Mel and Enid Zuckerman College of Public Health
University of Arizona

SYLLABUS
CPH/EPI 652 Grantsmanship for a Winning Proposal
SPRING 2013

Time: Tuesday 11:30 – 2:20
Final exam Tuesday May 7th 10:30-12:30

Location: A120

Instructor: Lynn B. Gerald, PhD, MSPH
A317 Drachman Hall
lgerald@email.arizona.edu
(520) 626-3243

Alternate Contact: Evamaria Lugo
Program Manager, Sr.
Office of the Associate Dean
626-7456 or elugo@email.arizona.edu

Office Hours: By appointment

Course Description: The course will present principles and skills needed to write competitive public health research grants, prepare budgets, and understand the peer review process. Students will write an NIH R01 type grant proposal that will undergo internal review.

Course Prerequisites: Permission of instructor. This course is based on the assumption that you already have a specific research project or topic in mind. You will be prepared for this course if you have recently written/co-written an in-depth review of the literature on a topic of genuine long-term interest to you. If you have not done so, you should be prepared to do an in-depth literature review in a short period of time. To do well in this class, you must have the time, energy, and desire to prepare for and attend class. You should already know (a) how to write a research hypothesis, (b) how to do a thorough literature review on a specific research hypothesis, and (c) when and how to use experimental, quasi-experimental and observational designs for research. You must have a good grasp of English grammar and scientific writing style or have a tutor. You must also be proficient in the use of word-processing and web browsing software or
have a tutor. All prospective students must submit a one page summary of their project with a mentor’s signature to the instructor prior to receiving approval to enroll. DrPH students must have appointed their dissertation chair and the dissertation chair must approve the one page summary in writing prior to enrollment in the course.

**Course Learning Objectives**: At the end of this course students will be able to:

- Describe how grants are reviewed
- Understand the essential components of a grant proposal
- Learn techniques and strategies for grant writing such as:
  - Presenting the rationale for the project and the importance of the problem to be addressed in a persuasive manner
  - Choosing the appropriate study design and evaluation for the chosen public health problem
  - Developing a project team with the necessary expertise to achieve the aims of the project
  - Designing a budget that will allow achievement of the aims of the project
  - Presenting the ethical considerations of the proposed project and how to ensure the safety of human participants
- Understand administrative policies and procedures for submitting proposals
- Understand strategies for interpreting grant critiques and how to revise a proposal
- Read and critique grant proposals

**MPH and DrPH Competencies Addressed**:

**MPH**

- Communicates effectively both in writing and orally (unless a handicap precludes one of those forms of communication)
- Developing and presenting a budget
- Developing strategies for determining priorities
- Preparing proposals for funding from internal and external sources
- Conducts cost-effectiveness, cost benefit, and cost utility analyses

**DrPH**

- Develop appropriate approaches to addressing public health issues.
- Identify at least one area of their own expertise within the field of public health.
- Identify and distribute sources of funding for public health activities.
- Design culturally appropriate public health programs.

**Course Notes**: Reading assignments and course materials will be made available on the course web site at D2L.

Grading/Student Evaluation: The course grade will be determined as follows:

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Grading Scale</th>
</tr>
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<tbody>
<tr>
<td>Grant Critiques:</td>
<td>A≥ 89.5%</td>
</tr>
<tr>
<td>50 pts</td>
<td></td>
</tr>
<tr>
<td>Class participation</td>
<td>B≥ 79.5%</td>
</tr>
<tr>
<td>200 pts</td>
<td></td>
</tr>
<tr>
<td>Grant proposal:</td>
<td>C≥ 69.5%</td>
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<tr>
<td>100 pts</td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>D≥ 64.5%</td>
</tr>
<tr>
<td>350 pts</td>
<td>E&lt; 64.5%</td>
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</tbody>
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Grant Critiques: Each class member will be assigned a grant to review during the peer review session. This is meant to expose you to the concept of peer-review and familiarizes you with the reviewer’s perspective. You will be required to write a constructive critique according to NIH guidelines and present this critique orally.

