

HBEH 860: RESEARCH PROPOSAL DEVELOPMENT

**Department of Health Behavior
UNC Gillings School of Global Public Health**

Spring 2018 – Last revised 1/11/2017

Meeting Time: Fridays, 9:05 am – 11:55 am

Location Rosenau TBD

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TEACHING OBJECTIVES:

HBEH 860, Research Proposal Development, is a required course for doctoral students in Health Behavior. HBEH 860 is a pragmatic skills-building course that aims to provide a mentored, guided structure for developing a significant research project and leads students through the steps of assembling a grant application through an NIH mechanism: the predoctoral National Research Service Award (NRSA) (F31). The course also enhances readiness to undertake the doctoral dissertation. A number of students are able to use the work they create in this course toward a full NRSA application to submit to the NIH in the summer or fall following the course, and/or to have their proposal serve as the basis for a dissertation or grant application for another funding agency. Given these larger purposes, the primary teaching objectives of HBEH 860 are to develop or increase students' skills and ability to:

- 1) Integrate detailed components of research methods (e.g., research questions and hypotheses; constructs, variables and relations; measurement reliability and validity; sampling; study design; and statistical analyses) and apply them to the development of an original research study and the preparation of a research grant proposal;
- 2) Develop and write an NIH career development award (in this case a predoctoral NRSA);
- 3) Participate effectively both as an applicant to, and as a reviewer for, NIH and other funding agencies; and
- 4) Map out steps towards the larger arc of a research career.

Statement on diversity, respect, equality and inclusion*: Students in this class are encouraged to speak up and participate during class meetings. Because the class will represent a diversity of individual beliefs, backgrounds, and experiences, every member of this class and teaching team

must show respect for every other member. We are committed to respect, diversity, and equality in all areas of people's backgrounds and identities. In this class we will work together to promote an inclusive environment where all can feel safe and welcome. We recognize that discrimination, harassment, and bias can be direct or indirect, intentional or unconscious, and takes place at both institutional and personal levels. We are committed to providing equality of opportunity for all by intentionally working to identify, prevent, and eliminate discrimination, harassment, and biases. Our success relies on the participation of everyone in this class. We all have a responsibility not to be unkind or offensive to each other, or to participate in, or condone harassment or discrimination of any kind both inside and outside of this class. (**adapted from California State University, Office of Diversity and Inclusion*).

COURSE DESCRIPTION:

NRSA as a Focal Point of HBEH 860: Through the course of the semester, each student will develop key parts of the NRSA application using the most recent guidelines available at: <https://grants.nih.gov/grants/guide/pa-files/PA-16-309.html> . We have chosen the NRSA as the appropriate grant mechanism for you to work with because:

- 1) Many of the NRSA proposal requirements are transferable to other dissertation and early career award funding mechanisms.
- 2) The career development section of the NRSA is relevant to writing a mentored career development award (e.g., a K01), the mechanism that early investigators are most likely to write during their first academic or research appointments. Writing this section of the grant will also help you to think about the mentorship you will need to complete your dissertation and launch your research career.
- 3) A number of students in Health Behavior submit NRSA's or other similar funding proposals and could therefore benefit from formal training on this mechanism.

Ground Rules for Choosing a Topic: Upon completion of the course, you will have gained experience in the most difficult phases of research, namely: transforming a research interest into a testable research question and developing a sound and feasible study design to address that question. The experience is intended to enhance your readiness to undergo the dissertation research process and it exposes you to a typical expectation of most doctoral level jobs: the preparation of research grant proposals. To ensure that you receive the fullest experience possible through HBEH 860, proposals for this course must fit within the following parameters:

- 1) This course is oriented toward the development of proposals for quantitative studies, but studies may also include qualitative component(s);
- 2) Proposed studies must be explanatory (tests of associations) or evaluation studies, not purely descriptive studies;
- 3) Proposals can be primary data collection or secondary analysis of data;
- 4) If the proposal is a primary data collection project, it should be feasible to accomplish with only salary support for yourself (which is what the NRSA provides), or you need to demonstrate/describe the additional funding that will be available to support the data collection.

