



## **IUP Graduate Handbook**

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**Master of Education in Mathematics Education**

Department of Mathematical and Computer Sciences

2020-2021

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## INTRODUCTION

Welcome to the Department of Mathematics! We are delighted that you have decided to join us. This Handbook is developed to answer frequent and important questions related to the M.Ed. in Mathematics Education Program. It is not designed to replace student advising, but is offered as a means of assisting that process. We encourage you to read this Handbook carefully, as it can help to facilitate your advancement through the program. We also expect that you will familiarize yourself with the Graduate School Catalog as it details the policies of the Graduate School (<https://www.iup.edu/registrar/catalog/>).

Using this Handbook effectively will enhance the advisement process and enable students to take a more active role in attaining their personal and professional goals. If you cannot locate information you need in this Handbook, please contact the program coordinators.

Whether you take the time to review this Handbook in depth or not, you will be held accountable to the Program's governing principles.

### **IUP's Civility Statement**

As a university of different peoples and perspectives, IUP aspires to promote the growth of all people in their academic, professional, social, and personal lives. Students, faculty, and staff join together to create a community where people exchange ideas, listen to one another with consideration and respect, and are committed to fostering civility through university structures, policies, and procedures. We, as members of the university, strive to achieve the following individual commitments:

**To strengthen the university for academic success**, I will act honestly, take responsibility for my behavior and continuous learning, and respect the freedom of others to express their views.

**To foster an environment for personal growth**, I will honor and take care of my body, mind, and character. I will be helpful to others and respect their rights. I will discourage intolerance, hatred, and injustice, and promote constructive resolution of conflict.

**To contribute to the future**, I will strive for the betterment of the community; myself, my university, the nation, and the world.

### **Affirmative Action**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

### **Title IX Reporting Requirement**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

## **Student Conduct and Student Rights**

[www.iup.edu/studentconduct/policies/](http://www.iup.edu/studentconduct/policies/)  
[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

## **Mission Statement and Program Objectives**

This unique program is designed for teachers, with online classes that enable you to hold your job while you earn your master's. You have two tracks from which to choose: A Secondary Mathematics Education track, which is totally online, and an Elementary and Middle Level Mathematics Education Track, which includes online as well as face-to-face classes. The face-to-face classes are offered one evening a week to fit the schedules of those who are teaching. Whether you are interested in furthering your knowledge, working towards permanent certification, becoming a teacher-leader, or planning to eventually pursue a doctoral degree, the program prepares you to embrace the challenges of teaching mathematics to a diverse population of students in an ever-changing world.

For teachers in public schools, the program meets the credit requirements for Instructional Level II certification. However, it does not provide initial certification or grades 7–12 certification for those who hold a K-6 Level I certificate.

The objectives of the program include:

- Gaining confidence and invaluable insight into practical ways to teach math that are both appealing and effective for your students.
- Taking advantage of the best and most current research for effective classroom practices at the elementary, middle school, and secondary levels.
- Exploring the real day-to-day challenges of teaching.
- Learning how to work with diverse learners and test standards and incorporating technology into the classroom.
- Learning from faculty members who have experience teaching at the K-12 level and who understand the joys and challenges of teaching.

## **Faculty and Staff**

Dr. Yong Colen  
Professor of Mathematics  
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724-357-2600

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jwalker@iup.edu  
724-357-2741

### **Admission**

Applicants must have a minimum cumulative undergraduate grade-point average (GPA) of 3.0 (on a 4.0 scale). The degree must be earned from a regionally accredited institution. It is preferred that applicants have an undergraduate degree in education and or mathematics.

Graduate Admissions: [www.iup.edu/admissions/graduate/](http://www.iup.edu/admissions/graduate/)

For more information regarding Admission Classification and Provisional Admission for International Graduate Application, view the Graduate Catalog: [www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

### **Financial Assistance**

#### **Graduate Assistantships/Scholarships**

- Regarding assistantships, many of our students offer tutoring to undergraduates as part of their responsibilities. All tutors are expected to behave professionally and treat students with respect. Tutors should not initiate, solicit, or exchange personal information with students that they are tutoring. Any unfair treatment of students (e.g. giving preferential treatments to certain students or ignoring certain students) is inappropriate. Such behaviors may trigger an immediate review and loss of an assistantship.
- Please visit the following website for information regarding assistantships: [www.iup.edu/admissions/graduate/financialaid/assistantships-and-scholarships/](http://www.iup.edu/admissions/graduate/financialaid/assistantships-and-scholarships/)
- Office of Financial Aid: [www.iup.edu/financialaid/](http://www.iup.edu/financialaid/)
- The Mildred Reigh scholarship is available to graduate students. The scholarship is awarded in May for the following school year. Visit the following website for information about the scholarship: <https://www.iup.edu/math-computer-sciences/undergrad/scholarship-opportunities/>

### **Academic Advisement**

Upon acceptance into the M.Ed. in Mathematics Education program, you will be assigned an advisor. Your advisor will be your main contact throughout the program. He/she will share with you a program of study, suggest courses to take for each semester, and answer questions you might have. As a graduate advisee you are expected to be in touch with your advisor for scheduling classes or with other concerns. You should also take the initiative to be aware of your options in the program.