Peer review/Class Attendance/Participation: All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion. Absences pre-approved by the UA Dean of Students (or Dean’s designee) will be honored. This class is intended to be a workshop (rather than a lecture) so a large part of the grade will depend upon students delivering their writing assignments on time and actively participating in the workshops. Therefore, your participation will count as 1/3 of your total grade. Active participation includes completing homework writing assignments and peer review/critiques of your classmate’s work on time as well as participating in class discussion and critiques. Absences from class will count against your participation grade. Late assignments will incur point deductions from your participation grade. Throughout the semester you and your fellow students will evaluate each other’s assignments in class. This is meant to expose you to the concept of peer-review and aid in developing the ability to constructively review your peer’s work.

Grant Proposal: A R01 style grant proposal is your final project. It will be evaluated by the instructor and at least one outside reviewer. The reviewers will assign a score of 1-9 (1=exceptional; 9=poor). Reviewer scores will be averaged to assign the final score. The scale works as described below:

- 1 = 100 points
- 2 = 95 points
- 3 = 90 points
- 4 = 85 points
- 5 = 80 points
- 6 = 75 points
- 7 = 70 points
- 8 = 65 points
- 9 = 50 points

Required Statements:

Communications: You are responsible for reading emails sent to your UA account from your professor and the announcements that are placed on the course web site. Information about readings, news events, your grades, assignments and
other course related topics will be communicated to you with these electronic methods. The official policy can be found at:
http://www.registrar.arizona.edu/emailpolicy.htm

Disability Accommodation: If you anticipate issues related to the format or requirements of this course, please meet with me. I would like us to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Resources (621-3268; drc.arizona.edu) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations. The official policy can be found at:
http://catalog.arizona.edu/2008%2D09/policies/disability.htm

Academic Integrity: All UA students are responsible for upholding the University of Arizona Code of Academic Integrity, available through the office of the Dean of Students and online: The official policy found at:
http://deanofstudents.arizona.edu/codeofacademicintegrity

Classroom Behavior: This class is a workshop where you will exchange ideas and critique each others’ work; this is expected to be done in a professional and constrictive manner. The Dean of Students has set up expected standards for student behaviors and has defined and identified what is disruptive and threatening behavior. This information is available at:
http://deanofstudents.arizona.edu/disruptiveandthreateningstudentguidelines

Students are expected to be familiar with the UA Policy on Disruptive and Threatening Student Behavior in an Instructional Setting found at http://policy.arizona.edu/disruptive-behavior-instructional and the Policy on Threatening Behavior by Students found at http://deanofstudents.arizona.edu/sites/deanofstudents.arizona.edu/files/Disruptive_threat_bklt_2012.pdf

Grievance Policy: Should a student feel he or she has been treated unfairly, there are a number of resources available. With few exceptions, students should first attempt to resolve difficulties informally by bringing those concerns directly to the person responsible for the action, or with the student's graduate advisor, Assistant Dean for Student and Alumni Affairs, department head, or the immediate supervisor of the person responsible for the action. If the problem cannot be resolved informally, the student may file a formal grievance using the Graduate College Grievance Policy found at http://grad.arizona.edu/academics/policies/academic-policies/grievance-policy

Grade Appeal Policy: http://catalog.arizona.edu/2012-13/policies/gradappeal.htm

Syllabus Changes: Information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate.
Telephone and Computer Use: Laptops are allowed. Turn your cell phones to silent or vibrate in order to not disrupt the class and disturb your fellow students and professor.