Your Faculty Research Advisor: In the fall prior to taking this course, you invited a member of the Health Behavior faculty to serve as a Faculty Advisor for this course. This individual will work with you at defined points in the semester to help guide you and offer feedback throughout the proposal writing process. At a minimum, they should agree to meet with you and/or provide written feedback on: an early draft of your Specific Aims page, a final draft of your Specific Aims page, and a detailed outline or draft of your Research Strategy. Please note that faculty are encouraged to provide structured feedback but not to rewrite or edit your proposal sections. It is your responsibility to set up meetings with your Faculty Advisor and plan a schedule for submitting drafts and receiving feedback. To be respectful of their time and provide the best chances of receiving useful feedback, we strongly suggest planning these meetings well in advance. If you are having difficulty connecting with your Faculty Advisor, please notify the course instructor or TA.

Course Structure: Throughout the proposal-writing process in this course, you will submit drafts of sections of the application to receive feedback from the course instructor and TA, your classmates, and your Faculty Advisor. In addition to traditional didactic and interactive lecture, most class sessions will also feature one or more of the following: individual and peer group time for working on your proposal, guest speakers, and student works-in-progress presentations.

Class Preparation, Readings, and Materials: There are no required textbooks for this course. All reading materials and supplemental materials will be available on Sakai. Class Preparation activities (e.g. listening to pre-recorded lectures) and Assigned Readings for the week should be completed before doing the week's assignment and before coming to class.

Workgroups and Peer Review: Significant portions of the class involve providing and receiving peer review in the form of written and oral comments. Peer review is an important skill in a professional research career and is particularly essential for research proposal development and grant writing. Please complete peer review activities thoughtfully and on time. Additional guidance on peer review and methods for critiquing proposals will be provided throughout the course. If you have questions, concerns, or difficulty with any aspect of the peer review components of the course (whether providing or receiving), please talk with the TA or instructor.

Changes to the syllabus: If unforeseen circumstances (e.g. inclement weather, significant change in NIH NRSA guidelines) require a change to the syllabus, the instructor will make this announcement in class and via Sakai and will post a revised version of the syllabus to Sakai that reflects these edits.

Honor Code: All students are expected to abide by the Honor Code for the University of North Carolina at Chapel Hill (<https://studentconduct.unc.edu/>). Special instructions regarding academic dishonesty may be found in the *Instrument of Student Judicial Governance*, Section II.B. (<http://instrument.unc.edu/>). Please speak with the instructor if you have any questions about these policies and procedures. **Please note, to help support your learning in this course, many faculty, alumni, and fellow students have contributed examples of research proposals they have written. These documents constitute their intellectual property and, as such, we ask that you not share copies of these research proposals (or any excerpts from them) with any other individual outside of the course, and that you treat these documents with the respect and academic integrity described in UNC's Honor Code. Thank you.**

ASSIGNMENTS AND GRADING:

A calendar of class activities and assignments is available on Sakai and listed below. Please submit all assignments (graded and non-graded) in the “Assignments” section of Sakai. The major assignment for the course are five completed components of a NRSA research proposal:

- Abstract (30 lines)
- Specific Aims (1 page)
- Research Strategy (6 pages)
- Applicant's Background and Goals for Fellowship Training (6 pages)
- References (no page limit)

As per NIH style guidelines, all assignment pieces are single spaced, 0.5 inch margins, 11-point font (Arial or Times New Roman or equivalent).

Class assignments include submitting drafts of different sections of the NRSA application at various points in the semester. Even though these assignments are not given a formal letter grade, you are expected to submit them on time; late or incomplete non-graded assignments will be reflected in the final course grade (see below). More importantly, this will limit your ability to receive feedback from peers and the teaching team in a timely fashion. Please contact the instructor if you need an extension on an assignment due to illness or unforeseen circumstances.

For non-graded assignments, no credit will be received for assignments that are submitted more than one hour late without prior approval for an extension from the instructor.

For graded assignments, late assignments without prior approval will be marked down 2 points for each 24-hour period or portion thereof.