### Campus Resources & Student Support

The School of Graduate Studies and Research: [www.iup.edu/graduatestudies/](http://www.iup.edu/graduatestudies/)  
Graduate Catalog: [www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)  
Office of the Bursar: [www.iup.edu/bursar/](http://www.iup.edu/bursar/)  
Office of the Registrar: [www.iup.edu/registrar/](http://www.iup.edu/registrar/)  
Disability Support Services: [www.iup.edu/disabilitysupport/](http://www.iup.edu/disabilitysupport/)  
Office of Social Equity: [www.iup.edu/social-equity/](http://www.iup.edu/social-equity/)  
IUP Campus Library [www.iup.edu/library/](http://www.iup.edu/library/)  
MyIUP: [www.iup.edu/myiup/](http://www.iup.edu/myiup/)  
IT Support Center: [www.iup.edu/itsupportcenter/](http://www.iup.edu/itsupportcenter/)  
Veterans and Service Members: [www.iup.edu/veterans/resource-center/](http://www.iup.edu/veterans/resource-center/)  
IUP Writing Center: [www.iup.edu/writingcenter/](http://www.iup.edu/writingcenter/)  
IUP Career and Professional Development Center: [www.iup.edu/career/](http://www.iup.edu/career/)  
IUP Parking Services and Visitor Center <http://www.iup.edu/parking/>  
University Police <http://www.iup.edu/police/> | 724-357-2141  
Crisis Intervention 24/7 Hotline: 1-877-333-2470  
Student Registration: [www.iup.edu/registrar/students/registration/](http://www.iup.edu/registrar/students/registration/)

### IUP Email

IUP offers an email account to all active students. **Your IUP email address is the primary means by which the university will contact you with official information and you should use for all IUP official communications. It is your responsibility to check your IUP email regularly.** Visit [www.iup.edu/itsupportcenter/howTo.aspx?id=23401](http://www.iup.edu/itsupportcenter/howTo.aspx?id=23401) to learn more about setting up this account. For more information regarding University policy on email communication, view the Graduate Catalog: [www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

### Graduate Student Assembly

The Graduate Student Assembly (GSA) represents the graduate student body's interests at IUP and within the Indiana community. The GSA makes recommendations related University-wide and graduate-specific policies and in areas of concern in the cultural, intellectual, and social life of the part- and full-time graduate student. Visit [www.iup.edu/graduatestudies/gsa](http://www.iup.edu/graduatestudies/gsa) for more information.

**Programs and Degrees**  
**Master of Education in Mathematics Education (36 credits)**  
**PROGRAM OUTLINE\***

**I. Education and Educational Research (6 cr.) (All courses online)**

- EDEX 569/578/650/750/751/752 EDSP 704/746/747/748 (choose one)
- GSR 615 Elements of Research

**II. Mathematics Education Core (12 credits) (All courses online)**

- MAED 650 Curriculum and Instruction in Mathematics Education
- MAED 654 Teaching Problem Solving in Mathematics Education
- MAED 652 Differentiated Instruction in Mathematics Education
- MAED 660 Survey of Research in Mathematics Education

**III. Mathematics Education Content (12 credits). Choose a Specialization.**

**Secondary Mathematics Education  
Specialization (All courses online)**

- MAED 611 Algebra for Secondary Teachers
- MAED 612 Geometry for Secondary Teachers
- MAED 613 Probability and Statistics for Secondary Teachers
- MAED 614 Precalculus and Discrete Math for Secondary Teachers
- MAED 617 Teaching Proportional Reasoning
- MATH 650 History of Mathematics

**Elementary and Middle School Mathematics  
Education Specialization**

- MAED 517 Probability and Statistics for Elementary/Middle Level Teachers **(Online)**
- MAED 520 Patterns and Functions for Elementary/Middle Level Teachers **(Online)**
- MAED 556 Geometry for Elementary/Middle Level Teachers **(Online)**
- MAED 557 Number Theory for Elementary/Middle Level Teachers
- MAED 558 Logic and Logical Games for Elementary/Middle Level Teachers
- MAED 561 Discrete Math for Elementary/Middle Level Teachers **(Online)**
- MAED 571 Algebra for Elementary/Middle Level Teachers **(Online)**
- MAED 617 Teaching Proportional Reasoning