Plagiarism: What counts as plagiarism?
• Copying and pasting information from a web site or another source, and then revising it so that it sounds like your original idea.
• Doing an assignment/essay/take home test with a friend and then handing in separate assignments that contain the same ideas, language, phrases, etc.
• Quoting a passage without quotation marks or citations, so that it looks like your own.
• Paraphrasing a passage without citing it, so that it looks like your own.
• Hiring another person to do your work for you, or purchasing a paper through any of the on- or off-line sources.
Course Schedule Spring 2013

• **Week 1 (January 15): Course Overview and Discussion of Grant Types.**
  - **Content:** Explain course expectations, objectives and assignments. Discuss R01s, Program Announcements, Requests for Applications/Proposals, NIH Guide, and grants.gov.
  - **Homework:** Draft your Specific Aims Section and upload to the dropbox and your discussion group on D2L by midnight on Monday.
  - **Readings:** Review “R Awards Criteria at a Glance”, and “Choosing the Appropriate Funding Instrument and Funding Mechanism for Extramural Research Support” (provided on D2L). Gerin and Kapelewski Chapter 3-4. Review the General Class References and Sample Student Grants.

• **Week 2: (January 22): Overview of the Grant Review Process.**
  - **Content:** Discussion of the NIH peer review system.
  - **Classroom exercise:** View the NIH Video: “NIH Peer Review Revealed” and “NIH Tips for Applicants”. Critique your classmate’s specific aims.
  - **Homework:** Review grant application(s) and prepare written critique. Upload your critique to the dropbox and your discussion group on D2L by midnight on Monday.

• **Week 3 (January 29): Mock Study Section.**
  - **Classroom exercise:** Mock study section.
  - **Homework:** Critique your classmate’s Specific Aims section and upload to the dropbox and your discussion group on D2L by midnight on Monday.

• **Week 4 (February 5): Grantsmanship and Specific Aims.**
  - **Content 1:** Discussion on general grantsmanship, tips for grant writing and where to begin and how to talk with NIH program officers. Discussion of strategies for a strong specific aims section.
  - **Classroom exercise:** Critique classmate’s Specific Aims section.
  - **Homework:** Revise Specific Aims; draft Significance and Innovation section; upload to the dropbox and your discussion group on D2L by midnight on Monday.
• **Week 5 (February 12): Completing the Forms and Submitting Your Grant.** (Guest Lecture: Evamaria Lugo, Program Coordinator, Sr. Office of the Associate Dean for Research, Mel and Enid Zuckerman College of Public Health)
  o **Content:** Discussion of grants.gov, SF424 forms, and University procedures for submission.
  o **Homework:** Critique your classmate’s Specific Aims and Significance and Innovation sections and upload to the dropbox and your discussion group on D2L by midnight on Monday.
  o **Readings:** Download and review SF424 (R&R) Application Guide for NIH and Other PHS Agencies Adobe Forms Version B (link to parent grant announcement provided on D2L). The link will take you to the R01 parent announcement. You will then need to click on the “apply for grant electronically link”. This will take you to grants.gov where you will need to click on the “Download” button under applications and instructions. Download both the application and its instruction page. Next, you will need to open the “instructions” and download either the first or 2nd link – these are the actual instructions for the R01. Gerin and Kapelewski pgs 151-152, 186-212 and Chapter 8, “Electronic submission of grants” (link provided on D2L), and review University of Arizona Sponsored Projects’ Web Site (link provided on D2L).

• **Week 6 (February 19): Significance and Innovation.**
  o **Content:** Discussion of strategies for a clear concise significance section and how to establish innovation.
  o **Classroom exercise:** Critique your classmate’s Significance and Innovation section.
  o **Homework:** Revise your Specific Aims and Significance and Innovation sections; draft your Approach section; upload to the dropbox and your discussion group on D2L by midnight on Monday.
  o **Readings:** Gerin and Kapelewski pgs 79-86.

• **Week 7 (February 26): Marketing your Research** (Guest Lecture: Kate Jensen, MPH Assistant Vice President for Marketing)
  o **Content:** TBA
  o **Classroom exercise:** TBA
  o **Homework:** Critique your classmate’s Specific Aims, Significance and Innovation, and Approach sections; upload to the dropbox and your D2L discussion group by midnight on Monday.
  o **Readings:** TBA

• **Week 8 (March 5th): Writing the Approach.**
  o **Content:** Discussion of what to include in your approach section and how to organize this section.
  o **Classroom exercise:** Critique your classmate’s Approach section.
  o **Homework:** None
- **Readings**: Gerin and Kapelewski pgs 87-110, “Recruitment for Controlled Clinical Trials”, “Barriers to Participation in Randomized Controlled Trials”, “How to Approach Recruitment and Retention” and review sample timelines, tables, and figures. (provided on D2L).

