: TXPL 538: Treatment Planning II
Timing: D3
Category: Formative
Contact: Dr. Stephanie Dennison
sdennison1@umaryland.edu

General Description

Description of Assessment

The student will collect and interpret data to elaborate a treatment plan for the patient. The student will understand the impact of the patient's medical, dental, and social histories and integrate this information in the design and development of the treatment plan. They will perform an adequate clinical examination, radiographic interpretation, and occlusal analysis. From the data collected the student will diagnose and establish a prognosis for the case.

The main emphasis of this competency is the treatment planning process including correctly collecting and entering the data in the EHR, acceptable diagnostic casts mounted on an articulator, acceptable radiographs and intraoral pictures uploaded into Infinitt, appropriate medical consultations (if indicated), correctly developing a treatment plan into phases, sequencing and providing treatment plan options.

The student will present the treatment plan to the patient taking into consideration the patient's chief complaint, wishes, desires and financial resources.

Evaluation of student's use of critical thinking and scientific knowledge in determining appropriate patient care will be done.

Prerequisites

Prior to taking this examination, the student must have successfully completed TXPL 528. To be eligible to challenge this competency exam the student must have completed one TXP and must have completed the TPW of the selected case.

The student must also submit the completed TXPL 538 treatment plan primer, the patient's chart #, and at least 1 peer-reviewed article in support of the selected treatment plan option to the evaluating faculty and the course director no later than 1 week before the scheduled Treatment Plan Competency is challenged.

Criteria for Evaluation

See attached rubric. Critical errors are noted in the rubric.

Setting

Clinic

Type of Competency Examination

Demonstration-clinical performance patient-based (student self-scheduled)

Presentation oral (case-based) to faculty member (student self-scheduled)

Time Allotted

1 hour

Remediation Required Under the Following Circumstances

In the event the student fails a Treatment Planning Competency Exam, the student is required to write a paragraph/page about the deficient area and submit this to the course director for approval before this competency can be challenged again. The student's GP Director/Assistant GP Director will underline on the competency form the specific deficiency needing further study. However, in the event a student fails a competency for the second time and then successfully retakes the competency on the third try (after the second written paragraph has been submitted to the course director and approved) the assigned grade for this competency will be no greater than the minimum passing grade: 70%. Once the student fails a Treatment Planning Competency Exam, the student will be only allowed to re-challenge a failed competency exam two more times. Failing the competency exam for the third time will result in failing the entire course.

Maryland Competency Statements

1a. Evaluate and assess emerging trends, technologies, and products in health care; and integrate best research outcomes with clinical expertise and patient values for evidence-based practice.

1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.

2b. Practice within the scope of competency and know how to refer to professional colleagues indicated.

3a. Communicate effectively with other professionals regarding the care of patients.

3c. Communicate with a diverse population of patients

4b. Provide appropriate prevention, intervention, and educational strategies.

5d. Apply principles of risk management, including informed consent and appropriate record keeping in patient care.

6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.

6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.

6c. Order, obtain, and interpret appropriate radiographic/digital images.

6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.

6e. Use knowledge of the basic and clinical sciences to evaluate the form and function of the oral and craniofacial complex and its interaction with other systems of the body in health and disease.

- 7a. Manage acute pain and dental anxiety.
- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.
- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patients and restore oral health.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related peri-radicular pathology and restore oral health.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.
- 7l. Diagnose and manage temporomandibular disorders
- 7n. Recognize and refer patient abuse and/or neglect.
- 7q. Provide care for a diverse population of patients including infants, children, adolescents, adults, and geriatric and special needs patients.

Grading Information and Remediation

Examiners

GP Directors and Assistant Directors

Grading

Each competency will be evaluated on a scale: 1- 100%. If **any** of the 7 sections on the competency form receives an unacceptable grade the student has failed the entire exam. If the student fails either the case selection or professionalism criteria, the student has failed the entire exam. If **all** of the 7 sections (Professionalism is not included in this grade computation) receive grades of **Honors**, the grade for the competency is 100%. Grade reductions below honors are stipulated on the competency sheet and the grade will be computed accordingly.

A grade of 70% is required to pass.

Critical Errors

All 7 sections of the examination must be passed. If **any** of the 7 sections on the competency form receives an unacceptable grade the student has failed the entire exam. If the student fails either the case selection or professionalism criteria, the student has failed the entire exam. Critical errors that lead to an automatic failure include:

- Case selection
- Documentation
- History
- Clinical examination
- Radiographic interpretation
- Occlusal examination
- Diagnosis/Prognosis
- Treatment Plan

Description of Remediation

In the event the student fails a Treatment Planning Competency Exam, the student is required to write a paragraph/page about the deficient area and submit this to the course director for approval before this competency can be challenged again. The student's GP Director/Assistant GP Director will underline and counsel the student from the graded section on the competency form the specific deficiency needing further study. However, in the event a student fails a competency for the second time and then successfully retakes the competency on the third try (after the second written paragraph has been submitted to the course director and approved) the assigned grade for this competency will be no greater than the minimum passing grade: 70%. Once the student fails a Treatment Planning Competency Exam, the student will be only allowed to rechallenge a failed competency exam two more times. Failing the competency exam for the third time will result in failing the entire course.

