



OGRE REQUIREMENTS FOR CROSS-LISTED COURSES

A course that is cross-listed at the 4000 and 6000 levels should contain information pertaining to both levels with a distinction of work that is required for students who are to receive credit at the 6000 level. A natural pedagogical outcome should require student work at a more independent level. More depth and breadth should be shown in 6000 level course outcomes, assessments, and grading criteria so it doesn't appear to be just more work (i.e., an extra assignment).

The syllabus should take into consideration the following:

1. Course numbers listed at both levels.
2. Do not refer to the course as the "UG" course and the "GR" course. Instead, refer to the 4000 level and 6000 level options. Students should follow the course level they are enrolled in, not their status as a student. For example, an "UG taking a GR level course" needs to follow the 6000 level syllabus because of the registration.
3. Learning Outcomes:
 - a. Need to be listed for both levels. Be sure to list learning outcomes, not just assessments.
 - b. One or more outcomes for the 6000 level depending on the level and breadth. The 4000 level outcomes can also be used but there has to be a distinction between the two levels.
 - c. Students taking a 6000 level course, regardless of student status (i.e., UG vs GR) must satisfy the learning outcomes at the 6000 level if wanting to receive GR credit for the course.
 - d. Learning outcomes at the 6000 level should address more breadth and depth of the material as well as having the student demonstrate more independent mastery.
4. Learning Assessments:
 - a. A learning assessment is an instrument - like a test, homework or project - that is used to evaluate whether or not the learning outcomes have been achieved.
 - b. An assessment is not a difference in grading.
 - c. An assessment should address each outcome listed at the 4000 level. However, the 6000 level outcomes may be included in only one assessment if that works best for the course.
 - d. The number of assessments should not just be greater at the 6000 level but learning outcomes should be tied to each assessment (i.e., greater external research required at the 6000 level than at the 4000 level).
 - e. The assessments at the 6000 level should require the student to demonstrate a greater amount of independence than at the 4000 level.

5. Separate grading criteria for each level. Note: courses for credit at the 6000 level cannot receive "D/D+/D-" grades and this should be indicated on the syllabus.
6. Academic Integrity: use the following template on the next page for any 4000 level or higher course.

Academic Integrity Statement for all 4000 level plus syllabi:

The Rensselaer Handbook of Student Rights and Responsibilities and The Rensselaer Graduate Student Supplement define various forms of Academic Dishonesty and procedures for responding to them. All forms are violations of the trust between students and teachers. Student-teacher relationships are built on trust. For example, students must trust that teachers have made appropriate decisions about the structure and content of the courses they teach, and teachers must trust that the assignments that students turn in are their own performance. Acts that violate this trust undermine the educational process.

The Rensselaer Handbook of Student Rights and Responsibilities and The Rensselaer Graduate Student Supplement define various forms of Academic Dishonesty and you should make yourself familiar with these. In this class, all assignments that are turned in for a grade must represent the student's own work. In cases where help was received, or teamwork was allowed, a notation on the assignment should indicate your collaboration. Submission of any assignment that is in violation of this policy will result in a penalty. If found in violation of the academic honesty policy, students may be subject to two types of penalty. The instructor administers an academic [grade] penalty and the student is reported to the Dean of Students or the Dean of Graduate Education as appropriate. The first violation results in 0 grade for that assignment. The second violation results in failure of the course. If you have any questions concerning this policy before submitting an assignment, please ask for clarification.

Sample:

The following document is a sample of a syllabus for cross-listed courses that meet the guidelines in this requirements statement.