- **Week 9 (March 12)**: Spring Break

- **Week 10 (March 19)**: How to Collaborate with Your Statistician. (Guest Lecture: Dean Billheimer, PhD)
  - **Content**: Sample size considerations and estimations; how to plan your analyses.
  - **Classroom Exercise**: Ask questions regarding your sample size calculations and justifications and about your proposed analyses.
  - **Homework**: Revise your Specific Aims, Significance and Innovation, and Approach sections; draft your Budget and Budget Justification; upload to the dropbox and your discussion group on D2L by midnight on Monday.
  - **Readings**: Review “Power and Sample Size: How Many Patients do I Need?”, Bacchieri and Cioppa Chapter 6, and “Some Practical Guidelines for Effective Sample Size Determination” (provided on D2L).

- **Week 11 (March 26)**: Grant Budgeting. (Guest Lecture: Evamaria Lugo, Program Coordinator, Sr. Office of the Associate Dean for Research, Mel and Enid Zuckerman College of Public Health)
  - **Content**: Discussion of modular versus detailed budgets, budget justifications, and strategies for effective budgeting.
  - **Classroom exercise**: TBA
  - **Homework**: Critique your classmate’s Specific Aims, Significance and Innovation, Approach and Budget and Budget Justification sections; upload to the dropbox and your discussion group on D2L by midnight on Monday.
  - **Readings**: Gerin and Kapelewski pgs 153-185. Review “Preparing NIH Budgets” and sample budgets (provided on D2L).

- **Week 12 (April 2)**: Approach Presentations (Facilitator: Joe K Gerald, MD, PhD)
  - **Classroom exercise**: Each student will do a presentation to the group on his/her grant including specific aims, significance, innovation and approach. The group will critique and provide feedback on the grant.
  - **Homework**: Revise your Specific Aims, Significance and Innovation, Approach, Budget, and Budget Justification; draft your Human Subjects Section, Resources, Biosketch and Abstract; upload to the dropbox and your discussion group on D2L by midnight on Monday.
  - **Readings**: None

- **Week 13 (April 9)**: Grant Budgeting: Part 2.
  - **Classroom exercise**: Critique your classmate’s Budget and Budget Justification.
Homework: Critique your classmate’s Human Subjects Section, Resources, Biosketch and Abstract; upload to the dropbox and your discussion group on D2L by midnight on Monday.

Readings: None

- **Week 14 (April 16): Writing the Human Subjects Section, Biosketches, Resources, and Abstract.**
  o Content: Discussion of elements to include in your human subjects plan, biosketches, resources and your abstract.
  o Classroom exercise: Critique your classmate’s Human Subjects section, Biosketch, Resources, and Abstract.
  o Homework: Complete grant forms and finalize your grant application. Grant is due by noon Wednesday April 24th. Please upload complete pdf file to D2L.
  o Readings: Gerin and Kapelewski Chapter 6. Review “NIAID Human Subjects Section”. (link provided on D2L) Review the sample biosketches and “The University of Arizona Human Protections Program Investigator Manual”. (provided on D2L).

- **Week 15 (April 23): Revising Grants and Responding to Critiques.**
  o Content: Discussion on how to read your critiques and strategies for preparing a resubmission.
  o Homework: Complete grant forms and finalize your grant application. Grant is due by noon Wednesday April 24th. Please upload complete pdf file to D2L.
  o Readings: Gerin and Kapelewski pgs 234-241

- **Week 16 (April 30): No class.**
  o Content: None
  o Homework: None
  o Readings: None

- **Week 17 (May 7): Final Exam Grant Review: Mock Study Section.**
  o Content: Students grants will be reviewed in a mock study section.
  o Homework: None
  o Readings: None