**IV. Mathematics Education Electives (6 credits) (All Courses online)**

- MAED 559 Technology-Related Topics in Mathematics Education
- MAED 616 Writing in Mathematics Education
- MAED 681 Special Topics in Mathematics Education
- MAED 698 Internship in Mathematics Education<sup>1</sup>
- MAED 795 Thesis in Mathematics Education
- Any course from Category III

\*Notes:



1. The internship may be used to do preliminary work related to a thesis. This is by permission from the graduate coordinator.
2. At least 50% of total credits must be 600 or 700-level.
3. There is a five-year time completion limit – see your advisor.
4. Special credits are limited to six including transfer credits, workshop credits, and special topics. Transfer credits should be pre-approved. You must send a letter to the Graduate School requesting the transfer. The Graduate School will not finalize transfers until after candidacy has been granted.
5. You must maintain a QPA of at least 3.0 (“B” average).
6. Certain substitutions can be made with written approval of your advisor and the department affected.
7. You will automatically come up for candidacy the semester after completing 12 credit hours at IUP.
8. Keep in contact with your advisor especially for substitutions, transfers, and electives.

### Course Descriptions

Course descriptions are available in the Graduate Program Catalog at <https://catalog.iup.edu/index.php?catoid=4>

### Evaluation of Students

A comprehensive or qualifying exam is not required for this program.

For information regarding School of Graduate Studies and Research policies on grading, view the Graduate Catalog: [www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

### Degree Completion

Starting several months before Commencement Day, all students need to begin the process of applying for graduation, so that required paperwork is completed and they are ready to participate in the Commencement ceremony.

Graduate students apply for graduation through MyIUP. Graduate students are required to apply for graduation by the established deadlines.

- May Graduation: April 30
- August Graduation: July 31
- December Graduation: November 30
- January Graduation: December 31

Contact the Co-op Store at [Co-op-Store@iup.edu](mailto:Co-op-Store@iup.edu) for information needed to mail or pick up your regalia.

View *Steps in the Graduate Graduation Process* for assistance concerning the graduation process:

<https://www.iup.edu/commencement/graduate/steps-in-the-graduation-process/>

For more information about graduation, view the Graduate Catalog: [www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

## Thesis and/or Dissertation Completion

The Thesis and Dissertation Manual (TDM) is the governing document and provides detailed information regarding the thesis process. You are responsible for knowing and understanding the contents of this manual should you decide to do a thesis. The TDM is available at the School of Graduate Studies and Research Web site: <https://www.iup.edu/graduatestudies/resources-for-current-students/research/thesis-dissertation-information/thesis-dissertation-manual/>. Students planning to complete a thesis should allow a minimum of two semesters to do so. The following are meant to serve as a general guide as you immerse yourself in the thesis process. Succinctly, the topics contained in the TDM can be broadly divided into four major categories:

- 1. Deadlines, Forms, Checklists, and Instructions** – You must know and be aware of all deadlines associated with the thesis process. You must complete and submit all necessary forms on time. Be absolutely certain that you have addressed all items on all checklists contained in the TDM and that you have carefully followed all of the instructions for the various processes addressed in the TDM.
- 2. Thesis Committee** – Choose your thesis advisor carefully. Your advisor should be eligible to be the chair of your thesis committee, and be knowledgeable in the area related to your thesis. For instance, if you are writing a Master's Thesis in the field of statistics, then you should select a statistician as your advisor. The other members of your thesis committee also should be knowledgeable in the area related to your thesis. You should communicate frequently with the members of your thesis committee.
- 3. Responsibilities** – Acclimate yourself not only with your responsibilities but also with the responsibilities of all of those individuals involved in the thesis process.
- 4. Format and Style** – There are several formatting and style rules that your thesis is required to follow. These rules are specific and failure to follow them will result in your thesis not being accepted by the School of Graduate Studies and Research.
- 5. Thesis Defense** – The thesis defense will be open to other faculty and students.

With regard to the actual writing of your thesis, it is important to write intelligently, both in a grammatically and mathematically correct fashion. A poorly written thesis is unacceptable. An effective way to improve your writing skills is to carefully observe how mathematics is written in textbooks and published research papers. Upon request, the Department of Mathematical and Computer Sciences may provide resources which you may use to facilitate a properly written thesis.

