**HBEH 860: RESEARCH PROPOSAL DEVELOPMENT**

**Department of Health Behavior**

**UNC Gillings School of Global Public Health**

**Spring 2020 – Last revised 1/9/2020**

**Meeting Time:** Fridays, 11:15 am – 2:15 pm

**Location:** Rosenau 332

**Course Instructor:** Kate Muessig

Office: Rosenau 306

Office hours by appointment

[kmuessig@med.unc.edu](mailto:kmuessig@med.unc.edu)

**Teaching Assistant:** Christine Schalkoff

Office hours by appointment

[caschalk@live.unc.edu](mailto:caschalk@live.unc.edu)

**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, we expect every member of the class and teaching team to 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-19-195.html> and through resources and links on Sakai. We have chosen the NRSA as the appropriate grant mechanism 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 NRSAs or other similar funding proposals and can 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. Studies may include quantitative, qualitative, and/or mixed methodologies;
2. Proposed studies should be theoretically grounded, and hypothesis-driven, 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 would be available to support the proposed data collection.

**Your Faculty Research Advisor:** In the fall prior to taking this course, you invited someone to serve as a Faculty Advisorfor this course. This individual will work with you at defined points in the semester to help guide you and offer feedback at key points in 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 confirm 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, class sessions will also feature one or more of the following: individual, paired, and peer group time for working on your proposal and receiving feedback, 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. Additional readings may be added throughout the course to best tailor the instruction to students’ needs.

**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 will be made available on Sakai and listed below. Please submit all assignments (graded and non-graded) in the “Assignments” section of Sakai. The major assignment due at the end of the course includes five completed components of a NRSA research proposal submitted as a single file:

* 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 sections should be single spaced, 0.5 inch margins, 11-point font (Arial or Times New Roman or equivalent). Final assignments will be graded with a rubric which will be provided to you in class. Each assignment will be independently graded by two reviewers and the final grade averaged weighted to the higher grade.

Class assignments include submitting drafts and peer reviews of different sections of the NRSA application each week. Brief descriptions of the assignments are provided below. Additional guidance on assignments will be provided each week in class and in lecture slides. Even though these assignments are not given a 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, late assignments 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. A Zoom videoconference link can be set up if you are off campus but able to call-in for part of the class.

2) Before class: Submit assignments on time, including providing peer feedback to your workgroup members (even if you will not be in class).

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, lecture recordings and any announcements.

4) Additional make-up work may be necessary depending on the number and nature of class sessions missed. Whenever possible, we will make a recording of the lecture portion of class available via Sakai following the class session.

