



The Florida State University
College of Medicine

**Medical Biochemistry
and Genetics**

BMS 6204

Spring 2015

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Instructors

Course Director

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Course Instructors

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Timothy Megraw, Ph.D.

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Course Overview

Course Goals

The overall course goal is to provide the foundation to utilize fundamental information about biochemistry and genetics in second year courses, later clerkships, graduate medical education, and clinical practice. Specifically, the course is designed to:

- Enhance medical knowledge & clinical reasoning skills. Students will be able to apply their knowledge of the basic biochemical and genetic mechanisms to common or representative diseases, including the symptoms associated with disease, as demonstrated not only by their performance on course examinations and quizzes, but also in later courses, clerkships and graduate medical education.
- Prepare students to scientifically evaluate disease prevention and treatment strategies. Students will be able to identify critical components of biochemistry and genetics that inform prevention approaches and treatment decisions, as evidenced by examination performance. Performance on these assessments should be at a mastery level which will indicate the future transfer of knowledge necessary not only for current biochemically-based treatments, but also to evaluate new treatments and diagnostic tools as they are developed for clinical use.
- Prepare students to communicate effectively and professionally. Students will collaborate with classmates and apply their knowledge of biochemical and genetic information to solve clinical problems by working professionally and effectively in small groups.

Learning Objectives

The Institutional Learning Objectives relevant for Medical Biochemistry and Genetics relate to the FSU COM competency domains.

Competencies

FSUCOM – Competencies -Course Title BMS 6204		
Competency Domains	Competencies Covered in the Course	Methods of Assessment
Patient Care	x*	
Medical Knowledge	Explain the basic biochemical and genetic mechanisms of common or representative diseases	Faculty observation in small groups. Written examinations; NBME Subject Exam
Practice-based Learning	Self-assess knowledge gaps and formulate a plan for improvement	Self-assessment of written exam performance
Communication Skills	Demonstrate skills of communication with peers and faculty.	Peer and self-evaluations of small group interaction; faculty observation.
Professionalism	Demonstrate professional attitude and behavior in all course activities.	Peer and self-evaluation of small group interaction; faculty observation.
System-based Practice		N/A
<p>NOTES: *Clinical faculty and physicians with active practices are invited to illustrate how biochemical and genetic information and knowledge are used clinical practice.</p>		

Policies

Americans with Disabilities Act

Candidates for the M.D. degree must be able to fully and promptly perform the essential functions in each of the following categories: Observation, Communication, Motor, Intellectual, and Behavioral/Social. However, it is recognized that degrees of ability vary widely between individuals. Individuals are encouraged to discuss their disabilities with the College of Medicine's [Director of Student Counseling Services](#) and the FSU Student Disability Resource Center to determine whether they might be eligible to receive accommodations needed in order to train and function effectively as a physician. The Florida State University College of Medicine is committed to enabling its students by any reasonable means or accommodations to complete the course of study leading to the medical degree.

[The Office of Student Counseling Services](#)

Medical Science Research Building, G146

Phone: (850) 645-8256 Fax: (850) 645-9452

This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center

97 Woodward Avenue, South

Florida State University

Tallahassee, FL 32306-4167

Voice: (850) 644-9566

TDD: (850) 644-8504

sdrc@admin.fsu.edu

<http://www.fsu.edu/~staffair/dean/StudentDisability>

Academic Honor Code

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. (Florida State University [Academic Honor Policy](#))

Attendance Policy

The College of Medicine has detailed attendance policies as they relate to each cohort and events that conflict with course schedules. See [FSUCOM Student Handbook](#) for details of attendance policy, notice of absences and remediation.

Recommended Reading Materials

Primary:

Panini, S.R. **Medical Biochemistry: An Illustrated Review.** Thieme, 2013.

Also useful:

Meisenberg, G. and Simmons, W.H. *Principles of Medical Biochemistry.* 3rd Edition. Mosby Elsevier, Philadelphia, 2006.

Nussbaum, RL, McInnes, RR, Willard, HF. *Genetics in Medicine.* 7th Edition. W.B. Saunders Co., New York, 2007. (Available as e-book from COM Library)

Grading

Assignments

There will be 3 integrated block exams which include content from all Year 1 Spring semester courses. Biochemistry & Genetics items on each exam will be in a “board-type” multiple choice format that emphasizes problem solving rather than rote memory. The course endorses a criterion-referenced teaching philosophy in which exams test the specific ideas that all students are expected to master (criteria), with no attempt to rank order student performance. Thus, there is no reason for students to feel competitive with each other. On the contrary, higher achievement can be expected when students work cooperatively. While all students are expected to pass each exam with a score $\geq 70\%$, we encourage you to aspire to mastery (100%) of the material and will do everything we can to help you achieve scores of 80% or higher.

In addition to the study questions provided for each content area which require narrative format explanation of the material, weekly multiple choice practice questions will be posted on blackboard. Each set of questions is not only a formative assessment, but an active learning process. These formative quizzes will allow students to track progress on a weekly basis.

At the end of the semester, students will take the NBME subject exam in Biochemistry & Genetics. We have given this subject exam every year and are aware that the exams are difficult and sometimes contain items not specifically covered in the course. Be confident that the course director takes that into account in setting the “passing” performance level.

Grading System

FSU COM has adopted a pass/fail grading system which is used in the curriculum for the first and second years (See [FSUCOM Student Handbook](#)). To achieve a grade of Pass in BMS 6204 (Biochemistry & Genetics) a student must meet all of the following requirements:

- 1) A final average $\geq 70\%$ on the combination of all examination questions. An average $<70\%$ will receive a grade of fail, which will require remediation or repetition of the course, as determined by decision of the Student Evaluation and Promotion Committee. A student whose performance is below passing on any individual exam is required to 1) attend the exam review, 2) contact the course director within 24 hours of the exam review, and 3) meet with the course director. Students may be asked to complete a Performance Improvement Program (PIP), the purpose of

which is to assist the student in developing the skills and habits necessary to succeed in the curriculum as well as to address specific performance deficits.

- 2) Satisfactory performance on the NBME Basic Sciences Subject Examination in Biochemistry, as determined by the Course Director. The score will be normalized based on class average and historical data.
- 3) Attendance and satisfactory participation in all required sessions, as determined by the Course Director. Unexcused absence from an activity for which attendance is required (for example, Small Group session) may be considered as an issue of Professionalism and require completion of the Performance Improvement Program.
- 4) Demonstration of the attitudes and behaviors of Medical Professionalism in all aspects of the course. Issues of Professionalism may result in a Report of Concern for Unprofessional Behavior..