COMPREHENSIVE TREATMENT PLANNING COMPETENCY 1 2

(circle)

Student Name and #:

Patient Chart #:

Faculty Name and #:

Date: GP:

Peer-reviewed article title/author/journal/date: _____

I. **Case selection:** case must include **CARIES**, **OPERATIVE** and need for **PROSTHODONTIC** treatments. Pass/Fail*

	Honors Level	Satisfactory Level	Needs improvement	Unacceptable*
II. Documentation 1) EHR forms 2) Intraoral pictures 3) Radiographs 4) Study models	10	8	6	0
III. History 1) Chief complaint 2) Medical history/vital sign 3) Dental history/risk factors	12	10	8	0
IV. Clinical Examination 1) Soft tissue exam 2) Clinical caries 3) Defective restorations 4) Cracked or broken teeth 5) Diagnostic aids employed if needed	14	12	10	0
V. Radiographic Interpretation 1) Caries & faulty restorations 2) Endodontics 3) Periodontal bone loss 4) Furcation involvements 5) Other pathology, etc	12	10	8	0
VI. Occlusal Examination 1) Angle's classification 2) Posterior bite collapse 3) Loss of vertical dimension 4) Occlusal plane 5) Lateral guidance/ incisal guidance, etc	12	10	8	0
VII. Diagnosis/Prognosis 1) Dental caries 2) Periodontal diagnosis 3) Endodontic diagnosis 4) Oral pathology 5) Occlusion 6) Prognosis	18	16	14	0
VIII. Treatment plan 1) Placed into phase 2) Chief complaint considered 3) Patient wishes considered 4) Risk factors are considered 5) Prognosis is considered 6) Treatment options presented	22	18	14	0

IX. **Professionalism:** 1) Preparedness, 2) Concern for patient's comfort, 3) HIPPA, OSHA & infection control, 4) Time management.

Pass/Fail*

FACULTY SIGNATURE: _____

Please turn in this form to Course Director or leave in course director mailbox in the GP directors office/section.

*An unacceptable or fail in any category is a critical error and is an automatic failure

Grading Rubric	Honors Level	Satisfactory level	Needs improvement	Unacceptable*
II. Documentation 1) EHR forms 2) Intraoral pictures 3) Radiographs 4) Study models	10 1) Meets all requirements in Satisfactory level 2) <u>High quality intraoral pictures & x-rays</u> 3) Study models were mounted even though no posterior contacts exist.	8 1) EHR forms completely filled—out (May be missing one item) 2) Adequate Intraoral pictures & radiographs 3) The study models are well trimmed	6 1) More than 2 items missing in EHR forms 2) <u>No intraoral pictures</u> 3) More than 1 radiograph is missing 4) The study models are not well trimmed	0 1) <u>Blank EHR forms</u> 2) <u>Three or more radiographs are not diagnostic or missing</u> 3) <u>Study models are not made</u>
III. History 1) Chief complaint 2) Medical history/vital sign 3) Dental history/risk factors	12 1) Meets all requirements in Satisfactory level 2) Med & dental hx has been <u>researched</u> . The student determined if there are <u>any drug interactions or contraindications to dental tx</u>	10 1) CC <u>mentioned</u> accurately 2) Current BP recorded 3) Medical history reviewed 4) All current medications listed 5) Dental history reviewed	8 1) CC mentioned inaccurately 2) Medical history reviewed but dental significance was not mentioned	0 1) <u>CC never mentioned</u> 2) <u>Significant medical history or allergies missed</u> 3) <u>Student is not familiar with the patient's medication</u>
IV. Clinical Examination 1) Soft tissue exam 2) Clinical caries 3) Defective restorations 4) Cracked or broken teeth 5) Diagnostic tests	14 1) Student <u>correctly recorded even difficult to diagnose</u> such as endo - perio combined lesions, cracked teeth etc. 2) Student recorded all requirements in Satisfactory level.	12 1) A thorough soft tissue exam performed 2) All clinical caries noted 3) All defective restorations & broken teeth noted 4) Diagnostic tests applied if needed 5) Caries risk assessment was done	10 Requires faculty assistance 1) To detect small caries lesions 2) To apply diagnostic aids 3) To detect small soft tissue lesions.	0 1) <u>Fails to differentiate between normal structures and deviations</u> 2) <u>Fails to detect large carious lesions and broken teeth</u> 3) <u>No caries risk assessment</u> 4) <u>Failed to detect obvious large soft</u>
V. Radiographic Interpretation 1) Caries & faulty restorations 2) Endodontics 3) Periodontal bone loss 4) Furcation involvements 5) Other pathology, etc	12 1) Meets all requirements in Satisfactory level 2) <u>All caries lesions and cervical burnouts correctly identified</u> 3) <u>No retakes needed</u> 4) All periodontal bone losses, furcation involvements identified	10 1) The appropriate radiographs presented 2) Caries correctly identified (maybe one caries lesion missed or misdiagnosed as cervical burn—out) 3) Apical lesions and bony lesions have been noted	8 Requires faculty assistance 1) To confirm <u>less than two cervical burnouts</u> 2) To detect no more than <u>two caries on radiographs</u> 3) To confirm <u>periodontal bone loss, furcation involvements etc</u>	0 1) <u>More than three obvious caries lesions missed on radiographs</u> 2) <u>Obvious peri - radicular lesion(s) missed</u>
VI. Occlusal Examination 1) Angle's cx 2) Posterior bite collapse 3) Loss of vertical dimension 4) Occlusal plane 5) Lateral/incisal guidance	12 1) Student <u>detected all problems listed under the occlusal examination section</u> 2) Student detected posterior bite collapse and loss of vertical dimension	10 2) The models are correctly mounted if posterior stops exist 3) Occlusal interferences are noted 4) A student detected problems listed under the occlusal examination session. (Maybe missed one)	8 2) The mounting is off due to lack of posterior stops 3) The occlusal interferences are missed 4) More than two problems under the occlusal examination missed	0 1) <u>Study models are not made</u> 2) <u>Mounting is clearly incorrect</u>
VII. Diagnosis/Prognosis 1) Dental caries 2) Periodontal diagnosis 3) Endodontic diagnosis 4) Oral pathology 5) Occlusion 6) Prognosis	18 1) Meets all requirements in Satisfactory level 2) <u>Difficult, complicated dx made by the student</u> 3) <u>Short term and long term prognoses were made based on scientific reasons</u>	16 1) All caries diagnosed correctly 2) Periodontal dx made correctly 3) Endodontic dx made correctly 4) Occlusal dx made correctly 5) Other diagnoses made correctly 6) Prognosis mentioned	14 Requires faculty assistance 1) To detect no more than 2 dental caries 2) To make perio, endo, occlusal diagnosis, and pathology diagnose if any 3) To determine prognosis	0 1) <u>More than 3 clinically visible caries were not diagnosed</u> 2) <u>Incorrect periodontal dx</u> 3) <u>Incorrect or missed endodontic dx</u> 4) <u>Incorrect or missed oral pathology</u> 5) <u>No diagnosis on occlusion</u> 6) <u>No prognosis mentioned</u>
VIII. Treatment plan 1) Placed into phases 2) Chief complaint 3) Patient wishes 4) Risk factors 5) Prognosis considered 6) Treatment options	1) Meets all requirements in Satisfactory level 2) <u>The student presented scientific data to support his/her decisions</u>	18 1) Placed into phases & each treatment placed in order by its priority within phases 3) CC, patient wish, risk factors, prognosis were considered 4) Treatment options presented	14 Requires faculty assistance 1) To sequence within phases 2) To determine prognosis 3) To make treatment options	0 1) <u>Tx plan was not structured into phases</u> 2) <u>There is no sequencing within the phase</u> 3) <u>CC was not considered</u> 4) <u>Risk factors and prognosis were not considered</u>

