## **Introduction to Research - Fall 2010**

**Course Objective:** This course introduces graduate students to ethical, biosafety, communication and methodological aspects of biomedical research. Students will (a) examine basic methodologies of experimental research; (b) follow conceptual and methodological development of selected fields of biomedical sciences, and (c) apply one or more methodologies to your own research.

**Course Format:** It consists of weekly meetings of <u>2 hours</u> in duration and each topic will be covered in 2 sequential sessions with a combination of informal didactic presentation by the faculty, as well as discussion and presentation by the students. **English** is used in the classroom and in written reports.

**Grading Criteria:** Students are evaluated based on attendance and classroom performance (20%), team presentation of animal models (30%), mid-term report (20%), and Final report (30%).

**Time**: Tuesdays 13:10 - 15:00

Classroom: Lecture Room 2, B1 floor, Uni-President Health & Research Building

統一健康研究大樓 B1 樓 第二會議室

Coordinator: Christina Chang 張玲(ext. 3615) & Chi-Wu Chiang 蔣輯武(ext. 3637)

Teaching Assistant: Chang-Lin Wu 吳長霖(ext.3621)

| Date       | Topic  | Lecturers           |
|------------|--|---------------------|
|            | •  |                     |
| 09/14/2010 | Doing research & scientific integrity  | Christina Chang 張 玲 |
| 09/21/2010 | Keeping lab records  | Christina Chang 張 玲 |
| 09/28/2010 | Scientific reading (journal formats, hypothesis formation, data presentation & interpretation, etc.) | Li-Wha Wu 吳梨華       |
| 10/05/2010 | Communication skills (interpersonal & scientific)  | Chi-Wu Chiang 蔣輯武   |
| 10/12/2010 | Scientific writing (abstract, poster & thesis etc.)  | Shainn-Wei Wang 王憲威 |
| 10/19/2010 | Biosafety and lab safety   | Ching-Hao Teng 鄧景浩  |
| 10/26/2010 | Animal models for human disease  | Christina Chang 張 玲 |
| 11/02/2010 | Research resources (e.g., public databases, tools, protocols)  | TBA                 |
| 11/09/2010 | Mid-term report due  | 張 玲                 |
| 11/16/2010 | Methodology in Cell Biology  | Li-Wha Wu 吳梨華       |
| 11/23/2010 | Methodology in Bacteriology  | Ching-Hao Teng 鄧景浩  |
| 11/30/2010 | Methodology in Genetics and Epigenetics  | Yi-Ching Wang 王憶卿   |
| 12/07/2010 | Methodology in Virology  | Shainn-Wei Wang 王憲威 |
| 12/14/2010 | Methodology in Protein Chemistry and Proteomics  | Nanshan Chang 張南山   |
| 12/21/2010 | Methodology in Molecular Biology   | Chi-Wu Chiang 蔣輯武   |
| 12/28/2010 | Project Management   | Larry Paris         |
| 01/04/2011 | Development of Taiwan biotech companies  | TBA                 |
| 01/11/2011 | Final report due   | 張 玲                 |