

Overview of GMS 647x series, Spring 2014

Fundamentals of Physiology & Functional Genomics I, II and III

Course objectives and/or goals: The “Fundamentals of Physiology & Functional Genomics” courses (GMS 6471, 6472, 6473) provide exposure to fundamental physiological concepts with emphasis on the impact of functional genomics. The focus is on the respiratory, circulatory and gastrointestinal systems, and modern experimental approaches in physiology.

The series consists of three independent modules. Students may take any combination of the three modules. Each course consists of 3-4 hours of lecture, paper discussion, and/or team-based learning (TBL) per week during spring semester.

Textbook: E- textbook “Ganong’s Review of Medical Physiology”, 23rd edition (2010), which is available through the UF Health Science Center library (<http://www.accessmedicine.com/resourceTOC.aspx?resourceID=11>)

Methods by which students will be evaluated and their grades determined:

The students will take a closed-book exam at the end of each module, which will be graded separately. Participation in the classroom, discussion, and TBL score will be included in the grading. The following shows the tentative weight of each factor in grading:

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|---------------|-----|
| Exam | 80% |
| Participation | 10% |
| TBL | 10% |

Lecture Topics:

GMS 6471

Introduction and Overview of Human Body I
Overview of Human Body II
Overview of Human Body III
Muscle I
Muscle II
Paper Discussion: Muscular Dystrophy
Cardiovascular System I
Cardiovascular System II
Cardiovascular System III (Vascular)
Genetic Approaches in Physiological Problems I
Genetic Approaches in Physiological Problems II
Physiological Approaches in Mouse Models
Paper Discussion

GMS 6472

Gene Transfer I
Gene Transfer II
Paper Discussion
Introduction to Respiration I
Introduction to Respiration II

Paper Discussion/TBL
Fetal Circulation
Physiology of Pregnancy
Paper Discussion
Autonomic Nervous System
Problem Solving
Paper Discussion

GMS 6473

Endocrine System I
Endocrine System II
Renal Physiology I
Renal Physiology II
Renal Physiology III
Long-Term Control of Blood Pressure
Chronic Kidney Disease and Hypertension
Paper Discussion/TBL
Gastrointestinal System I
Gastrointestinal System II
Paper Discussion