Absence from class: Attendance and participation are part of your grade for the class. If you have an unavoidable conflict and cannot come to class, please do the following:

- 1) Before class: Email the TA, instructor, and your working group members (if relevant) as soon as you know you will need to miss class.
- 2) Before class: Submit assignments on time, including providing peer feedback to your workgroup members (even if you will not be in class). If
- 3) After class: Contact your working group members or another peer to find out what you missed. Check Sakai and review updated materials including slides and any announcements.
- 4) Additional make-up work may be necessary depending on the number and nature of class sessions missed.

COURSE SCHEDULE:

Date	Topics to be Covered	Class Preparation	Assignments Due
1-12 Week 1	<p>Overview of the course and NRSA Research topics and Faculty Advisors What you need to know about your data</p> <p>Key Resources: NIH SF424 (R&R) for Individual Fellowships Guide: https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/fellowship-forms-e.pdf .</p> <p>NRSA Program Announcement (PA-16-309): https://grants.nih.gov/grants/guide/pa-files/pa-16-309.html</p> <p>Data Set Grid</p>	<p>Read: Rawl SM. Writing a Competitive Individual National Research Service Award (F31) Application. <i>Western Journal of Nursing Research</i>, 2014, 36(1):31-46.</p> <p>Sample NRSA 1: Marissa Hall, pages: 45-51 (Specific Aims & Research Strategy); and 60-63 (Goals for Fellowship Training and Career, Activities Planned Under this Award, and Doctoral Dissertation and Research Experience).</p> <p>Bring to class: 1) Copy of your Draft Student Research Idea(s) (submitted to Sakai before class). Be prepared to share this with the class as well as your questions/uncertainties.</p>	<p>Assignment 1: Draft Student Research Idea(s) due on Sakai by 9:00 AM, Friday, 1/12</p> <p>Continue reading relevant literature in your topic area to verify gaps and brainstorm research questions</p>
1-19 Week 2	<p>Specific Aims Research Questions Link between Research and Training Workshopping Research Questions and Training Goals</p>	<p>Read: Chapters 7 and 8 of “The Grant Application Writer’s Workbook.”</p> <p>Sample NRSA 2: Marta Mulawa, pages: 41-47 and 58-61.</p> <p>Class2_Final NRSA Overview Handout 2018</p> <p>Peruse: NIH ReReporter searching on keywords for your research https://projectreporter.nih.gov/reporter.cfm</p>	<p>Assignment 2: Draft Research Questions and Training Goals, due on Sakai by 9:00 AM, Friday, 1/19</p>

1-26 Week 3	<p>Reading and Critiquing Grant Proposals</p> <p>NRSA review criteria and discussion of NIH reviewer video</p> <p>Overview of Peer Reviewer Specific Aims Feedback form</p> <p>In-class working time</p>	<p>Read: Class 3_Reviewing NRSA Grant Proposals in HBEH 860.docx</p> <p>NIH Scoring Guidelines.pdf.</p> <p>NIH Scoring System and Procedure.pdf.</p> <p>Listen to: Grantsmanship_Catherine Jo-Recorded-Lecture.pptx</p>	<p>Assignment 3: Specific Aims Draft 1 Due on Sakai <u>and to your workgroup</u> by 9:00 AM, Friday, 1/26</p>
2-2 Week 4	<p>Structure of the Research Strategy, Part 1</p> <p>(a) Overview</p> <p>(b) Significance</p> <p>Workgroup Feedback on Specific Aims</p>	<p>Read: Specific Aims of students in your workgroup. Complete one Peer Reviewer Specific Aims Feedback form for each person in your group</p> <p>Read the <u>Specific Aims & Significance</u> sections of 3 <u>new</u> sample NRSA's in the "NRSA Examples" folder on Sakai (Options: Melissa Cox; Paul Gilbert; Shelley Golden; Catherine Jo; Joseph Lee; or Jennifer Moss)</p> <p>Write: Begin an outline for the Significance section of your proposal that includes bullet points or topic sentences for key points and arguments.</p>	<p>Assignment 4: Peer Reviewer Specific Aims Draft 1 Feedback Forms due on Sakai and emailed to workgroup by 9:00 AM, Friday 2/2</p>
2-9 Week 5	<p>Structure of the Research Strategy, Part 2</p> <p>(a) Approach overview</p> <p>(b) Methods</p> <p>In-class writing time</p>	<p>Read: Read the <u>Specific Aims & Approach</u> sections of 2 sample NRSA's in the "NRSA Examples" folder of Sakai (Options: Marta Mulawa; Marissa Hall; Melissa Cox; Paul Gilbert; Shelley Golden; Catherine Jo; Joseph Lee; or Jennifer Moss)</p>	<p>Assignment 5: Specific Aims Draft 2 Due on Sakai by 9:00 AM, Friday, 2/9</p> <p>**Instructors will return individual</p>