*An unacceptable or fail in any category is a critical error and is an automatic failure

COMPETENCY EXAMINATION #51

Title: Comprehensive treatment planning of a clinical patient competency exam # 2
Course: TXPL 538: Treatment Planning II
Timing: D3
Category: Summative
Contact: Dr. Stephanie Dennison
sdennison@umaryland.edu

General Description

Description of Assessment

The student will collect and interpret data to elaborate a treatment plan for the patient. The student will understand the impact of the patient's medical, dental and social histories and integrate this information in the design and development of the treatment plan. The student will perform an adequate clinical examination, radiographic interpretation and occlusal analysis. From the data collected the student will diagnose and establish a prognosis for the case.

The main emphasis in this competency is the treatment planning process including: correctly collecting and entering the data in the EHR, acceptable diagnostic casts mounted on an articulator, acceptable radiographs and intraoral pictures uploaded into Infinitt, appropriate medical consultations (if indicated), correctly developing a treatment plan into phases, sequencing and providing treatment plan options.

The student will present the treatment plan to patient taking in consideration the patient's chief complaint, wishes, desires and financial resources.

Prerequisites

Prior to taking this examination, the student must have successfully completed TXPL 528. To be eligible to challenge this competency exam the student must have passed the first competency exam (Comp 50) and must have completed the TPW of the selected case.

The student must also submit the completed TXPL 538 treatment plan primer, the patient's chart #, and at least 1 peer-reviewed article in support of the selected treatment plan option to the evaluating faculty and the course director no later than 1 week before the scheduled Treatment Plan Competency is challenged.

Criteria for Evaluation

See attached rubric. Critical errors are noted in the rubric.

Setting

Clinic

Type of Competency Examination

Demonstration-clinical performance patient-based (student self-scheduled)

Presentation oral (case-based) to faculty member (student self-scheduled)

Time Allotted

1 clinic session

Remediation Required Under the Following Circumstances

In the event the student fails a Treatment Planning Competency Exam, the student is required to write a paragraph/page about the deficient area and submit this to the course director for approval before this competency can be challenged again. The student's GP Director/Assistant GP Director will underline on the competency form the specific deficiency needing further study. However, in the event a student fails a competency for the second time and then successfully retakes the competency on the third try (after the second written paragraph has been submitted to Drs. Sanit and Freundlich and approved) the assigned grade for this competency will be no greater than the minimum passing grade: 70%. Once the student fails a Treatment Planning Competency Exam, the student will be only allowed to re-challenge a failed competency exam two more times. Failing the competency exam for the third time will result in failing the entire course.

Maryland Competency Statements

- 1a. Evaluate and assess emerging trends, technologies, and products in health care; and integrate best research outcomes with clinical expertise and patient values for evidence-based practice.
- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in patient care.
- 2b. Practice within the scope of competency and know how to refer to professional colleagues indicated.
- 3a. Communicate effectively with other professionals regarding the care of patients.
- 3c. Communicate with a diverse population of patients
- 4b. Provide appropriate prevention, intervention, and educational strategies.
- 5d. Apply principles of risk management, including informed consent and appropriate record keeping in patient care.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 6c. Order, obtain, and interpret appropriate radiographic/digital images.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 6e. Use knowledge of the basic and clinical sciences to evaluate the form and function of the oral and craniofacial complex and its interaction with other systems of the body in health and disease.
- 7a. Manage acute pain and dental anxiety.
- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.

- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patients and restore oral health.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related peri-radicular pathology and restore oral health.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.
- 7l. Diagnose and manage temporomandibular disorders
- 7n. Recognize and refer patient abuse and/or neglect.
- 7q. Provide care for a diverse population of patients including infants, children, adolescents, adults, and geriatric and special needs patients.

