

MULTIDISCIPLINARY STUDIES (MDA) 593: TRAINING AND PRACTICE IN TEACHING MOLECULAR AND COMPUTATIONAL BIOLOGY (BISC-593)

OVERVIEW

THIS IS A 2-CREDIT TA TRAINING COURSE DESIGNED SPECIFICALLY FOR GRADUATE STUDENTS IN THE MOLECULAR AND COMPUTATIONAL SECTIONS OF THE DEPARTMENT OF BIOLOGICAL SCIENCES, USC DANA AND DAVID DORNISIFE COLLEGE OF LETTERS, ARTS AND SCIENCES. ONE OF THE MAIN GOALS OF THE COURSE IS TO HELP STUDENTS TO BECOME THOUGHTFUL AND INSPIRING TEACHER, ENCOURAGING NOT JUST THEIR IMMEDIATE SUCCESS IN THE CLASSROOM, BUT THEIR LONG-TERM DEVELOPMENT AS TEACHERS. IN ADDITION TO THE BASIC TEACHING SKILLS, THE COURSE WILL ALSO FOCUS ON SPECIFIC CHALLENGES AND STRATEGIES IN TEACHING MOLECULAR BIOLOGY AND COMPUTATIONAL BIOLOGY.

SYLLABUS

MULTIDISCIPLINARY STUDIES (MDA) 593: TRAINING AND PRACTICE IN TEACHING MOLECULAR AND COMPUTATIONAL BIOLOGY (BISC-593)

FALL 2012

INSTRUCTOR

PROFESSOR LIN CHEN

OFFICE: RRI ROOM 204C

OFFICE HOURS: FRIDAYS 1:00-2:00PM AND BY APPOINTMENT

PROFESSOR TING CHEN

OFFICE: RRI 408H

OFFICE HOURS: TUESDAY 8-10AM

MEETINGS

TUESDAY, 12:30-2:00PM

RRI 301

THIS COURSE IS A PRACTICAL TRAINING DESIGNED FOR FIRST-SEMESTER TEACHING ASSISTANTS IN MOLECULAR AND COMPUTATIONAL BIOLOGY. CONCURRENT REGISTRATION OR PRIOR COMPLETION OF THIS COURSE IS A CONDITION OF BEING ASSIGNED A FIRST TEACHING ASSISTANTSHIP IN MOLECULAR AND COMPUTATIONAL BIOLOGY.

LEARNING OBJECTIVES

BY THE END OF THE SEMESTER, ENROLLED STUDENTS WILL 1) BE COMFORTABLE WITH BASIC TECHNIQUES FOR RELATING SUCCESSFULLY TO UNDERGRADUATE STUDENTS, AND GIVE EFFECTIVE AND CLEAR PRESENTATION, 2) HAVE LEARNED BASIC PRINCIPLES OF LESSON PLAN DESIGN AND EXECUTION, 3) BE FAMILIAR WITH BASIC PRINCIPLES OF ASSIGNMENT DESIGN AND GRADING TECHNIQUES, 4) DEVELOP A REPERTOIRE OF TECHNIQUES FOR LEADING AND ADVANCING CLASSROOM DISCUSSION, AND 5) FORMULATE AND ADOPT A STRATEGY FOR FURTHER DEVELOPMENT AS A TEACHER AND HAVE BEGUN TO ASSEMBLE A PORTFOLIO OF TEACHING MATERIALS.

