

LUCOM Preclinical Summer Research
Elective
(LUCOM 6502)

General Information Packet

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Research Elective Overview

The research elective provides students with hands-on experience in the process and practice of biomedical research and scholarly activity. Students engage in mentored research projects and other scholarly endeavors in which they participate in various activities that can include scholarly writing, development of new educational materials, hypothesis development, design and performance of experiments, and the collection and interpretation of data. Students are strongly encouraged to develop and hone their presentation skills by participating in LUCOM Research Day that typically occurs the following spring semester. Depending on the project in which they engage, students can gain experience in using biostatistics, reading and critiquing primary research literature, scientific writing, and maintaining a safe laboratory environment. In addition, students can also gain understanding of key elements of the research enterprise, such as manuscript preparation, grant development, and the regulations that govern the inclusion of animal models and human subjects in research projects. Throughout the elective, scientific integrity and scholarly professionalism are emphasized and expected. Course grades are pass/fail.

The Summer Research Elective will officially occur only in the month of June.

However, students are permitted (and some will be expected by the faculty mentor) to engage in research for both June and July. Students unable to participate in research during June can be involved in July if approved by the faculty mentor; however, no Pass/Fail grade will be given. This includes students on academic probation and participation in research will be dependent upon successful course remediation and the availability of research mentors.

The Summer Research Elective does not increase tuition or fees and therefore does not influence financial aid availability. Please contact the LUCOM Financial Aid Office with any questions.

Course Objectives

After completing this course, the successful student will be able to do the following:

1. Describe the application of the scientific method in biomedical research including hypothesis development, experimental design, purpose of controls, and data collection, analysis, and interpretation.
2. Describe the general features of the overall research process such as research funding sources and mechanisms, grant applications, presentation of data at scientific conferences, and publication of research findings in scientific journals.
3. Describe the general features of regulatory oversight in the research process such as laboratory safety, proper care and use of animals in research (Institutional Animal Care and Use Committee), and proper utilization of human subjects in research (Institutional Review Board).
4. Explain the fundamental concept and value of scientific integrity in the responsible conduct of research.

Other Research Opportunities at LUCOM

- LUCOM Research Fellowship
 - (2) positions each year
 - 1-year experience after successful completion of COMLEX 1 exam
 - Benefits include
 - Paid stipend and deferred tuition during fellowship period
 - Financial scholarship applied to OMSIII and OMSIV semesters
 - Priority for 3rd year rotation location upon completion of the fellowship
- LUCOM Research Volunteer
 - Continue to contribute to LUCOM faculty projects outside of the elective period
- OMSIII/IV Research Rotation
 - Must be approved by Senior Associate Dean for Clinical Education and a designated faculty mentor

General Information About the Research Elective

- The faculty mentors set the expectations for goals, scheduling, and responsibilities
 - Please contact the Research Manager, Barb Lutz, if there is a discrepancy between Center for Research policies / expectations and those described by the faculty mentor
 - Students can participate in the Summer Research Elective with qualified, non-LUCOM faculty members at Liberty University or at another location/institution. Mentors must be approved by sending a current copy of their *curriculum vitae* and a letter requesting short-term LUCOM affiliation (example letter provided as Appendix).
- Do not engage in research with animals or humans (direct human contact or handling data) without approval from the Liberty IACUC or IRB (respectively). Be familiar with the approved protocols and/or the rationale and requirements for exemption.
- Access to the research laboratory space is a privilege and can be revoked. Do not permit access to anyone without notifying Mrs. Lutz
- LUCOM has created a series of “how-to” videos referred to as “research modules.” Some will be required for the elective, while others will be readily available to support your ongoing research endeavors as a LUCOM student. Below is a list of topics that will be developed.
 - Considerations for the future scientist
 - Introduction to applied statistics
 - General approaches to data management and creating posters with Microsoft Office
 - Introduction to literature reviews
 - Laboratory technique specific videos
- Expectations for dress in the research space is the same as in the anatomy laboratory
- Your ability to work independently (without direct supervision) in the research laboratory will require documented proof of training and your acceptance of associated risks
- Some faculty will only accept students able to dedicate more than 4-weeks for summer research, while others will only require 4-weeks.
 - This information is included in the following forms for each faculty mentor and project available for this year’s elective
- Funds are available for students to travel and present their work at a larger venue through the Liberty University Center for Research and Scholarship. More information can be found at the Liberty University Center for Research and Scholarship webpage (below).
 - Please note, this office is located on main campus and is distinct from the LUCOM Center for Research.
 - <https://www.liberty.edu/center-for-research-scholarship/research-award-funds/student-research-presentations/>

Example Request Letter for Temporary LUCOM Faculty Appointment for Research Elective Mentorship

Greetings,

By submitting this letter, I am applying for appointment as an adjunct faculty member for the College of Osteopathic Medicine in a temporary category. The purpose of my request is to serve as the preceptor/mentor for a LUCOM Osteopathic Student Doctor participating in the pre-clinical research elective course.

The student will complete an elective supporting or performing research under my supervision during the elective period in summer 2022.

Enclosed you will find a copy of a current CV and a copy of my current appointment at a college of medicine or other health profession (if applicable) to support my application.

I am currently in good standing at my institution as well as with all federal, state and local regulatory, licensure, governmental and legal authorities and have no sanctions on my licensure, certification, academic appointment or legal status.

I acknowledge that appointment in a temporary category is granted for specific students and for specific, limited periods of time and that I am aware that, if I wish to gain full appointment as a faculty member of Liberty University College of Osteopathic Medicine, additional documentation and support is required and such action is encouraged and supported by the College.

Professionally:

Name: _____

Signature: _____

Date: _____

Liberty University College of Osteopathic Medicine

Pre-Clinical Research Elective (LCOM 6502)

Mentor's Evaluation of Student

Mentor Name: Click or tap here to enter text.

Summer Section: Choose an item.

Student Doctor Name: Click or tap here to enter text.

List the modules the student reviewed below.

Click or tap here to enter text.

Click or tap here to enter text.

Click or tap here to enter text.

Click or tap here to enter text.

Click or tap here to enter text.

Click or tap here to enter text.

The Following Section is to be Completed by the Faculty Mentor

For each of the following, please rate the student using a scale of 1 (lowest) to 5 (highest).

- | | |
|--|-----------------|
| 1. Punctuality and work ethic | Choose an item. |
| 2. Willingness to read and/or prepare for research activities | Choose an item. |
| 3. Attitude and enthusiasm for the project | Choose an item. |
| 4. Collegiality | Choose an item. |
| 5. Professionalism | Choose an item. |

In the space below, please provide brief comments regarding the performance of the student during the research elective period.

Click or tap here to enter text.

Mentor Signature: Click or tap here to enter text.
(a typed "signature" is acceptable)

Date: Click or tap to enter a date.