Grading Information and Remediation

Examiners

GP Directors and Assistant Directors

Grading

Each competency will be evaluated on a scale: 1- 100%. If **any** of the 7 sections on the competency form receives an unacceptable grade the student has failed the entire exam. If the student fails either the case selection or professionalism criteria, the student has failed the entire exam. If **all** of the 7 sections (Professionalism is not included in this grade computation) receive grades of **Honors**, the grade for the competency is 100%. Grade reductions below honors are stipulated on the competency sheet and the grade will be computed accordingly.

A grade of 70% is required to pass.

Critical Errors

All 7 sections of the examination must be passed. If **any** of the 7 sections on the competency form receives an unacceptable grade the student has failed the entire exam. If the student fails either the case selection or professionalism criteria, the student has failed the entire exam. Critical errors that lead to an automatic failure include:

- Case selection
- Documentation
- History
- Clinical examination
- Radiographic interpretation
- Occlusal examination
- Diagnosis/Prognosis
- Treatment Plan

Description of Remediation

In the event the student fails a Treatment Planning Competency Exam, the student is required to write a paragraph/page about the deficient area and submit this to the course director for approval before this competency can be challenged again. The student's GP Director/Assistant GP Director will underline and counsel the student from the graded section on the competency form the specific deficiency needing further study. However, in the event a student fails a competency for the second time and then successfully retakes the competency on the third try (after the second written paragraph has been submitted to the course director and approved) the assigned grade for this competency will be no greater than the minimum passing grade: 70%. Once the student fails a Treatment Planning Competency Exam, the student will be only allowed to rechallenge a failed competency exam two more times. Failing the competency exam for the third time will result in failing the entire course.

COMPREHENSIVE TREATMENT PLANNING COMPETENCY 1 2
(circle)

Student Name and #:
Faculty Name and #:

Patient Chart #:
Date: GP:

Peer-reviewed article title/author/journal/date: _____

I. **Case selection:** case must include **CARIES, OPERATIVE** and need for **PROSTHODONTIC** treatments. Pass/Fail*

	Honors Level	Satisfactory Level	Needs improvement	Unacceptable*
II. Documentation 1) EHR forms 2) Intraoral pictures 3) Radiographs 4) Study models	10	8	6	0
III. History 1) Chief complaint 2) Medical history/vital sign 3) Dental history/risk factors	12	10	8	0
IV. Clinical Examination 1) Soft tissue exam 2) Clinical caries 3) Defective restorations 4) Cracked or broken teeth 5) Diagnostic aids employed if needed	14	12	10	0
V. Radiographic Interpretation 1) Caries & faulty restorations 2) Endodontics 3) Periodontal bone loss 4) Furcation involvements 5) Other pathology, etc	12	10	8	0
VI. Occlusal Examination 1) Angle's classification 2) Posterior bite collapse 3) Loss of vertical dimension 4) Occlusal plane 5) Lateral guidance/ incisal guidance, etc	12	10	8	0
VII. Diagnosis/Prognosis 1) Dental caries 2) Periodontal diagnosis 3) Endodontic diagnosis 4) Oral pathology 5) Occlusion 6) Prognosis	18	16	14	0
VIII. Treatment plan 1) Placed into phase 2) Chief complaint considered 3) Patient wishes considered 4) Risk factors are considered 5) Prognosis is considered 6) Treatment options presented	22	18	14	0

IX. **Professionalism:** 1) Preparedness, 2) Concern for patient's comfort, 3) HIPPA, OSHA & infection control, 4) Time management. Pass/Fail*

FACULTY SIGNATURE: _____

Please turn in this form to Course Director or leave in course director mailbox in the GP directors office/section.

*An unacceptable or fail in any category is a critical error and is an automatic failure