GRADE

THIS COURSE WILL BE TAUGHT CREDIT/NO CREDIT. TO PASS THE COURSE, YOU MUST SUCCESSFULLY COMPLETE EVERY COMPONENT ASSIGNMENT AND PARTICIPATE FULLY IN CLASS. A MAJOR COMPONENT OF THE COURSE IS CLASSROOM PRESENTATION AND CRITIQUE. EACH STUDENT WILL BE ASSIGNED TO GIVE MORE THAN ONE PRESENTATION (SPECIFIC NUMBER DEPENDS ON THE STUDENTS ENROLLED IN THE CLASS) THAT WILL BE CRITIQUED BY THE DISCUSSED AND CRITIQUED BY THE REST OF THE CLASS. THE INSTRUCTOR WILL LEAD AND COORDINATE THE CRITIQUE DISCUSSION. AT THE END OF DISCUSSION, AN EVALUATION FORM WILL BE FILLED UP TO GIVE THE PRESENTER FEED BACK ON THE STRENGTH OF THE AND

BISC-593: PRACTICUM IN TEACHING THE MOLECULAR AND COMPUTATIONAL BIOLOGY

WEAKNESS OF THE PRESENTATION AND SUGGESTIONS OF IMPROVEMENT. GRADE WILL BE BASED QUALITY OF PRESENTATION AND CLASS PARTICIPATION.

TEXTS

A NUMBER OF REQUIRED AND OPTIONAL READINGS WILL COME FROM THE FOLLOWING TEXT, WHICH IS AVAILABLE USED FOR UNDER \$8 FROM AMAZON:

CURZAN, ANNE, AND LISA DAMOUR. *FIRST DAY TO FINAL GRADE: A GRADUATE STUDENT'S GUIDE TO TEACHING, SECOND EDITION*. ANN ARBOR: THE UNIVERSITY OF MICHIGAN PRESS, 2006.

ADDITIONAL READINGS, BOTH REQUIRED AND OPTIONAL, WILL BE AVAILABLE ON COURSE RESERVES ON BLACKBOARD.

USC CENTER OF EXCELLENCE IN TEACHING: TA RESOURCES [HTTP://CET.USC.EDU/TAF/INDEX.HTML](http://cet.usc.edu/taf/index.html).

SCHEDULE OF TOPICS AND READINGS

WEEK 1- -INTRODUCTION: COURSE INTRODUCTION PROF. TING CHEN (T CHEN) AND PROF. LIN CHEN (L CHEN)

**WEEK 2- -LEADING DISCUSSION
TEACHING COMPUTATIONAL BIOLOGY
LECTURE BY PROF. TING CHEN, FOLLOWED BY CLASS DISCUSSION**

**WEEK 3- -LEADING DISCUSSION
TEACHING MOLECULAR BIOLOGY
LECTURE BY PROF. LIN CHEN, FOLLOWED BY CLASS DISCUSSION
PROF. LIN CHEN WILL OPEN DISCUSSION WITH THE CLASS ON QUALITIES A GOOD TEACH SHOULD HAVE AND THINGS TEACHER SHOULD AVOID FORM THE PERSPECTIVE OF STUDENTS IN THE CLASS. PROF. LIN CHEN WILL ADDRESS SOME OF THE POINTS OF THE DISCUSSION RESULTS USING EXAMPLES OF CLASSROOM TEACHING OF MOLECULAR BIOLOGY.**

WEEK 4- -STUDENT PRESENTATIONS, FOLLOWED BY CLASS DISCUSSION (T CHEN)

WEEK 5 - STUDENT PRESENTATIONS, FOLLOWED BY CLASS DISCUSSION (T CHEN)

WEEK 6 - STUDENT PRESENTATIONS, FOLLOWED BY CLASS DISCUSSION (T CHEN)

WEEK 7 – STUDENT PRESENTATIONS, FOLLOWED BY CLASS DISCUSSION (T CHEN)

WEEK 8 - STUDENT PRESENTATIONS, FOLLOWED BY CLASS DISCUSSION (L CHEN)

WEEK 9 - STUDENT PRESENTATIONS, FOLLOWED BY CLASS DISCUSSION (L CHEN)

WEEK 10 - STUDENT PRESENTATIONS, FOLLOWED BY CLASS DISCUSSION (L CHEN)

WEEK 11 - STUDENT PRESENTATIONS, FOLLOWED BY CLASS DISCUSSION (L CHEN)

WEEK 12 – COURSE REVIEW AND SUMMARY (T CHEN AND L CHEN)