**COURSE SCHEDULE:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Topics to be Covered** | **Class Preparation** | **Assignments Due**  (See quick guide for date and time) |
| 1-10  Week 1 | Overview of the course, NRSA Research topics and Faculty Advisors  NIH SF424 (R&R) for Individual Fellowships Guide: <https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/fellowship-forms-e.pdf> .  NRSA Program Announcement:  <https://grants.nih.gov/grants/guide/pa-files/PA-19-195.html>  Data Set Grid | **Read:**  Rawl SM. Writing a Competitive Individual National Research Service Award (F31) Application. *Western Journal of Nursing Research*, 2014, 36(1):31-46.  Sample NRSA 1: Marissa Hall, pages: 6 (Abstract); 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).  **Bring to class:**  Copy of Assignment 1 | **Assignment 1:**  Draft Student Research Idea(s)  Continue reading relevant literature in your topic area to verify gaps and brainstorm research questions  Friday, Jan 10th  8 AM  Sakai |
| 1-17  Week 2 | Specific Aims  Research Questions  Link between Research and Training  Workshopping Research Questions and Training Goals | **Read:**  Chapters 7 and 8 of “The Grant Application Writer’s Workbook.”  Sample NRSA 2: Marta Mulawa, pages: 41-47 and 58-61.  Class2\_Final NRSA Overview Handout  **Peruse:**  NIH RePorter searching on keywords for your research <https://projectreporter.nih.gov/reporter.cfm> | **Assignment 2:**  Draft Research  Questions and  Training Goals  Friday, Jan 17th  8 AM  Sakai |
| 1-24  Week 3 | Reading and Critiquing Grant Proposals  NRSA review criteria  Overview of Peer Reviewer Specific Aims Feedback form  In-class working time | **Read:**  Class 3\_Reviewing NRSA Grant Proposals in HBEH 860.docx  NIH Scoring Guidelines.pdf.  NIH Scoring System and Procedure.pdf.  **Listen to:**  Grantsmanship\_Catherine Jo-Recorded-Lecture.pptx | **Assignment 3**: Specific Aims Draft 1  Friday, Jan 24th  8 AM  Sakai, Workgroup |
| 1-31  Week 4 | Structure of the Research Strategy, Part 1   1. Overview 2. Significance   Workgroup Feedback on Specific Aims | **Read:**  Specific Aims of students in your workgroup. Complete one Peer Reviewer Specific Aims Feedback form **for each person** in your group  Read the Specific Aims & Significance sections of 3 new sample NRSAs in the “NRSA Examples” folder on Sakai  **Write:**  Begin an outline for the Significance section of your proposal that includes bullet points or topic sentences for key points and arguments. | **Assignment 4:**  Peer Reviewer Specific Aims Draft 1 Feedback Forms  Friday, Jan 31st  8 AM  Sakai, Workgroup |
| 2-7  Week 5 | Structure of the Research Strategy, Part 2   1. Approach overview 2. Methods   In-class writing time | **Read:**  Read the Specific Aims & Approach sections of 2 sample NRSAs in the “NRSA Examples” folder of Sakai  **Review:**  Research Methods and Dissertation Example.ppt  **Write:**  Continue developing your Significance section.  Begin an outline for the Methods you will use to accomplish each Specific Aim. | **Assignment 5:**  Specific Aims Draft 2  Friday, Feb 7th  8 AM  Sakai |
| 2-14  Week 6 | Works-in-Progress Presentations | **Prepare:**  Works-in-Progress presentation  **Write:**  Refine Significance section.  Develop full outline of Approach section and begin filling in. Identify areas of uncertainty. | **Assignment 6:** Works-in-Progress brief presentation in class  IMPORTANT: slides must be submitted to Sakai by **10:00 AM, Friday, 2/14** |
| 2-21  Week 7 | Structure of the Research Strategy, Part 3  (a) Creating effective visuals  (b) Problems and solutions  Activities planned under this award  (a) Timelines  Workgroup time | **Write:**  Continue developing Approach section. | **Assignment 7:**  Specific Aims “Final Working Draft” due on Sakai and to your Faculty Advisor  Friday, Feb 21st  10 AM  Sakai, Advisor |
| 2-28  Week 8  No in-person class session | Consider attending the 41st Minority Health Conference: <http://minorityhealth.web.unc.edu/> | **As needed:**  Make an appointment with a statistician or ODUM Institute for additional statistical guidance  **Write:**  Revise Specific Aims  Continue developing Approach section. | **Assignment 8:**  Significance section draft  Friday, Feb 28th  10 AM  Sakai, Workgroup |
| 3-6  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:**  Significance sections of your workgroup members. Take notes for sharing with workgroup members in class on Friday.  Read Sample NRSA RSokol: Specific Aims page 49 and then read “Applicant’s Background and Goals for Fellowship Training” pages 44 – 48.  **Write:**  Revise Significance section  Complete draft of Approach section | **Assignment 9:**  Research Strategy (Significance and Approach) full draft. Include most recent copy of Specific Aims page.  Friday, Mar 6th  10 AM  Sakai, Workgroup |
| 3-13  NO CLASS | University Holiday – Spring Break |  |  |
| 3-20  Week 10 | Workgroup Feedback: Students provide feedback on the Research Strategy  (Significance and Approach). | **Read:**  Read draft Research Strategy (Significance & Approach) of students in your workgroup. Complete Peer Reviewer Feedback form for **ONE** person in your group (assigned by TA).  **Write:**  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  Friday, Mar 20th  10 AM  Sakai, Assigned workgroup member |
| 3-27  Week 11 | Responding to peer/mentor reviewer comments and Grant Reviewer Comments  Human Subjects  Workgroup time | **Read:**  NRSA Summary Statement and Response-Ex1.pdf  NRSA Summary Statement and Response-Ex2.pdf  NRSA - Human Subjects Protections Section – Ex1.pdf  **Write:**  Revise Research Strategy based on peer and teaching team feedback. | **Assignment 11:** Revised Research Strategy (Significance and Approach). Include most recent copy of Specific Aims page.  Friday, Mar 27th  10 AM  Sakai, Advisor |
| 4-3  Week 12 | Peer-review feedback on Background and Goals section  Getting from HB680 to Dissertation Proposal  Other doctoral research funding mechanisms | **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.  **Write:**  Complete full draft of Applicant’s Background and Goals for Fellowship Training (~6 pages) | **Assignment 12:**  Full Draft of Applicant’s Background and Goals for Fellowship Training (~6 pages)  Friday, Apr 3rd  10 AM  Sakai, Assigned Peer Reviewer |
| 4-10  NO CLASS | University Holiday |  |  |
| 4-17  Week 13 | Writing the Abstract  Working groups – use this time to review your workgroup team members’ abstracts and consult with your working groups for any issues you are having with any sections of the proposal. | **Read:**  NRSA-Sample-Abstracts.pdf  **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 OR poorly done.  **Write:**  Revise Research Strategy based on Faculty Advisor feedback. Revise Applicant’s Background and Goals for Fellowship Training based on peer freedback. | **Assignment 13:** Draft Abstract  Friday, Apr 17th  10 AM  Sakai, Bring to class |
| 4-24  Week 14 | NIH Early Career Training Mechanisms  Course Evaluations | **Listen to:**  Early Career Award Mechanisms Recorded Lecture.pptx  **Read:**  Read one early career proposal (Sakai). | **Assignment 14:**  **Final Assignment Due Friday, Apr 24th**  **11:59 PM**  **(details below)** |