Grading Rubric	Honors Level	Satisfactory level	Needs improvement	Unacceptable*
II. Documentation 1) EHR forms 2) Intraoral pictures 3) Radiographs 4) Study models	10 1) Meets all requirements in Satisfactory level 2) <u>High quality intraoral pictures & x-rays</u> 3) Study models were mounted even though no posterior contacts exist.	8 1) EHR forms completely filled--out (May be missing one item) 2) Adequate Intraoral pictures & radiographs 3) The study models are well trimmed	6 1) More than 2 items missing in EHR forms 2) <u>No intraoral pictures</u> 3) More than 1 radiograph is missing 4) The study models are not well trimmed	0 1) Blank EHR forms 2) <u>Three or more radiographs</u> are not diagnostic or missing 3) <u>Study models are not made</u>
III. History 1) Chief complaint 2) Medical history/vital sign 3) Dental history/risk factors	12 1) Meets all requirements in Satisfactory level 2) Med & dental hx has been <u>researched</u> . The student determined if there are <u>any drug interactions or contraindications to dental tx</u>	10 1) CC <u>mentioned</u> accurately 2) Current BP recorded 3) Medical history reviewed 4) All current medications listed 5) Dental history reviewed	8 1) CC mentioned inaccurately 2) Medical history reviewed but dental significance was not mentioned	0 1) CC <u>never mentioned</u> 2) Significant medical history or allergies missed 3) Student is not familiar with the patient's medication
IV. Clinical Examination 1) Soft tissue exam 2) Clinical caries 3) Defective restorations 4) Cracked or broken teeth 5) Diagnostic tests	14 1) Student <u>correctly recorded even difficult to diagnose</u> such as endo - perio combined lesions, cracked teeth etc. 2) Student recorded all requirements in Satisfactory level.	12 1) A thorough soft tissue exam performed 2) All clinical caries noted 3) All defective restorations & broken teeth noted 4) Diagnostic tests applied if needed 5) Caries risk assessment was done	10 Requires faculty assistance 1) To detect small caries lesions 2) To apply diagnostic aids 3) To detect small soft tissue lesions.	0 1) <u>Fails to differentiate between normal structures and deviations</u> 2) <u>Fails to detect large carious lesions and broken teeth</u> 3) <u>No caries risk assessment</u> 4) <u>Failed to detect obvious large soft</u>
V. Radiographic Interpretation 1) Caries & faulty restorations 2) Endodontics 3) Periodontal bone loss 4) Furcation involvements 5) Other pathology, etc	12 1) Meets all requirements in Satisfactory level 2) <u>All caries lesions and cervical burnouts correctly identified</u> 3) <u>No retakes needed</u> 4) All periodontal bone losses, furcation involvements <u>identified</u>	10 1) The appropriate radiographs presented 2) Caries correctly identified (maybe one caries lesion missed or misdiagnosed as cervical burn-out) 3) Apical lesions and bony lesions have been noted	8 Requires faculty assistance 1) To confirm <u>less than two cervical burnouts</u> 2) To detect <u>no more than two caries on radiographs</u> 3) To confirm <u>periodontal bone loss, furcation involvements etc</u>	0 1) <u>More than three obvious caries lesions missed on radiographs</u> 2) <u>Obvious peri - radicular lesion(s) missed</u>
VI. Occlusal Examination 1) Angle's cx 2) Posterior bite collapse 3) Loss of vertical dimension 4) Occlusal plane 5) Lateral/ incisal guidance	12 1) Student <u>detected all problems listed under the occlusal examination section</u> 2) Student detected posterior bite collapse and loss of vertical dimension	10 2) The models are correctly mounted if posterior stops exist 3) Occlusal interferences are noted 4) A student detected problems listed under the occlusal examination session. (Maybe missed one)	8 2) The mounting is off due to lack of posterior stops 3) The occlusal interferences are missed 4) More than two problems under the occlusal examination missed	0 1) <u>Study models are not made</u> 2) <u>Mounting is clearly incorrect</u>
VII. Diagnosis/Prognosis 1) Dental caries 2) Periodontal diagnosis 3) Endodontic diagnosis 4) Oral pathology 5) Occlusion 6) Prognosis	18 1) Meets all requirements in Satisfactory level 2) <u>Difficult, complicated dx made by the student</u> 3) <u>Short term and long term prognoses were made based on scientific reasons</u>	16 1) All caries diagnosed correctly 2) Periodontal dx made correctly 3) Endodontic dx made correctly 4) Occlusal dx made correctly 5) Other diagnoses made correctly 6) Prognosis mentioned	14 Requires faculty assistance 1) To detect no more than 2 dental caries 2) To make perio, endo, occlusal diagnosis, and pathology diagnose if any 3) To determine prognosis	0 1) <u>More than 3 clinically visible caries were not diagnosed</u> 2) <u>Incorrect periodontal dx</u> 3) <u>Incorrect or missed endodontic dx</u> 4) <u>Incorrect or missed oral pathology</u> 5) <u>No diagnosis on occlusion</u> 6) <u>No prognosis mentioned</u>
VIII. Treatment plan 1) Placed into phases 2) Chief complaint 3) Patient wishes 4) Risk factors 5) Prognosis considered 6) Treatment options	1) Meets all requirements in Satisfactory level 2) <u>The student presented scientific data to support his/her decisions</u>	18 1) Placed into phases & each treatment placed in order by its priority within phases 3) CC, patient wish, risk factors, prognosis were considered 4) Treatment options presented	14 Requires faculty assistance 1) To sequence within phases 2) To determine prognosis 3) To make treatment options	0 1) <u>Tx plan was not structured into phases</u> 2) <u>There is no sequencing within the phase</u> 3) <u>CC was not considered</u> 4) <u>Risk factors and prognosis were not considered</u>

*An unacceptable or fail in any category is a critical error and is an automatic failure

TXPL 548 COMPETENCY EXAMINATION #52

Title: Comprehensive Care Treatment Plan Competency

Course: TXPL 548: Comprehensive Treatment Planning III

Timing: D4

Category: Summative

Contact: Dr. Sarah Rollor srollor1@umaryland.edu

General Description

Description of Assessment:

The student will interpret data to formulate a comprehensive treatment plan for the patient. The student will understand the impact of the patient's medical, dental, and social histories and integrate this information in the design and development of the treatment plan. The student will perform an assessment of the clinical examination, offer radiographic interpretation, and perform an occlusal analysis. From the data presented and interpreted, the student will diagnose the patient, create a treatment plan, and establish prognoses for the outcomes of the case.

The main emphasis in this competency is the independent act of the treatment planning process. The competency includes demonstration of:

- acceptable interpretation and diagnosis of mounted study models
- interpretation of radiographs and intraoral photographs provided
- appropriate medical consultations recommended (if indicated)
- correctly developing a treatment plan in phases with appropriate sequence and providing treatment plan options.

The student will present the treatment plan to the assessing faculty, taking into consideration the patient's chief complaint, wishes, desires, and financial resources.

Demonstration of critical thinking and application of scientific knowledge and literature in determining appropriate patient care is the hallmark of this summative exam.

Prerequisites

Completion of TXPL 528 and TXPL 538

Criteria for Evaluation

See attached rubric. Critical errors are noted in the rubric.

Setting

Case-based simulation oral exam one on one with faculty.

