# Sample Lecture Schedule

## Monday

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:45 AM</td>
<td>Welcome</td>
<td>Metzger</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>Course Introduction/General Review of the Cardiovascular System</td>
<td>Iaizzo</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>Cardiac Myocytes</td>
<td>Barnett</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>The Conduction System of the Heart</td>
<td>Iaizzo</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>12-Lead ECG (Demonstration)</td>
<td>Howard</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>LUNCH (provided)</td>
<td></td>
</tr>
<tr>
<td>12:30 PM</td>
<td>EKG Lab—Biopac Systems (MOOS 3-110)</td>
<td>VHL graduate students</td>
</tr>
<tr>
<td>1:30 PM</td>
<td>Control of Coronary Blood Flow during Normal and Disease States</td>
<td>Katz</td>
</tr>
<tr>
<td>2:30 PM</td>
<td>Thoracic Surface Anatomy and Great Vessels</td>
<td>Weinhaus</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>Gross Anatomy Lab 1: Thoracic Surface Anatomy, Subclavian Region and Great Vessels</td>
<td>Weinhaus/Cook/Iaizzo</td>
</tr>
<tr>
<td>6:15 PM</td>
<td>Reception (Sponsored by the Institute for Engineering in Medicine, University of Minnesota)</td>
<td></td>
</tr>
<tr>
<td>7:00 PM</td>
<td>Keynote Presentation: “Resiliency: Excelling in a Tough Environment” Dr. Rosemary Kelly, Professor and Chief, Division of Cardiothoracic Surgery, University of Minnesota</td>
<td></td>
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</tbody>
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## Tuesday