**COURSE GRADING:**

|  |  |  |
| --- | --- | --- |
| **Class Participation** | **Due Date** | **48 points** |
| Come prepared for classes and engage with class discussions and guest speakers  Turn in 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.  Works-in-Progress presentation | Multiple dates  Multiple dates  Friday, 2/14 | 14  24    10 |
| **Graded Assignment: Research Proposal** | **Due Date** | **52 points** |
| Submitted as **one word document** to Sakai:  -Abstract (30 lines)  -Specific Aims (1 pg)  -Research Strategy (6 pgs)  -Applicant's Background & Goals for Fellowship Training (6 pgs)  -References (no limit)  Late assignments will be marked down 2 points per each 24-hour period or portion thereof | Friday, 4/24 to Sakai by 11:59 PM |  |

**ASSIGNMENT DESCRIPTIONS:**

|  |  |
| --- | --- |
| **Non-Graded Assignment** | **Description** |
| **Assignment 1:**  Draft Student Research Idea(s) | 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 | 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 | A rough draft of the Specific Aims page (~1 page; must include 2-3 aims). The document should address the problem and research gap, 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 Feedback Forms | Complete one Peer Reviewer Specific Aims Feedback form **for each person** in your group. |
| **Assignment 5:**  Specific Aims Draft 2 | Submit Revised Specific Aims section on Sakai for teaching team. |
| **Assignment 6:**  Works-in-Progress brief presentation in class | Works-in-Progress presentation: Each student will have 5 minutes to present their study overview (Specific Aims) and one or two specific issues for feedback from the group. You may use up to 5 slides. The group will provide 5-10 minutes of feedback/discussion. |
| **Assignment 7:**  Specific Aims “Final Draft” | 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 | Submit a full draft of your Significance section (~0.5 – 1 page).  Review Week 4 lecture and resources for guidance. |
| **Assignment 9:**  Research Strategy (Significance and Approach) full Draft | 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.** |
| **Assignment 10:**  Peer Reviewer Research Strategy Feedback Form | Complete Peer Reviewer Research Strategy (Significance & Approach) Feedback Form for **one person** in your group (assigned by TA). |
| **Assignment 11:**  Revised Research Strategy (Significance and Approach) | 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 | Submit draft Applicant's Background & Goals for Fellowship Training (~6 pages) to peer reviewer assigned by TA. Review relevant lectures and NIH fellowship guidelines for format and content. |
| **Assignment 13:**  Draft Abstract | Complete draft abstract (30 single spaced lines) and have it printed for class.  See NRSA Sample abstracts for more ideas. |
| **Assignment 14:**  Final Assignment – NRSA Proposal | Upload final assignments to Sakai by Friday, April 24th, 11:59 PM  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).  Late assignments will be marked down 2 points for each 24-hour period or portion thereof. |