Type of Competency Examination

Simulated treatment planning on a standardized case (student self-scheduled)

Presentation- Oral (case-based) to faculty member (student self-scheduled)

Time Allotted

1 clinic session

Remediation Required under the Following Circumstance

In the event the student fails a Treatment Planning Competency Exam, the student is required to write a paragraph/page about the deficient area and

submit this to the course director for approval before this competency can be challenged again. The student's GP Director/Assistant GP Director will underline on the competency form (under needs improvement) the specific deficiency needing further study. However, in the event a student fails a competency for the second time and then successfully retakes the competency on the third try the assigned grade for this competency will be no greater than the minimum passing grade: 70%. Once the student fails a Treatment Planning Competency Exam, the student will be only allowed to rechallenge a failed competency exam two more times. Failing the competency exam for the third time will result in failing the entire course.

Maryland Competency Statements

- 1a. Evaluate and assess emerging trends, technologies, and products in health care; and integrate best research outcomes with clinical expertise and patient values for evidence-based practice.
- 1b. Utilize critical thinking and scientific knowledge in decision making processes involved in-patient care.
- 2b. Practice within the scope of competency and know how to refer to professional colleagues indicated.
- 3a. Communicate effectively with other professionals regarding the care of patients.
- 3c. Communicate with a diverse population of patients
- 4b. Provide appropriate prevention, intervention, and educational strategies.
- 5d. Apply principles of risk management, including informed consent and appropriate record keeping in patient care.
- 5e. Comply with state and federal regulations related to OSHA and HIPAA, catastrophe preparedness, patient confidentiality, infection control, hazard communications, radiation safety, and medical waste disposal.
- 6a. Assess a patient's medical, psychological, and social history as it relates to dental treatment.
- 6b. Secure a dental history that includes chief complaint, patient expectations, and past dental history.
- 6c. Order, obtain, and interpret appropriate radiographic/digital images.
- 6d. Formulate and present to a patient a primary treatment plan, and alternative plans or referral, based on relevant findings and individual patient considerations.
- 6e. Use knowledge of the basic and clinical sciences to evaluate the form and function of the oral and craniofacial complex and its interaction with other systems of the body in health and disease.
- 7a. Manage acute pain and dental anxiety.

- 7b. In non-surgical patients, prevent, diagnose, and treat periodontal diseases ranging from gingivitis to moderate periodontitis.
- 7c. Develop and implement interceptive strategies to prevent and diagnose dental caries in individual patients and restore oral health.
- 7f. Prevent, diagnose, manage and treat pulpal disease, and related peri-radicular pathology and restore oral health.
- 7i. Differentiate normal from altered oral soft tissues and determine the need for additional diagnostic information.
- 7k. Perform an exam of the hard and soft tissues of the head and neck.
- 7l. Diagnose and manage temporomandibular disorders
- 7n. Recognize and refer patient abuse and/or neglect.
- 7q. Provide care for a diverse population of patients including infants, children, adolescents, adults, and geriatric and special needs patients.

Grading Information and Remediation

Examiners

GP and Assistant Directors

Grading

Each competency will be evaluated on a scale: 1-100%. If **any** of the 7 sections on the competency form receives an unacceptable grade the student has failed the entire exam. If the student fails either the case selection or professionalism criteria, the student has failed the entire exam. If **all** the 7 sections (Professionalism is not included in this grade computation) receive grades of **Superior**, the grade for the competency is 100%. Point allocation below superior are stipulated on the competency sheet and the grade will be calculated accordingly.

Examiners

Dr. Sarah Rollor

Dr. Mona Gorman

Dr. Eve Desai

Dr. Daniel Cheng

Dr. Lisa D’Affronte

Dr. Kwan Sanit

Dr. Carl Oppenheim

Dr. Kamila Kantovitz

Dr. Stanley Cohen

Dr. Christina Platia

Dr. Stephanie Dennison

Dr. Priyam Jani

Dr. Sami Abu Alhuda

Dr. Ramsay Koury

Dr. Ekpa Eyoma

Critical Errors

All 7 sections of the examination must be passed. If any of the 7 sections on the competency form receives an unacceptable grade the student has failed the entire exam. If the student fails either the case selection or professionalism criteria, the student has failed the entire exam. Critical errors that lead to an automatic failure include:

- Case selection
- Documentation
- History
- Clinical examination
- Radiographic interpretation
- Occlusal examination
- Diagnosis/Prognosis
- Treatment Plan

Description of Remediation

In the event the student fails a Treatment Planning Competency Exam, the student is required to write a paragraph/page about the deficient area and submit this to the course director for approval before this competency can be challenged again. The student's GP Director/Assistant GP Director will underline and counsel the student from the graded section on the competency form (under needs improvement) the specific deficiency needing further study. However, in the event a student fails a competency for the second time and then successfully retakes the competency on the third try (after the second written paragraph has been submitted to the course director and approved) the assigned grade for this competency will be no greater than the minimum passing grade: 70%. Once the student fails a Treatment Planning Competency Exam, the student will be only allowed to rechallenge a failed competency exam two more times. Failing the competency exam for the third time will result in failing the entire course.

