

Elective Description

Campus: All Campuses

Elective/Experience Title: Basic, Clinical and Applied Sciences Phase 2 and 3 Research Elective

Course Number: MED 9510

Preceptor(s): As approved by course director Dr. Sletten. Preceptor must have a UND SMHS faculty appointment

Approval of research proposal: The campus dean and Dr. Sletten must approve the research project proposal (see attached form) no less than 4 months prior to the elective period.

Period(s) Offered: phase 2 or 3 elective periods Elective must be scheduled phase 3 rotation 7 or earlier.

Number of students per period: Unlimited

Revised Curriculum Phase(s): 2 & 3

Course may be taken for 4 or 8 weeks of elective credit.

Purpose: To expose the phase 2 or 3 medical student to the principles of medical research and allow the student to conduct research under the mentorship of an experienced researcher in the medical field.

Compliance with the following activities timeline is required for completion of the elective:

- 4 months prior to the elective month: project approval by campus dean and Dr. Sletten
- 3 months prior to elective month: IRB approval request submitted to both UND and local health system if applicable
- End of period 8: manuscript must be submitted for first review
- Beginning of period 10: manuscript submitted to Dr. Sletten prior to this date for final review
- Grade must be submitted by end of period 10.

Objectives: Following successful completion of this elective, the student will be able to:

1. Generate a research question. (competency 1.8)
2. Complete the IRB education and approval process both for UND SMHS and the health system where research is taking place. (competency 1.8, 5.7)
3. Summarize the process of determining authorship of a research study. (competency 1.8)
4. Generate an abstract (competency 1.8)
 - a. Describing the research question
 - b. With a review of the literature for existing information relevant to the question
 - c. Collating, distilling and summarizing the acquired data
 - d. And documenting the conclusions derived from the acquired data (including applying relevant statistical and/or graphic techniques for the analysis.
5. Generate a manuscript of publication quality and identify a target journal for publication (competency 1.8)

Instructional Activities: During this elective, the student will be involved in/experience:

1. During the elective month, weekly meetings (minimum) with preceptor. Dates of these meetings should be documented for the course director.
2. Completion of IRB education located at <https://und.edu/research/resources/human-subjects/human-subject-education.html> and if applicable, completion of IRB education required by the health system where the research will take place.
3. Additional completion of the CITI authorship module that can be found at the same link but which is not required by the IRB.
4. Obtaining UND IRB approval and local health system IRB approval of the research project.
5. Completing research activities related to the research question.
6. Submission of manuscript for edits to two editors. The preliminary editor may include the writing center or a medical librarian. The secondary editor must be a doctoral level reviewer (not the preceptor of the project). Edits from both reviewers must accompany the submission of the manuscript to Dr. Sletten.
7. Completion of a manuscript of publication quality for the research project. The manuscript must contain appropriate recognition of UND affiliation.

Criteria for Grading: During and following this elective, the preceptor will:

1. Utilize the standardized UNDSMHS Phase 2/3 research elective evaluation form.
2. Evaluate the research project in respect to the following criteria which fulfill all objectives of the elective:
 - a. Honors Criteria: In the judgment of the preceptor(s) and the course director the student has fulfilled all criteria of the elective and a research manuscript judged by both preceptor and course director to be worthy of publication has been submitted for publication to a peer reviewed journal.
 - b. Satisfactory Criteria: In the judgment of the preceptor(s) and the course director, the course objectives are met
 - c. Unsatisfactory Criteria: Preceptor(s) and/or course director's evaluation show course objectives have not been met.

If the student receives an unsatisfactory grade for the rotation, it will be at the course director's discretion whether there has been sufficient work done and time remaining in the academic year for remediation or whether completion of a different course will be required for credit.

Instructions for Preceptors: Research Elective MED 9510

Thank you for considering precepting a 4th year medical student for the research elective. This elective is designed to expose the medical students to the principles of medical research and allow the students to conduct research under the mentorship of an experienced researcher in the medical field. The project may encompass any length of time, however, the student will have a dedicated 4 or 8-week period to intensify work on the project.

Below you will find some guidelines that detail the requirements of this commitment.

1. To precept this elective, you must have a UND SMHS faculty appointment.
2. Any manuscript, presentation or publication related to the research completed during this elective must recognize the UND SMHS affiliation in addition to health system affiliations.
3. During the month of the elective, minimum weekly meetings with the student are required.
4. The goal for the student in completing this elective is that they produce a manuscript of publication quality.
5. The student must complete the following timeline and you will be required to assist them in meeting these dates:
 - 4 months prior to the elective month(s): project approval by campus dean and Dr. Sletten (course director)
 - 3 months prior to elective month: IRB approval request submitted to both UND and local health system if applicable
 - End of period 8: manuscript must be submitted for first review
 - Beginning of period 10: manuscript submitted to Dr. Basson prior to this date for final review
 - Grade must be submitted by end of period 10

UND SMHS has many resources for assistance in our students completing their research. Resources may include biostatistics consults, writing assistance, literature review resources. For help in reaching any of these resources or other questions related to the project, please contact Dr. Sarah Sletten, Director of Learner Research, at sarah.sletten@und.edu.

Signatures: (this page purposely left as its own)

Department Chairman

Date

Campus Dean

Date

**Chair, Undergraduate Medical Education Committee (UMEC)
Asst. Dean for Medical Curriculum**

Date

Senior Associate Dean for Medicine and Research

Date