		<p>Review: Research Methods and Dissertation Example.ppt and complete post-lecture quiz</p> <p>Write: Continue developing your Significance section. Begin an outline for the Methods you will use to accomplish each Specific Aim.</p>	feedback on your Specific Aims by Friday, 2/16
2-16 Week 6	Works-in-Progress Presentations	<p>Prepare: Works-in-Progress presentation: Each student will have 5 minutes to present their study overview (Specific Aims) and one or two specific issues you are struggling with for feedback from the group. You may use up to 5 slides. The group will then provide 10 minutes of feedback/discussion.</p> <p>Write: Refine Significance section. Develop full outline of Approach section and begin filling in. Identify areas of uncertainty.</p>	<p>Assignment 6: Works-in-Progress brief presentation in class</p> <p><u>IMPORTANT: slides must be submitted to Sakai by 8:00 AM, Friday, 2/16</u></p>
2-23 Week 7 NO CLASS	<p>Class will not meet</p> <p>Join us at the Minority Health Conference! http://minorityhealth.web.unc.edu/</p>	<p>As needed: Make an appointment with a statistician or ODUM Institute for additional statistical guidance</p> <p>Write: Revise Specific Aims based on feedback. Continue developing Approach section.</p>	<p>Assignment 7: Specific Aims “Final Draft” due on Sakai and to your Faculty Advisor by 9:00 AM, Friday, 2/23</p>
3-2 Week 8	<p>Structure of the Research Strategy, Part 3</p> <p>(a) Creating Effective Visuals (b) Potential problems and solutions</p> <p>Activities planned under this award</p> <p>(a) Timelines</p>	<p>Read: Significance sections of your workgroup members. Take notes for sharing with workgroup members in class on Friday.</p> <p>Write:</p>	<p>Assignment 8: Significance section due on Sakai and to your workgroup by 9:00 AM, Wednesday, 2/28</p>

	Workgroup time	Continue developing Approach section.	
3-9 Week 9	Goals for Fellowship Training Doctoral Dissertation and Other Research Experience Building a mentorship team Review peer reviewer feedback form for Research Strategy In-class writing time	Read: Read Sample NRSA RSokol: Specific Aims page 49 <u>and then</u> read “Applicant’s Background and Goals for Fellowship Training” pages 44 – 48. Write: Revise Significance section based on peer feedback Complete draft of Approach section	Assignment 9: Research Strategy (Significance and Approach) full Draft due on Sakai and to your assigned peer reviewer by 5:00 PM, Friday, 3/9 . Include most recent copy of Specific Aims page.
3-16 NO CLASS	University Holiday – Spring Break		
3-23 Week 10	Workgroup Feedback: Students provide feedback on the Research Strategy (Significance and Approach).	Read: Read draft Research Strategy (Significance & Approach) of both students in your workgroup. Complete one Peer Reviewer Feedback form for ONE person in your group (as assigned by TA). Write: Complete rough draft of “Training Goals and Objectives for the duration of the fellowship” (~2 pgs). Outline Doctoral Dissertation and Research Experience using bullets and topic sentences.	Assignment 10: Completed Peer Reviewer Research Strategy Feedback form due on Sakai and emailed to your assigned workgroup member by 9:00 AM, Friday, 3/23 .
3-30 NO CLASS Individual Meetings	No class – University Holiday Individual meetings with Teaching Team	Prepare any questions for your individual meeting.	