2024-2025 GRADING RUBRIC FOR THE TXPL 548 COMPETENCY 52

Categories	Superior	Acceptable	Needs Improvement	Unacceptable
I. Documentation 1) EHR forms 2) Intraoral pictures 3) Radiographs 4) Study models	1) Meets all requirements at above average level 2) High quality intraoral pictures & radiographs	1) Correctly identifies all clinical data that needs to be collected and documented to comprehensively treatment plan the patient. 2) Correctly identifies errors in radiographic images and clinical photos. 3) Suggests appropriate measures to resolve issues present in existing data collected in the EHR forms and images. Correctly assesses diagnostic quality of the study models.	1) Failure to identify at least 1 or more missing data point. 2) Misses at least one error in the radiographs presented. 3) Does not correctly identify radiographic errors. 4) Does not identify problems with the quality of the study models.	1) Failure to identify issues with the data collected, radiographic images, clinical photos, and study models AND does not explain or know how to fix the errors.
II. History 1) Chief complaint 2) Medical history/vital sign 3) Dental history/risk factors	1) Meets all requirements in acceptable level. 2) Medical and dental history have been reviewed completely. 3) Student has determined if there are any drug interactions/contraindications for dental treatment.	1) CC identified accurately. 2) Medical and Dental history reviewed. 3) All current medications listed. 4) Significant medical/dental interactions or concerns of medications are identified.	1) CC not identified inaccurately. 2) Student was not able to answer medical/dental related questions of faculty	1) CC not identified. 2) Student does not know patient's medication and the medical/dental implications AND did not know where to find the answer.
III. Radiographic Interpretation 1) Caries & faulty restorations 2) Endodontics 3) Vertical bony defects 4) Furcation involvement Other pathology, etc.	1) Meets all requirements in acceptable level. 2) All carious lesions and cervical burnouts are correctly identified. All periodontal bone losses and furcation involvements identified.	1) The appropriate radiographs presented. 2) Caries correctly identified (maybe one carious lesion missed or misdiagnosed as cervical burn-out) 3) Apical lesions and bony lesions have been noted. 4) All radiographs are diagnostic	Requires faculty assistance. -To confirm less than two cervical burnouts -To detect no more than two caries on radiographs -To confirm periodontal bone loss, furcation involvement, etc. Multiple (3+) radiographs are not diagnostic.	1) More than three obvious carious lesions missed on radiographs. 2) Peri - radicular lesion(s) missed.
IV. Occlusal Examination 1) Posterior bite collapse 2) Loss of vertical dimension 3) Occlusal plane 4) Lateral/ incisal guidance Angle's classification	1) Meets all requirements in acceptable level. 2) Students detected posterior bite collapse and loss of vertical dimension.	1) The appropriate radiographs presented. 2) Caries correctly identified (maybe one carious lesion missed or misdiagnosed as cervical burn-out) 3) Apical lesions and bony lesions have been noted.	1) The occlusal interferences are missed. 2) More than two problems under the occlusal examination missed.	1) Failure to identify posterior bite collapse. 2) Failure to identify loss of vertical dimension.

		All radiographs are diagnostic		
Diagnosis/Prognosis 1) Dental caries 2) Periodontal diagnosis 3) Endodontic/oral pathology diagnosis 4) Prognosis	20 1) Meets all requirements in acceptable level. 2) Short term and long-term prognoses were made based on scientific reasons.	15 1) All caries diagnosed correctly. 2) Periodontal dx made correctly. 3) Endodontic/oral pathology dx made correctly. Prognosis mentioned	7 Requires faculty assistance to: 1) Detect no more than 2 dental caries. 2) Make periodontal, endodontic, occlusal, and pathology diagnoses if any. Determine prognosis	0 1) 3 or caries not diagnosed. 2) Undiagnosed endodontic, periodontal, or other pathology. 3) No prognosis offered.
VI. Treatment plan 1) Placed into phases 2) Chief complaint 3) Patient desires/goals 4) Risk factors 5) Prognosis considered Alternate TX plan	30 1) Meets all requirements in acceptable level. 2) The student presented specific data to support their clinical decisions.	20 1) Placed into phases & each treatment placed in order by its priority within phases. 3) CC, patient wish, risk factors, prognosis were considered. Treatment options presented.	10 Requires faculty assistance: 1) To sequence within phases 2) To determine prognosis 3) To make treatment options Failure to identify the need for specialty referral	0 1) Tx plan was not structured into phases. 2) There is no sequencing within the phase. 3) CC was not considered. Risk factors and prognosis were not considered.
VII. Self-assessment				

TXPL 548 COMPREHENSIVE TREATMENT PLANNING COMPETENCY_SENIOR

Deadline: March 1, 2025

Student Name and #:
Faculty Name and #:

Patient Chart #:
Date: GP:

I. Case selection: case must include caries, the need for **PERIODONTAL** and **PROSTHODONTIC** treatments in addition to **two more disciplines** **Pass/Fail**

	Honors Level	Satisfactory level	Needs improvement	Unacceptable
II. Documentation 1) EHR forms (3 pts) 2) Intraoral pictures (3 pts) 3) Radiographs (3 pts) 4) Study models and mounting (3 pts)	12	10	8	0
III. History 1) Chief complaint (5 pts) 2) Medial history / vital sign (5 pts) 3) Dental history / risk factors (5 pts)	15	12	10	0
IV. Radiographic Examination 1) caries & faulty restorations (3 pts) 2) endodontics (3 pts) 3) vertical defects (3 pts) 4) furcation involvements (3 pts) 5) other pathology, etc. (3 pts)	15	12	10	0
V. Occlusal Examination 1) posterior bite collapse, loss of vertical dimension (3 pts) 2) space loss (3 pts) 3) occlusal plane (3 pts) 4) lateral guidance/ incisal guidance (3 pts) 5) Angles' classification (3 pts)	15	12	8	0
VI. Diagnosis/Prognosis 1) dental caries (5 pts) 2) periodontal diagnosis (5 pts) 3) endodontic diagnosis/oral pathology (5pts) 4) prognosis (5 pts)	20	16	12	0
VII. Treatment plan 1) Placed into phase (5 pts) 2) chief complaint considered (3 pts) 3) patient wishes considered (3 pts) 4) risk factors are considered (3 pts) 5) prognosis is considered (3 pts) 6) Alternate Tx plan (5 pts)	23	18	13	0
Self-assessment			Pass/ Fail	

IX. Automatic failures:

Professionalism: 1) concern for patient's comfort, 2) HIPPA, OSHA & infection control **Pass/ Fail**

Article: 1) If the article is not submitted one week prior to your TXPL comp appointment you will receive a 10-point deduction from your overall grade.