SAMPLE SYLLABUS FOR CROSS-LISTED COURSES

BMED 4420/6420 – Clinical Orthopaedics and Contemporary Research Fall, 2017

Credit Hours: 04

Course Description: The course will consist of traditional lectures delivered by the instructor reviewing the most contemporary research related to the nation's highest priorities (as identified by the NIH) for musculoskeletal diseases and care. Each topic will be studied in modules. In each module, the students will first learn about the pathophysiology of the disease through interactive lecture materials and web-based learning tools. Special topics will be presented relevant to each module relating state-of-the-art biomedical research to clinical practice. Following these background lectures, one of seven physicians will discuss with the students during lecture time the clinical perspective of the problem and will present clinical case studies. These will include medical histories and diagnostic studies from real patients. Each module will then conclude with either a live webcast or recorded video of surgery from either Albany Medical Center or the Capital Region Bone and Joint Center.

Instructors: Eric H. Ledet, Ph.D.
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Office Hours: W 10:00-12:00 and by appointment.

Richard L. Uhl, MD
Professor and Division Head
Division of Orthopaedic Surgery
Albany Medical College
uhlr@aol.com ("RPI Class" in subject line.)

Clinical Faculty: Maxwell Alley, MD; Robert Cheney, MD; Cory Czajka, MD; Michael Mulligan, MD;
Daniel Phelan, MD; Jared Roberts, MD; Richard Uhl, MD.

Teaching Assistant: Jonathan Kulwatno
CBIS 3117
kulwaj@rpi.edu
Office Hours: M 10:00-11:00 and by appointment.

Lecture: M, Th 9:00 – 10:00 DCC 337*
W 8:00 – 10:00 DCC 337*
* See detailed schedule.

Exams: There will be three midterm exams.
* See detailed schedule.

Course Learning Outcomes for BMED-4420: Students who successfully complete this course will be able to:

- Demonstrate the ability to effectively communicate with surgeons about these disorders, including the use of appropriate language to describe the anatomy, physiology, and pathology of the diseases.
- Demonstrate an ability to identify the scope of burden of each pathology from the research perspective, the clinician perspective, and the medical device industry perspective.
- Demonstrate an ability to define the nature of contemporary treatments (including surgical techniques) for each disease and the most up-to-date translational research.
- Demonstrate an ability to identify the most significant musculoskeletal conditions in the United States, including the nature of the pathology, the current state-of-the-art research, and opportunities for future research (and research funding).

Course Learning Outcomes for BMED-6420: Students who successfully complete this course will be able to:

- Demonstrate the ability to effectively communicate with surgeons about these disorders, including the use of appropriate language to describe the anatomy, physiology, and pathology of the diseases.
- Demonstrate an ability to identify the scope of burden of each pathology from the research perspective, the clinician perspective, and the medical device industry perspective.
- Demonstrate an ability to define the nature of contemporary treatments (including surgical techniques) for each disease and the most up-to-date translational research.
- Demonstrate an ability to identify the most significant musculoskeletal conditions in the United States, including the nature of the pathology, the current state-of-the-art research, and opportunities for future research (and research funding).
- Demonstrate the ability to review the contemporary literature related to musculoskeletal disease and treatment and synthesize it and communicate it effectively through written and oral communication.
- Demonstrate the ability to identify contemporary topics in musculoskeletal disease and treatment which are controversial and to be able to comprehend and present all of the viewpoints related to the controversy.

Pre-regs: BMED 4500 Advanced Systems Physiology or permission of professor.

Text: Bernstein J. Musculoskeletal Medicine. AAOS:Rosemont, IL. 2003. (ISBN:0-89203-294-4)

Grades: Undergraduates and graduate students have Independent grade rubrics as shown below. The metrics for success and grade criteria for each assignment will be different for students enrolled at the 4000 and 6000 levels.

BMED 6420	Points	BMED 4420	
Exam 1	100	Exam 1	250
Exam 2	100	Exam 2	250
Exam 3	100	Exam 3	250
Detailed Special Topic Report: Topic 1, 2, or 3	200	Pre-Procedure Summaries	200
Detailed Special Topic Report: Topic 4, 5, 6, or 7	200	Class Participation, Attendance	50
30 min Oral Presentation With Partner (To be presented in class.)	250		
Class Participation, Attendance	50		
Total	1,000	Total	1,000

Academic Integrity: Students must work independently on all course assignments (except graduate student oral presentations). All work must be original and not copied or written in collaboration with other students. Copying and pasting from published sources or the internet is considered plagiarism and is not acceptable. Plagiarized work will receive an automatic grade of zero.