4-6 Week 11	<p>Responding to peer/mentor reviewer comments and Grant Reviewer Comments</p> <p>Human Subjects</p> <p>Workgroup time</p>	<p>Read: NRSA Summary Statement and Response-Ex1.pdf</p> <p>NRSA Summary Statement and Response-Ex2.pdf</p> <p>Marta Mulawa NRSA - Human Subjects Protections Section (pgs 48 - 54)</p> <p>Write: Revise Research Strategy based on peer and teaching team feedback.</p>	<p>Assignment 11: Revised Research Strategy (Significance and Approach) along with Specific Aims due on Sakai and to Faculty Research Advisor by 5:00 PM, Tuesday, 4/3</p>
4-13 Week 12	<p>Peer-review feedback on Background and Goals section</p> <p>Getting from HB680 to Dissertation Proposal</p> <p>Other doctoral research funding mechanisms</p>	<p>Read: Read the Full Draft of Applicant's Background and Goals for Fellowship Training from your assigned peer-review pair. Take notes while reading (either using Track Changes/Comments or separately) for providing peer review feedback during class.</p> <p>Find: Search online databases to identify an alternative competitive research funding source you could apply for to support dissertation research. Be prepared to share with class.</p> <p>Write: Complete full draft of Applicant's Background and Goals for Fellowship Training (~6 pages) <u>submit by Tuesday</u></p>	<p>Assignment 12: Full Draft of Applicant's Background and Goals for Fellowship Training (~6 pages) due on Sakai and to assigned peer reviewer by 5:00 PM, Tuesday, 4/10</p>
4-20 Week 13	<p>Writing the Abstract</p> <p>Working groups – use this time to review your workgroup team members' abstracts and consult with your working groups for</p>	<p>Read: NRSA-Sample-Abstracts.pdf</p>	<p>Assignment 13: Draft Abstract due on Sakai by 9:00 AM,</p>

	any issues you are having with any sections of the proposal.	<p>Find: Search NIH Reporter for other F31 (or other Fellowship) Abstracts in your research field. Take particular note of how training plan goals are incorporated within a NRSA Abstract. Bring one abstract to class that you think is particularly well-done <u>OR</u> poorly done.</p> <p>Write: Revise Research Strategy based on Faculty Advisor feedback. Revise Applicant's Background and Goals for Fellowship Training based on peer feedback.</p>	Friday, 4/13-20 and bring to class.
4-27 Week 14	Early Career Award Panel Course Evaluations	<p>Listen to: Early Career Award Mechanisms Recorded Lecture.pptx</p> <p>Read: Choose one early career proposal to review on Sakai.</p>	Final Assignment Due 11:59 PM (details below)
Final Assignment Due 11:59 PM	<p><u>Upload final assignments to Sakai by Friday, April 27th, 11:59 PM</u></p> <p>SUBMIT AS ONE DOCUMENT: Full proposal including Abstract (no more than 30 lines), Specific Aims (1 page), Research Strategy (6 pages), References (no limit), Applicant's Background and Goals for Fellowship Training (6 pages) *Remember to follow NIH style guides (single spaced, 0.5 inch margins, 11-point font in Arial, Times New Roman, or equivalent).</p> <p>Late assignments will be marked down 2 points for each 24-hour period or portion thereof.</p>		

SCHEDULE OF ASSIGNMENTS:**Non-graded Assignments Descriptions & Due Dates:**

Non-Graded Assignment	Due Date	Description
Assignment 1: Draft Student Research Idea(s)	Due on Sakai by 9:00 AM on Friday, 1/12	Brief summary of a proposed research idea (~1 paragraph): Describe the health problem; make a statement or two about what is known and what is not known related to your focus; state why it would be important to fill that gap; state an overall study objective that links to the gap. If you are undecided at this point you may develop two research ideas (1 paragraph each).
Assignment 2: Draft Research Questions and Training Goals	Due on Sakai by 9:00 AM on Tuesday, 1/19	An initial draft of your Research Questions (at least 3) and Training Goals (at least 3). Less than a page total.
Assignment 3: Specific Aims Draft 1	Due on Sakai by 9:00 AM, Friday, 1/26	A rough draft of the Specific Aims page (~1 page; must include 2 or 3 aims). The document should address the problem and research gap being addressed, the study aims, the reason why the aims are important to address, and an explanation of how your study is significant in light of existing studies. See slides and materials for Classes 1 – 3.
Assignment 4: Peer Reviewer Specific Aims Draft 1 Feedback Forms	Due on Sakai and emailed to workgroup by 9:00 AM Friday, 2/2	Complete one Peer Reviewer Specific Aims Feedback form for each person in your group.
Assignment 5: Specific Aims Draft 2	Due on Sakai by 9:00 AM Friday, 2/9	Submit Revised Specific Aims section on Sakai for teaching team.
Assignment 6: Works-in-Progress brief	Due on Sakai by 8:00 AM, Friday, 2/16	Works-in-Progress presentation: Each student will have 5 minutes to present their study overview (Specific Aims) and one or two specific issues you are struggling with for feedback from the group. You may use up to 5 slides. The group will then provide 10 minutes of