FACULTY SIGNATURE: _____ **DATE:** _____

Please, make a copy for your records. Turn in original form to Dr. Rollor.

TXPL 548 COMPETENCY EXAMINATION #53

Title: Comprehensive Care Outcome Assessment Competency
Course: TXPL 548: Treatment Planning III
Timing: D4
Category: Summative
Contact: Dr. Sarah Rollor srollor1@umaryland.edu

General Description

Description of Assessment:

Through chart audits, the student needs to identify a patient that he/she has performed dental care in at least 3 disciplines. The patient should have been a patient of record for the student for at least 7 months. This assessment is completed at a recall visit to include a periodic exam and/or a periodontal maintenance. As part of this assessment the student will do a comprehensive oral examination and make recommendations for any updated diagnostic images that may be required. This competency will evaluate the student's ability to self-assess his/her treatment/ dental care provided to an assigned patient. This competency also includes the ability of the student to identify quality of care issues.

Prerequisites:

Completion of TXPL 528, TXPL 538, PERI 538, DHPP 538P, REST 538A, REST 538B, REST 538C, RAD1 538, TXPL 548- two patient outcome assessments

Criteria for Evaluation:

See grading rubric for criteria for evaluation.

Setting:

Case-based one on one with faculty.

Type of Competency Examination:

Demonstration-clinical performance patient-based (student self-scheduled)

Presentation oral (case-based) to faculty member (student self-scheduled)

Time Allotted:

1 clinic session

Remediation Required Under the Following Circumstances

A student who fails the competency with a score of less than 14 points out of a possible 20 points. The student must discuss with the faculty area(s) of disagreement with the faculty. He/she may then challenge the competency again.

Maryland Competency Statements

- 1b. Utilize critical thinking and scientific knowledge in decision-making processes involved in patient care.
- 4a. Evaluate effectiveness of prevention, maintenance, and reparative therapies through assessment of treatment outcomes.
- 5d. Apply principles of risk management, including informed consent and appropriate record keeping in patient care.
- 5f. Apply quality assurance, assessment, and improvement concepts (measured by chart audits).
- 7p. Evaluate outcomes of comprehensive dental care.

Grading Information and Remediation

Examiners

Dr. Sarah Rollor

Dr. Mona Gorman

Dr. Eve Desai

Dr. Daniel Cheng

Dr. Lisa D’Affronte

Dr. Kwan Sanit

Dr. Carl Oppenheim

Dr. Kamila Kantovitz

Dr. Stanley Cohen

Dr. Christina Platia

Dr. Stephanie Dennison

Dr. Priyam Jani

Dr. Sami Abu Alhuda

Dr. Ramsay Koury

Grading

As listed on rubric form.

Critical Errors

There are no critical error(s) that result in automatic failure. A student who fails the competency with a score of less than 14 points out of a possible 20 points and has a grade of less than 70%. If a student that fails to complete the competency by the set deadline the assigned grade for this competency will be no greater than the minimum passing grade: 70%.

Description of Remediation

A failing grade of less than 70% requires the student be counseled by the examining faculty member on those areas that were problematic. The student will then retake the competency examination until passing.

TXPL 548 Comprehensive Care Outcome Assessment Competency (D0170.9)**Due date: March 31, 2025**

Student name/S#: _____ GP: _____ Date: _____

Patient #: _____ Faculty: _____ Grade: _____/20 _____

This competency evaluates the student's ability to self-assess treatment outcomes of treatment provided by the student for the patient. The patient must have had dental care provided and completed at least three (3) disciplines and at least two disciplines by the current student. Examine the patient and assess the quality of care delivered. Your assessment will be compared with the examining faculty member. Each section has a value with a possible 20 points; 14 points are required to pass.

Student completes first three columns; Y=Yes N= No N/A =not applicable and comment section.

faculty completes columns A=Agree D=Disagree N/A=not applicable

	Y	N	N/A	A	D	N/A	Comments
Was chief complaint addressed? (1 point) In the proper sequence? (1 point)							
Is the medical history current? (1 point) Medications? (1 point) Medical consults? (1 point) Premedication needed? (1 point) Does the medical history impact treatment? (1 point)							
Was appropriate dental care provided? (1 point) Was it clinically acceptable? (1 point)							
Have periodic oral exams been completed in a timely manner? (Within 6-8 months) (1 point) Have radiographs been updated as needed? (1 point)							
Is the periodontal condition stable? (1 point) Is the patient's caries controlled? (1 point)							
Is the patient satisfied with treatment? (1 point)							
Did finances impact the treatment plan? (1 point)							
Did patient expectations impact treatment? (1 point) Where their patient management issues? (1 point)							
Was there anything that could have been done differently? (1 point)							
What was learned from treatment, patient relationships and other factors with the patient? (2 points) Write your response in the section adjacent to this question and you can extend to the back of form →							
Case disposition: Transfer: _____ Inactivate: _____ other: _____							

Faculty name: _____

Faculty signature: _____ F#: _____