Student-teacher relationships are built on trust. Acts which violate this trust undermine the educational process. The Rensselaer Handbook of Student Rights and Responsibilities and The Rensselaer Graduate Student Supplement define various forms of Academic Dishonesty and procedures for responding to them. Submission of any assignment that is in violation with these policies will result in a penalty that is deemed by the instructor to be appropriate to the infraction ranging from a grade of zero on the assignment in question, to failure of the class as a whole. The student will also be reported to the Dean of Students or the Dean of Graduate Education as appropriate. Note that academic dishonesty will be dealt with severely and will be reported to the Dean of Students. If you have any questions concerning this policy before submitting an assignment, please ask for clarification.

Exams: All exams in this course are closed-book and closed-note. All computers, tablets, phones, and watches must be put away and kept out of view during exams.

Clinical Orthopaedics and Contemporary Research – Clinical Topics

1. Degenerative Soft Tissue Injuries

Daniel Phelan, MD

Orthopaedic Surgeon

Rotator Cuff Repair or Biceps Tendon Repair.

2. Repetitive Motion Disorders

Michael Mulligan, MD

Orthopaedic Surgeons

Cubital Tunnel Release.

3. Spine Radiculopathy/Degenerative Disc Disease

Robert Cheney, MD

Orthopaedic Surgeon

Anterior Cervical Discectomy.

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4. Traumatic Sports Injuries

Max Alley, MD

Orthopaedic Surgeon

Anterior Cruciate Ligament Repair.

5. Osteoarthritis

Jared Roberts, MD

Orthopaedic Surgeon

Total Hip Arthroplasty, Total Knee Arthroplasty, or Partial Knee Arthroplasty.

6. Osteoporosis/Fragility Fractures

Richard Uhl, MD

Orthopaedic Surgeon

Distal Radius or Femoral Neck Fracture.

7. Traumatic Fractures

Cory Czajka, MD

Orthopaedic Surgeon

Traumatic Fracture Fixation.