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM</td>
<td>Cardiac Development</td>
<td>Martinsen</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>Mechanical Aspects of Cardiac Performance: Blood Pressure, Heart Tones, and Diagnoses</td>
<td>Hutchins</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Large Mammalian Comparative Cardiac Anatomy</td>
<td>Hill</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>Cardiac Energy Metabolism</td>
<td>Iles</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>LUNCH (provided)</td>
<td></td>
</tr>
<tr>
<td>1:00 PM</td>
<td>Use of Device-based Approaches to Treat Cardiovascular Diseases Associated with Increased Sympathetic Activity</td>
<td>Osborn</td>
</tr>
<tr>
<td>2:00 PM</td>
<td>Congenital Cardiac Disease</td>
<td>Maclver</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>Surface Anatomy of Heart and Lungs</td>
<td>Weinhaus</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Gross Anatomy Lab 2: Lungs, Great Vessels and Coronary Vessels</td>
<td>Weinhaus/Cook/Iaizzo</td>
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<tr>
<td>Wednesday</td>
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<td>-----------------------------------------------</td>
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<tr>
<td>Catheter Ablation of Cardiac Arrhythmias</td>
<td>Roukoz</td>
<td>8:00 AM</td>
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<tr>
<td>3D Electrophysiologic Cardiac Mapping</td>
<td>Laske</td>
<td>9:00 AM</td>
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<tr>
<td>Pacing and Defibrillation</td>
<td>Eggen</td>
<td>10:00 AM</td>
</tr>
<tr>
<td>Valve Anatomy and Transcatheter Valves/Minimally Invasive Valve Repair Procedures</td>
<td>Bateman</td>
<td>11:00 AM</td>
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<tr>
<td><strong>LUNCH (provided)</strong></td>
<td></td>
<td>12-1 PM</td>
</tr>
<tr>
<td>Interventional Cardiology: Stents, Closure Devices, etc.</td>
<td>Raveendran</td>
<td>1:00 PM</td>
</tr>
<tr>
<td>The University of Minnesota: One of the Pioneering Institutions in the Field of Cardiovascular Surgery</td>
<td>Iaizzo</td>
<td>2:00 PM</td>
</tr>
<tr>
<td>Internal Anatomy of the Heart and Posterior Mediastinum</td>
<td>Weinhaus</td>
<td>3:00 PM</td>
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<tr>
<td>Gross Anatomy Lab 3: Internal Anatomy of the Heart and Posterior Mediastinum</td>
<td>Weinhaus/Cook/Iaizzo</td>
<td>3:30 PM</td>
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<tr>
<td><strong>Thursday</strong></td>
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<tr>
<td>Introduction to Echocardiography</td>
<td>Sivanandam</td>
<td>8:00 AM</td>
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<tr>
<td>Intro to Anesthesia for Cardiac Surgery</td>
<td>Loushin</td>
<td>9:00 AM</td>
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<tr>
<td>Monitoring in the ICU</td>
<td>Beilman</td>
<td>10:00 AM</td>
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<tr>
<td>Ex Vivo Perfusion of the Heart or Lungs</td>
<td>Huddleston</td>
<td>11:00 AM</td>
</tr>
<tr>
<td><strong>LUNCH (provided)</strong></td>
<td></td>
<td>12-1 PM</td>
</tr>
<tr>
<td>Clinical Anatomy (anatomy review)</td>
<td>Weinhaus</td>
<td>1:00 PM</td>
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<tr>
<td>Gross Anatomy Lab 4: Clinical Anatomy (anatomy review)</td>
<td>Weinhaus/Cook</td>
<td>1:30 PM</td>
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<tr>
<td><em>Small Group Demos: In vitro swine, fresh cadaver (B172 Mayo)</em></td>
<td>Iaizzo</td>
<td>1:30 PM</td>
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<tr>
<td><strong>Friday</strong></td>
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<tr>
<td>Experimental Gene Therapeutics for Heart and Muscle</td>
<td>Metzger</td>
<td>8:00 AM</td>
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<tr>
<td>Ventricular Assist Device Therapy</td>
<td>John</td>
<td>9:00 AM</td>
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<tr>
<td>Novel Visualization of Functional Human Cardiac Anatomy Employing Visible Heart® Methodologies</td>
<td>Iaizzo</td>
<td>10:00 AM</td>
</tr>
<tr>
<td>Minimally Invasive Cardiac Surgery: Technique Overview</td>
<td>Liao</td>
<td>11:00 AM</td>
</tr>
<tr>
<td><strong>LUNCH (provided)</strong></td>
<td></td>
<td>12-1 PM</td>
</tr>
<tr>
<td>Patient Continuum of Care Following Cardiac Interventions</td>
<td>Martin</td>
<td>1:00 PM</td>
</tr>
<tr>
<td>Cardiac Anatomy Modeling, Virtual Reality, Virtual Prototyping and Atlas Website Tutorial</td>
<td>Bateman</td>
<td>2:00 PM</td>
</tr>
<tr>
<td>Gross Anatomy Lab: Finish Dissections and “Grand Rounds”</td>
<td>Weinhaus/Cook/Iaizzo</td>
<td>3:00 PM</td>
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</tbody>
</table>

*Lecture schedule subject to change
Course Grading

- 0 Credits: Students registered for 0 credits DO NOT need to take a final exam or complete a research project, however we consider that attendance is mandatory.

- 2 Credits: University of Minnesota students registered for 2 credits are required to complete one take-home exam (Due: Friday, March 9, 2018). The score on that exam, along with individual participation in the labs and lectures, will be used to determine the final grade. This course can be taken for either a letter grade (A-F) or as pass/fail (S/N). A satisfactory (S) grade will be equivalent to a grade of C or better.

- 3 Credits: University of Minnesota students registered for 3 credits are required to complete the take-home exam (see above). In addition, students must satisfactorily complete a research project, which includes a summary report or research paper, and pay an additional fee for the credit. The grade on the project will contribute to 1/3 of the total grade. Students who do not complete their project by the due date for submitting grades will be given an incomplete until it is satisfactorily completed. This project is to be arranged by the student and performed under the guidance of any of the course faculty willing to do so.