IUP Graduate Handbook
Masters of Science in Applied Mathematics

Department of Mathematical and Computer Sciences

Handbook Updated Summer 2021

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Introduction

Welcome to the Department of Mathematical and Computer Sciences! We are delighted that you have decided to join us.

This handbook was developed to answer frequent and important questions related to the M.S in Applied Mathematics program. It does not rep

Student Conduct and Student Rights

www.iup.edu/studentconduct/policies/
www.iup.edu/gradcatalog

Department of Mathematical and Computer Sciences

Information about the department is found at:
https://www.iup.edu/math-computer-sciences/

Mission Statement and Program Objectives

This program will:

- Prepare students for lifelong learning and successful careers using their mathematical and statistical skills;
- Train students thoroughly in methods of analysis, computational mathematics, and statistics;
- Develop the skills pertinent to the practice of mathematics and statistics, including the students' ability to formulate problems, to think creatively, and to synthesize information;
- Teach students to use current mathematical concepts and data analysis techniques for problem solving;
- Have students utilize current mathematical and statistical software;
- Develop oral and written communication skills.

Upon completion of the program students will have:

- Proficiency with the fundamental knowledge in applied mathematics or statistics,
- Ability to use analytical and computational methods to solve problems,
- Competence to communicate concepts and results to those with or without subject matter knowledge (both orally and in writing),
- Exposure to research talks in seminars and colloquia,
- Involvement in research projects,
- Ability to use current techniques, skills, and tools necessary for computing practice,
- Ability to function effectively on teams to accomplish a common goal,
- An ability to analyze a problem, and identify and define requirements appropriate for its solution.

Faculty and Staff

Program Coordinators: Dr. Frederick Adkins: fadkins@iup.edu, 724-357-3790
Dr. John Chrispell: jchrispe@iup.edu, 724-357-4763

IUP Career and Professional Development Center: wv lunapna.inauna/c|err/ /Link <<factSpan 1 >>BDC 20.02

*Required unless comparable courses have been taken at the undergraduate level. No more than 3 credits may be waived from a total of 30 credits of coursework.

II. CONTROLLED ELECTIVES† (15 CREDITS)

MATH 523: Complex Variables (3 credits)
MATH 547: Modeling and Simulation (3 credits)
MATH 551: Numerical Methods for Supercomputers (3 credits)
MATH 640: Numerical Mathematics (3 credits)
MATH 641: Ordinary and Partial Differential Equations (3 credits)
MATH 643: Graphs, Networks, and Combinatorics (3 credits)
MATH 645: Nonlinear Programming Models (3 credits)
MATH 647: Advanced Simulation (3 credits)
MATH 665: Applied Regression Analysis and Design of Experiments (3 credits)
MATH 667: Applied Statistical Methods (3 credits)

†At least 12 credits must be at the 600 level.

III. ADDITIONAL ELECTIVES‡

Other graduate-level mathematics courses may be selected with approval of the student's advisor. Also, with the advisor's approval, up to six credit hours of graduate work may be taken in disciplines such as

3. Choose one from: MATH 521, MATH 523, MATH 527, MATH 553, MATH 576
4. Choose one from: Thesis (3 credits), Internship (6 credits) (option for teaching or industry setting)

† Each course is 3 credits unless indicated otherwise.

Course Descriptions

Careers and Outcomes - Applied Mathematics, MS - Graduate Programs -
Computer Sciences -

Course Rotions*

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Models in OR)

MATH 641
MATH 667
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MATH 547

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View the IUP Academic Calendar: www.iup.edu/news/events/calendar/academic/

The Following University and SGSR policies can be found at www.iup.edu/gradcatalog
Academic Good Standing
Academic Integrity
Bereavement-Related Class Absences
Continuous Graduate Registration for Dissertation and Thesis
Grade Appeal Policy
Graduate Fresh Start Policy
Graduate Residency Requirement
Leave of Absence Policy
Time Limitations
Time-to-Degree Masters/Doctoral Dismissal Appeal Policy
Time-to-Degree Extensions for Master's Thesis and Doctoral Dissertation
Transfer of Credits Policy

Research

Applied Research Lab: www.iup.edu/arl/

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

www.iup.edu/gradcatalog
www.iup.edu/research/

Appendices

What Faculty Expect of Students

Graduate students are expected to be familiar with course syllabi and attend class regularly. Students should actively participate in their own learning, both inside and outside of class. Questions on course material should be brought to the instructor's attention. All course assignments should be turned in on time. As a graduate student, your assignments should be professionally presented. Faculty may require assignments to be typed (including complex mathematical formulas). At all times, graduate students are expected to conduct themselves in a respectful manner conducive of a positive learning environment.

What Students Can Expect of Faculty

In fulfillment of teaching obligations, yo

You can also expect faculty members to actively participate in scholarly growth and to contribute to the department, college, and university through a variety of service activities. Faculty members will facilitate growth in your professional development in each of these areas. As appropriate to the individual student, this can include apprenticeships in research in which the student learns how to define research problems. It may also mean participation in service experiences and socialization to the norms of the mathematical community.

Extra-Curricular Activities

Annual Department Events: The department hosts picnics and annual research presentation days. Students are welcomed and encouraged to attend departmental events.

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All interns must submit a resume approved by the internship coordinator. It is recommended that this step be completed at least one full semester prior to the semester that the student wishes to do the internship.

No interns may earn more than 6 credits for an internship. Forty hours of work equals one credit hour, so a 6credit internship requires 240 hours of internship work.

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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 Dr. John Chrispell by the end of the first week of classes.

The Department of Mathematical and Computer Sciences will keep this signed document on file.