Independent Research IV

INSTRUCTOR INFORMATION

THE UNIVERSITY OF TEXAS RIO GRANDE VALLEY- Brownsville Campus
BMED 3224-01: Independent Research IV
Term: Fall 2016,
Meeting time and location: Monday 1-2:40 pm, room LHSB 1.410
Instructor name: Dr. Chun Xu
Instructor office: BRHP, room 1.120, Dept. of Health and Biomedical Sciences
Instructor email: chun.xu@utrgv.edu Phone: (956) 882-4193

Contact Methods:

You may contact me using any of the information shown above, preferably email. Please feel free to reach me if you have any questions regarding content, if you need clarification, or would like assistance.

This syllabus represents the current course plans and objectives. As we go through the semester, those plans may need to be change to enhance the class learning opportunity. Any changes made will be updated in the syllabus and communicate with the students.

COURSE DESCRIPTION

The interconnected world of science and medicine research is critical. This course is designed for students interested in becoming research scientist and/or health care professionals such as medical doctors, dentists, physician assistants, and pharmacists. The goal of the Independent Research IV is to prepare students to be actively engaged in the field of clinical and translational science through academic training and research. The core course in the program focuses on the basic components of translational science and allow students to have opportunity to write a translational research grant and research manuscripts (e.g., a review paper).

Students are exposed to a broad range of settings and must successfully complete at least 15 semester credit hours of coursework.

As a result of participation in the program, it is expected that students will:

- develop skills in designing translational research studies and writing a mini review based current findings and/or a mini translational research grant;
- apply statistical procedures and bioinformatics analysis for translational research problems;
- develop skills for the communication of the scientific concepts and research questions in one's own discipline to experts in other disciplines and to the public at large;
- build interdisciplinary/intradisciplinary/multidisciplinary teams to study translational research issues.

Course Pre-Requisites, Co-Requisites, and/or other restrictions:

Admission to the BMED program. Completion of Independent Research I-III

Course Objectives:

- The student will be able to integrate knowledge of previous BMED courses with different basic science and clinical experiences.
- The student will be able to have a great understanding how to initiate translational research proposals and how to submit translational research grant.
- The student will have a greater understanding how to write mini review papers and/or research papers and submit papers.
  Specifically, two groups will be able to submit a mini review and mini translational research grant by the end of the course.

  A Mini Review
  - A title, affiliation, key words (5-6 words)
  - Abstract (1/2 page)
  - Introduction (previous findings on the topics, lack of issue we need to address, 2-3 pages),
  - Method (1/2-1 page)
  - Current findings (2-3 pages)
  - Conclusion, future directions (1/2-1 pages)
  - Literature cited (references)

  A Mini Translational Gran Proposal
  - A title, affiliation, key words (5-6 words)
  - Abstract (1/2 page)
  - Introduction (previous findings on the topics, objectives, hypothesis, specific aims, 2-4 pages),
  - Method (1/2-1 page)
  - Current findings (2-3 pages)
  - Expect results (1/2-1 page)
  - Strength/limitations and future direction (2/3-1 pages)
  - Literature cited (references)

Departmental Learning Outcomes:

- Students will acquire a basic knowledge of translational research and basic skills to write mini review papers and/or mini translational research grants.
- The student will be able to initiate translational research projects together with basic scientists and clinicians

TOPIC OUTLINE/SCHEDULE

Date	Topics	Assignment Due
Week #1 Aug. 29	Introduce Dr. Xu and students	
Week #3 **Sept. 1**2	translational research, specific on 1) A mini review paper including a title, affiliation, key words, abstract, introduction (previous findings on the topics, some lack of issue we need to address), method, current findings, conclusion, future directions 2) A mini grant proposal including a title, affiliation, key words, abstract, introduction (previous findings on the topics, objectives, hypothesis, specific aims, some lack of issue we need to explore), material and method, expect results, strengths and limitations	
Week #4 **Sept. 1**9	Each group will present abstract or summary of a mini review and a proposal (due Sept. 16) each student will take one section to present, such as introduction or study design), questions, comments and discussion	**Sept. 16**
Week #5 **Sept. 2**6	Each group will work on the review paper and translational research proposal. Discuss potential journal we will submit a mini review paper and a grant agency we will submit our mini grant	
Week #6 **Oct.** 3	Each group will work on the review paper and translational research proposal	
Week #7 **Oct.** 10	Each group will work on the review paper and translational research proposal. How to submit a research grant	
Week #8 **Oct.** 17	Each group will work on the review paper and translational research proposal. How to submit a manuscript for publication?	
Week #9 **Oct.** 24	Each group will work on the review paper and translational research proposal. Discuss specific sections of the review paper and proposal, e.g., questions, remaining issues, comments, suggestions, how to improve writing skills	
Week #10 **Oct.** 31	Continue working on a review paper and research proposal,	
Week #11 Nov**.** 7	Continue working on a review paper and research proposal,	
Week #12 Nov**.** 14	Continue working on a review paper and research proposal,	
Week #13 Nov**.** 21	Prepare final presentation (due Nov. 25)	**Nov. 25**
Week #14 Nov**.** 28	Refine a mini review paper and mini grant and then format manuscript and grant accordingly	
Week #15 Dec.5	Group final presentations on a mini review paper and research proposal	

GRADING POLYCY/EVALUATION

In-class group activity (30%):

During class, you will perform an activity as a group which will help you further understanding how to prepare a scientific paper and a research proposal. If you do not attend class, you will get a **zero** for the in-class group activity.

Inquiries (70%)

Everyone will be required to develop, carry out, analyze and present 2 inquires throughout the semester in a group of 4-5 students

- Inquire #1 – each group will present the abstract/summary of research proposal or scientific review paper. You will prepare a group oral PowerPoint presentation, each student may present one section (e.g., introduction, materials/methods). PowerPoint presentation slides for abstract/summary is due Sept 16. **Late submission will not be accepted.**

- Inquire #2 -- each group will present the final versions of research proposal or scientific review paper. You will prepare a group oral PowerPoint presentation, each student may present one section (e.g., introduction, materials/methods). PowerPoint slides for final presentation is due Nov. 25. **Late submission will not be accepted**