

Guidelines for Directed Research (MAT 5600)

Bulletin Description: A research project will be chosen, formulated, and executed by the student under the guidance of a faculty member. The project may investigate a mathematical sciences content or pedagogy topic. A final written report and presentation are required. MAT 5600 must be taken for a total credit of three semester hours.

The directed research project is designed to be a culminating experience for students in the MA in Mathematics, College Teaching concentration. The topic for the research project should be chosen in consultation with the faculty mentor, and can be any topic related to content or pedagogy in the mathematical sciences, but all projects should provide evidence of:

- Depth of knowledge in an area of mathematical sciences content or pedagogy, and
- Utilization of the appropriate research methodologies for the content matter.

Students will produce a written document and present their work to members of the department. The specific format of the document and presentation will vary depending on the subject matter, but all will be reviewed vis-a-vis the following expectations:

Written Document:

1. The document is well organized.
2. The document is professionally typeset, with careful attention to citations and references.
3. The level of exposition is appropriate for the expected audience of seniors, graduate students, faculty, and/or other professionals.
4. The style and grammar does not detract from the readability of the document.
5. The author provides some general context/background for the work.
6. The author's contribution to the work is clear.

Presentation:

1. The presentation is well organized.
2. The level and pace of the presentation is appropriate for the expected audience of seniors, graduate students, faculty and/or other professionals.
3. The presenter provides some general context/background for the work.
4. The presenter's contribution to the work is clear.
5. The presenter maintains composure when questioned.

Department of Mathematical Sciences Application for Directed Research
(please submit to the graduate program director)

Student's Name: _____

Title of Project: _____

Mentor's Name: _____

Semester/Year: _____ **Number of hours to be completed this semester:** _____

Institutional Review Board (IRB) Approval if Applicable

*If your project involves human subjects (e.g., your or another's students) you and your mentor may need to apply for IRB approval/exemption. Consult the website <https://researchprotections.appstate.edu/human-subjects> for instructions on applying for IRB approval/exemption. **IMPORTANT:** No data collection can occur until approval, exemption or an indication that IRB review is not needed has been obtained.*

Check the relevant statement:

_____ My project does not require IRB approval.

_____ My project involves human subjects and I have submitted my request to the IRB.

Directed Research Topic Description

Brief description of the proposed project:

Tentative timeline for the current semester of research:

Requirements and evaluation criteria for the current semester of research:

Student's Signature: _____ **Mentor's Signature:** _____