In addition to any requirements contained within the TDM, the Department of Mathematical and Computer Sciences strongly suggests that your thesis be typeset using a LaTeX compatible typesetting software package. Packages such as Scientific Notebook and MiKTeX are also recommended and freely available. There are sample style files available for you to use in each of the recommended software packages. These files will include sample shells in which you can insert the contents of your thesis.

### Evaluation Outcome for Dissertation and/or Thesis

The thesis will be scored pass, pass with minor revisions, pass with major revisions, or fail. Students who score pass with major or minor revisions, will be asked to revise and resubmit to the committee. Revisions to the thesis need to be completed by the end of the following semester. If students do not meet this deadline, the result is a fail.

**Effective fall 2017 for students admitted and students admitted after --** Thesis credits will be assigned Pass or Fail as the final evaluation outcome for the taken credits and carry no quality points weighted towards a student's CGPA.

**Ongoing Dissertation and Thesis students admitted "prior" to fall 2017 –** Thesis credits will be assigned a letter grade as the final evaluation outcome for the credits taken and carry quality points weighted towards a student's CGPA for the number of dissertation credits required for the program. "Extended" dissertation credits are not calculated into a student's CGPA.

For more information, view the view the Graduate Catalog: [www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

### Internship

#### Overview:

Internship experience can be a valuable for a mathematics education graduate student. Real world or research experience gives graduates advantages in job applications. **You should contact the program coordinator for more detailed information.**

Graduate internships for this program carry 3 credit hours. All interns are assigned a faculty supervisor by the program coordinator. In an internship, students usually work for 6-15 weeks and complete other requirements dependent on the position.

Finding a good internship requires considerable effort. It is very important that the interested student meet with the *program coordinator* at least one semester prior to the internship in order to craft a resume and start a search in a timely manner. The student will be assisted in the search by the program coordinator, but it is ultimately the student's responsibility to find an internship.

#### Intern Responsibility:

Interns are expected to complete the following requirements:

- a) Record daily activity logs.
- b) Provide weekly updates to the faculty supervisor.
- c) Write a final written report.
- d) Give a final oral presentation.

The log should list the tasks that are performed each day. It should also mention skills and tools that are learned or used and how coursework in the program has contributed to your learning. It may include personal impressions and feelings about the job.

The final written report should be typed and should summarize the internship project(s). It should contain a description of the work assigned as well as a description of the actual work accomplished. It should also contain a statement concerning the professional and personal benefits derived from the internship.

The final oral presentation is a summary of the final written report and will be followed by a question/answer session. The presentation will be opened to interested students, faculty, and appropriate personnel from the internship site. The intern should meet with the faculty supervisor and the site internship supervisor before the proposed presentation to discuss content of the oral presentation.

All requirements of the internship must be completed before a grade is assigned. Grading will be based on the evaluation of the above requirements, on the site supervisor's midterm and final evaluations, and on other feedbacks about the intern gained from on-site visits by the faculty supervisor and from communications between personnel at the internship site and the faculty supervisor.

### **University Policies and Procedures**

**University policy is the baseline policy.** Programs may have policy that is more stringent than the University baseline policy; however, not less stringent than the University baseline policy. For questions regarding this statement, please contact [Program Coordinator] or the School of Graduate Studies and Research.

#### **Academic Calendar**

View the IUP Academic Calendar: [www.iup.edu/news-events/calendar/academic/](http://www.iup.edu/news-events/calendar/academic/)

The following University and SGSR policies can be found at [www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

#### **Academic Good Standing**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

#### **Academic Integrity**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

*The Source: A Student Policy Guide:* [www.iup.edu/studentconduct/thefsource/](http://www.iup.edu/studentconduct/thefsource/)

#### **Bereavement-Related Class Absences**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

#### **Continuous Graduate Registration for Thesis**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

#### **Grade Appeal Policy**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

#### **Graduate Fresh Start Policy**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

**Graduate Residency Requirement**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

**Leave of Absence Policy**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

**Time Limitations**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

**Time-to-Degree Masters/Doctoral Dismissal Appeal Policy**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

**Time-to-Degree Extension for Master's Thesis**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

**Transfer of Credits Policy**

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

**Research**

For more information, visit the website of the School of Graduate Studies and Research, click on *Research*:

[www.iup.edu/gradcatalog](http://www.iup.edu/gradcatalog)

[www.iup.edu/research/](http://www.iup.edu/research/)

## Signature Page

My signature below indicates that I am responsible for reading and understanding the information provided and referenced in this department/program student handbook.

\_\_\_\_\_ [please initial] I understand my program coordinator may share this document with the School of Graduate Studies and Research.

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Submit to Valerie N Long by September 1**

**The Mathematics Department/Master of Education in Mathematics Education will keep this signed document on file.**