presentation in class		feedback/discussion. IMPORTANT: slides must be submitted to Sakai by 8:00 AM, Friday, 2/16.
Assignment 7: Specific Aims “Final Draft”	Due on Sakai and to Faculty Research Advisor by 9:00 AM Friday, 2/23	Submit “final” Specific Aims to your Faculty Research Advisor and on Sakai. Clarify with them the form and date through which they will provide feedback. Follow-up with them on this date if you have not received feedback.
Assignment 8: Significance section	Due on Sakai and to your workgroup by 9:00 AM Wednesday 2/28	Submit a full draft of your Significance section (~0.5 – 1 page). Review Week 4 (2/2) lecture and resources for assistance.
Assignment 9: Research Strategy (Significance and Approach) full Draft	Due on Sakai and emailed to workgroup by 5:00 PM on Friday, 3/9	The Research Strategy should include the study significance, aims and hypotheses, and literature justifying/ supporting them, including the theoretical base and methods for reaching the aims (study design, sample size justification, data source/data collection, measures, statistical analysis for each aim, and statement of feasibility) (~6 pages). IMPORTANT: Please include the most recent version of your Specific Aims section at the beginning of the document. In class on March 23, your peer reviewer will provide feedback on the submitted document and the Instructors will provide feedback during the individual meetings (scheduled for the week of March 26).
Assignment 10: Peer Reviewer Research Strategy Feedback Form	Due on Sakai and emailed to assigned workgroup member by 9:00 AM on Friday, 3/23	Complete Peer Reviewer Research Strategy (Significance & Approach) Feedback Form for <u>one person</u> in your group (as assigned by TA).

Assignment 11: Revised Research Strategy (Significance and Approach)	Due on Sakai and to Faculty Research Advisor by 5:00 PM Tuesday, 4/3	Submit your revised Research Strategy, including the most recent Specific Aims section, to your Faculty Research Advisor and on Sakai. Include questions for them showing any specific areas where you would like their feedback and guidance.
Assignment 12: Draft Applicant's Background & Goals for Fellowship Training	Due on Sakai and emailed to assigned peer reviewer by 5:00 PM on Tuesday, 4/17	Submit your draft Applicant's Background & Goals for Fellowship Training (~6 pages) to <u>peer reviewer assigned by TA</u> . Review relevant lectures and NIH fellowship guidelines for format and content.
Assignment 13: Draft Abstract	Due on Sakai, 9:00 AM on Friday, 4/6	Complete draft abstract (30 single spaced lines) and have it printed for class by 9:00 AM on Friday, 4/6. See NRSA Sample abstracts for more ideas.

Graded Assignments:

Graded Assignment: Class Participation	Due Date	45 points
• Come prepared for classes and engage with class discussions and guest speakers	Multiple dates	16
• Turn in interim <u>non-graded</u> Assignments 1 – 13 on due dates. No credit will be given for assignments submitted more than 1 hour late without prior permission from the instructor.	Multiple dates	24
• Works-in-Progress presentation	Varies	5
Graded Assignment: Research Proposal	Due Date	55 points

<p>Submitted as <u>one word document</u> to Sakai:</p> <ul style="list-style-type: none">-Abstract (30 lines)-Specific Aims (1 pg)-Research Strategy (6 pgs)-Applicant's Background & Goals for Fellowship Training (6 pgs)-References (no limit) <p>Late assignments will be marked down 2 points per each 24-hour period or portion thereof</p>	Friday, 4/27 to Sakai by 11:59 PM	
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