MGG 7010 MOLECULAR BIOLOGY AND GENETICS

Course Director: Dr. Lawrence I. Grossman. 3129 Scott Hall; phone: 313 577-5326; e-mail: lgrossman@wayne.edu; Office hours: Fri 3:00 – 4:00 PM and by appointment.

Course Co-Director: Dr. Maik Hüttemann. 3214 Scott Hall; phone: 313 577-9150; e-mail: mhuuutemaa@med.wayne.edu; Office hours: by appointment.

Instructors: A list of instructors and their contact information is appended; see the course schedule for a list of topics covered by individual instructors.

Information: All official information regarding this course, including schedule updates, policies, discussion forums, lecture slides and notes, supplementary reading and other assignments are posted on the Blackboard web site. Please consult the site regularly.

Required textbook: Molecular Cell Biology, 8th Edition, H. Lodish et. al., 2016 (WH Freeman; ISBN-10: 1464183392). The text is available at the Barnes and Noble Bookstore on main campus and from online sellers. Other required reading assignments will be posted at the Blackboard site.

Credits and Class Meetings: The class will meet Wednesday and Friday 1:00-2:40 pm in room 3125 Scott Hall - Fall Semester for 4 credits. See schedule for specific lectures/topics.

Learning Objectives:
1. Students will understand the structure and purpose of the basic components of eukaryotic cells - including macromolecular structures, membranes, and organelles.
2. Students will understand how the basic macromolecule components function in eukaryotic cells, how they process information, and replicate or self-destruct.
3. Students will understand how specific cell types contribute to multicellular biological processes and systems, including cells of the nervous system and the immune system among other examples.
4. Students will develop an appreciation for the scientific method and methodology used in modern cell and molecular biology research.

Structure: The course will consist of lectures on major topics in molecular and cellular biology as designated in the course schedule. Students are expected to become familiar with the assigned background material on each topic before each class and also to complete the problems assigned for each topic. Background material will consist primarily of chapters from the textbook (Lodish et al.) and other assigned reading. Class time will be spent on the lecture material, on answering student questions, and occasionally on working assigned problems.

Grading Policy: There will be four ~2-hour examinations. Each examination will constitute 25% of the course grade. Final grades will be determined by the course directors and other participating faculty.