

CMB621/622
Cell and Molecular Biology I/II

Course Coordinators: CMB I: Dr. Olivier LeSaux; CMB II: Dr. Peter Hoffmann and Dr. Jun Panee
Day, Time, and Place: Tuesday and Thursday, 3:30-5:50 pm, MEB 304
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Course description CMB 621/622 is a first year graduate course designed to review the basics in selected molecular and cell biology disciplines and introduce the student to state-of-the-art research in a variety of areas of modern biomedical research. It also serves to introduce students to the faculty at the University of Hawaii who are pursuing research in these fields. CMB221 will introduce essential elements of CMB topics and provide in-depth discussion on research pertaining to nucleic acid and protein biology, as well as cell signaling and functions. CMB622 is designed to expand upon to the topics covered in the first semester in the context of human biology and disease. The lectures will be presented by several faculty in the CMB Department and will incorporate cutting-edge research approaches as well as information from Alberts et al Molecular Biology of the Cell (5th Ed.). These course will not only provide CMB information required for developing research scientists, but critical thinking and analytical skills for properly judging published studies. In CMB622, students will be presented lectures and will also be presenting lectures as part of a student based learning curriculum.

Prerequisites For CMB621 students are required to have an appropriate level of undergraduate coursework in biology, chemistry, and physics. For CMB622, CMB621 or alternate courses (BIOC441, MBBE402, PEPS402, BIOL406) or a special consent from CMB curriculum committee is required.

CMB621/622 Student Learning Outcomes

By the end of this course the students should be able to:

1. Students will attain in-depth knowledge of current concepts in CMB.
2. Students will learn a wide variety of research approaches and methodologies for conducting CMB research.
3. Students will learn how to critically evaluate data presented in primary research articles and reviews and different ways to design and perform experiments and interpret results.
4. Through lectures that combine CMB material from textbooks and research papers, students will gain an understanding and appreciation of how scientific knowledge is achieved through different experimental approaches.

Grading criteria

Grading will be based on results from three exams given in CMB621. The grades for CMB622 will be based on two exams and short presentations given during the Cancer Biology section of the course.