

2015 UMB Basic Ultramicrotomy Mini-course Agenda (Tentative)

<b>10/26/2015</b>	
<b>9:00 to 9:50</b>	<p>1. The anatomy of ultramicrotomes.</p> <ul style="list-style-type: none"> <li>• Types of sectioning instrument (thick, semithick and ultrathin sections) vibrotome, cryostat and rotary microtome for paraffin blocks and ultramicrotome</li> <li>• Mechanism of ultramicrotomes</li> <li>• Functionality of ultramicrotomes and accessories</li> </ul>
<b>10:00 to 10:45</b>	<p>2. All about Knives</p> <ul style="list-style-type: none"> <li>• Types of diamond knives</li> <li>• The usage and care of diamond knives</li> <li>• Glass knives, pros and cons. How to prepare and use of glass knives</li> </ul>
<b>11:00 to 12:00</b>	<p>3. Ultramicrotomy of biological specimen: workflow &amp; general practice</p> <ul style="list-style-type: none"> <li>• Shaping sample pyramid and trapezoid block face</li> <li>• Smoothing block face</li> <li>• Pre-sectioning, semi-thick sectioning</li> <li>• Ultrathin sectioning</li> <li>• Section pick-up</li> </ul>
<b>Lunch Break</b>	
<b>1:00 to 5:00</b>	<p>Demonstration: Manual trimming and ultramicrotome trimming            Demonstration: Making glass knives, eyelash tools and cleaning diamond knives            Hands-on Practice</p>
<b>10/27/2015</b>	
<b>9:00 to 10:00</b>	<p>4. Ultrathin sectioning clinics</p> <ul style="list-style-type: none"> <li>• Common problem troubleshoot</li> <li>• Special sectioning: Sectioning flat specimen (monolayers, filters etc)</li> <li>• Tricks to locate diluted specimen in blocks</li> <li>• Tricks to section poorly embedded specimen (soft blocks)</li> <li>• Directional sectioning</li> <li>• Serial sections</li> </ul>
<b>10:00 to 10:30</b>	5. Q&A
<b>11:00 to 12:00</b>	Hands-on Practice
<b>Lunch Break</b>	
<b>1:00-5:00</b>	Hands-on Practice