Date	Day	Topic	Lecturer
08/31/17	Th	Introduction/Syllabus, Operating Room Environment	Ledet
09/06	W	Medical Terminology, Diagnostic Studies & Imaging I	Ledet
09/07	Th	Medical Terminology, Diagnostic Studies & Imaging II	Ledet
09/11	M	Biology/Anatomy – Bone, Cartilage I	Ledet
09/13	W	Biology/Anatomy – Bone, Cartilage II <i>[Grand Rounds]</i>	Ledet
09/14	Th	Biology/Anatomy – Tendon, Ligament, Muscle	Ledet
09/18	M	Biology/Anatomy – IVD, Inflammation	Ledet
09/20	W	Biology/Anatomy – Nerves, CNS, PNS <i>[Grand Rounds]</i>	Ledet
09/21	Th	Biology/Anatomy – Infection	Ledet
09/25	M	Biomedical Engineering Topic: Biomaterials	Ledet
09/27	W	Biomedical Engineering Topic: Endoscopy and Arthroscopy <i>[Grand Rounds]</i>	Ledet
09/28	Th	<i>Exam 1 – Basic Science</i>	Ledet
10/02	M	Topic 1 – Anatomy/Pathophysiology -- Shoulder	Ledet
10/04	W	Hip-In-A-Box DePuy Mitek MIS Surgical Simulator Lab *** Class begins at 7:30.	Spenciner
10/05	Th	Topic 2 – Anatomy/Pathophysiology – Hand, Wrist, Elbow I	Ledet
10/10	T	Topic 1 – Clinical Perspective – Rotator Cuff Reconstruction	Phelan
10/11	W	Topic 1 – Live Procedure – Rotator Cuff Reconstruction (BJC) *** Class begins at 7:30. *** Pre-procedure summary due: Rotator cuff or labral repair.	Phelan
10/12	Th	Topic 2 – Anatomy/Pathophysiology – Hand, Wrist, Elbow II	Ledet
10/16	M	Topic 2 – Clinical Perspective – Compression Neuropathy Carpal and Cubital Tunnel	Mulligan
10/18	W	Topic 2 – Live Procedure – Carpal/Cubital Tunnel Release (BJC) *** Class begins at 8:00. *** Pre-procedure summary due: Carpal or cubital tunnel release.	Mulligan
10/19	Th	Topic 3 – Anatomy/Pathophysiology – Spine Pain, IVD Degeneration I	Ledet
10/23	M	Topic 3 – Anatomy/Pathophysiology – Spine Pain, IVD Degeneration II	Ledet
10/25	W	Topic 3 – Biomedical Engineering Topic: Spine Fixation Techniques <i>[Grand Rounds]</i>	Ledet
10/26	Th	No class.	
10/30	M	Topic 3 – Clinical Perspective – Spine Pain, IVD Degeneration	Cheney
11/01	W	Topic 3 – Live Procedure – Cervical Interbody Fusion *** Class begins at 7:30. *** Pre-procedure summary due: TLIF or ACDF.	Cheney
11/02	Th	Topic 4,5 – Anatomy/Pathophysiology – Knee *** Grad Student Topic Paper Due ***	Ledet
11/06	M	Topic 4 – Clinical Perspective – Sports Injuries of the Knee	Alley

Date	Day	Topic	Lecturer
11/08	W	Topic 4 – Live Procedure – ACL Reconstruction (BJC) *** Class begins at 7:30. *** Pre-procedure summary due: ACL repair.	Alley
11/09	Th	Topic 5,6,7 – Anatomy/Pathophysiology – Hip/Tib/Fib/Femur	Ledet
11/13	M	Topic 5 – Anatomy/Pathophysiology – Hip & Knee Osteoarthritis <i>[Grad Presentations]</i>	Ledet
11/15	W	Topic 5 – Clinical Perspective – Osteoarthritis *** Class begins at 8:30 <i>[Grand Rounds]</i>	Roberts
11/16	Th	Topic 5 – Live Procedure – Partial Knee + TKA or THA (AMC) *** Class begins at 7:30. *** Pre-procedure summary due: THA or TKA.	Roberts
11/20	M	Exam II – Topics 1 through 5	Ledet
11/27	M	Topic 6,7 – Fracture Etiology, Classifications, Mechanisms. <i>[Grad Presentations]</i>	Ledet
11/29	W	Biomedical Engineering Topic: Grafts, BMP <i>[Grand Rounds]</i>	Ledet
11/30	Th	Topic 6,7 - Biomedical Engineering Topic: Biomechanics of Fracture Fixation I <i>[Grad Presentations]</i>	Ledet
12/04	M	Topic 6 – Anatomy/Pathophysiology – Osteoporosis/Fragility Fractures <i>[Grad Presentations]</i>	Ledet
12/06	W	Topic 6 – Clinical Perspective & Case Studies – Fragility Fractures *** Class begins at 8:00. *** Pre-procedure summary due: Distal radius locked plating or Kyphoplasty.	Uhl
12/07	Th	Topic 6,7 - Biomedical Engineering Topic: Biomechanics of Fracture Fixation II *** Grad Student Topic Paper Due *** <i>[Grad Presentations]</i>	Ledet
12/11	M	Topic 7 – Clinical Perspective & Case Studies – Traumatic Fractures *** Class begins at 7:30. *** Pre-procedure summary due: Cephalomedullary or IM nail of femur.	Czajka
12/13	W	Exam III – Topics 1 through 7	Ledet