IUP Graduate Handbook

Masters of Science in Applied Mathematics

Department of Mathematical and Computer Sciences

Handbook Updated 2022-2023

Master of Science in Applied Mathematics
Department of Mathematics
210 S. 10th St., Indiana, PA 15705
Phone: 724-357-2608

Program Website:

https://www.iup.edu/math-computer-sciences/grad/applied-mathematics-ms/index.html
https://www.iup.edu/math-computer-sciences/grad/index.html

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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 replace student advising, but is offered as a means of assisting that process. We encourage you to read this handbook carefully, as it will facilitate your advancement through the program. We also expect that you will familiarize yourself with the Graduate School Catalog as it details addresses Graduate School policies (https://www.iup.edu/registrar/catalog/index.html).

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. Please contact the program coordinators if you cannot locate information you need in this handbook.

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

https://catalog.iup.edu/content.php?catoid=7&navoid=951

Title IX Reporting Requirement

https://catalog.iup.edu/index.php

Student Conduct and Student Rights

https://www.iup.edu/studentsupportandstandards/policies/index.html
https://www.iup.edu/registrar/catalog/index.html

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*

Admission

- The minimum requirements in undergraduate coursework: Calculus sequence, Introduction to Ordinary Differential Equations, Introduction to Probability and Statistics, Introduction to Linear Algebra, Computer Programming
- An Introduction to Mathematical Proof course is strongly recommended.

Graduate Admissions: www.iup.edu/admissions/graduate/

For more information regarding Admission Classification and Provisional Admission for International Graduate Application, view the Graduate Catalog: https://www.iup.edu/registrar/catalog/index.html

Financial Assistance

IUP Office of Financial Aid: www.iup.edu/financialaid/

Graduate Assistantships

- https://www.iup.edu/admissions/graduate/financialaid/index.html
- Office of Financial Aid: www.iup.edu/financialaid/
- *Program/Department Awards – optional*

Academic Advisement

- Each student will have an academic advisor, who is responsible for providing advice on course selection.
- Each student is responsible for producing a tentative time plan based on the course rotation and individual interest prior to meeting with the advisor.

Campus Resources & Student Support

The School of Graduate Studies and Research: www.iup.edu/graduatestudies/
Graduate Catalog: https://www.iup.edu/registrar/catalog/index.html
Office of Student Billing: https://www.iup.edu/student-billing/
Office of the Registrar: www.iup.edu/registrar/
Disability Support Services: www.iup.edu/disabilitysupport/
Office of Social Equity: www.iup.edu/socialequity/
IUP Campus Library: www.iup.edu/library/
MyIUP: www.iup.edu/myiup/
IT Support Center: www.iup.edu/itsupportcenter/
Veterans and Service Members: www.iup.edu/veterans/resource-center/
IUP Writing Center: www.iup.edu/writingcenter/
IUP Career and Professional Development Center: www.iup.edu/career/
IUP Parking Services and Visitor Center: www.iup.edu/parking/
University Policy: www.iup.edu/police/ |724-357-2141
Crisis Intervention 24/7 Hotline: 1-877-333-2470
Student Registration: www.iup.edu/registrar/students/registration-resources/index.html

IUP Email

IUP offers an email account to all active students. **Your IUP email address is the primary means by with 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 https://www.iup.edu/itsupportcenter/get-support/e-mail-and-calendar/general/ to learn more about setting up this account. For more information regarding University Policy on email communications, view the Graduate Catalog: https://www.iup.edu/registrar/catalog/index.html

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 https://www.iup.edu/graduatestudies/resources-for-current-students/student-engagement/graduate-student-assembly/index.html for more information.

Programs and Degrees

Master's Program

The MS program in Applied Mathematics is designed to produce graduates who are marketable in industry, government, and education. The program is also appropriate for professionals who wish to add to their skills and for secondary mathematics and science teachers who wish to gain a deeper understanding of how mathematics and statistics can be used to solve applied problems. It also provides a solid background for those planning to enter a PhD program.

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Faculty members offer courses in the areas of traditional applied mathematics, operations research, computer science and statistics. The department houses its own computer facilities with which faculty and students engage in activities such as simulation and statistical analysis. Students utilize quantitative modeling techniques, including probability, statistics, optimization, and simulation, to the solution of data-driven, real-world problems. Most classes are offered at times convenient for nontraditional students who wish to advance their careers in applied mathematics, secondary education, or statistics. Students have the option of writing a thesis or participating in an internship.

The **Business Analytics Specialization** combines coursework in mathematics, statistics, and data science for business and management-oriented students. Students will gain quantitative modeling skills that empower them to find solutions and make better decisions when confronting data-driven, real-world problems.

The **Community College Instruction Specialization** combines the practical focus of the Applied Mathematics program with an emphasis on teaching the techniques necessary to succeed as a faculty member in two-year higher education institutions. Instructors at Pennsylvania community colleges must have a master's degree with at least 18 graduate credits in the discipline they teach. Students in this specialization will receive a master's degree in Applied Mathematics while also learning valuable teaching techniques, setting them on a path to success.

The **Data Science Specialization** provides the opportunity to gain skills on designing, analyzing, and utilizing complex databases to provide real world, real-time solutions that incorporate predictive analytics and forecasting to improve decision making.

The MS in Applied Mathematics consists of the following graduate courses: (Total 33–36 credits)

I. CORE COURSES* (15 CREDITS)

MATH 545: Deterministic Models in Operations Research (3 credits)
MATH 546: Probabilistic Models in Operations Research (3 credits)
MATH 563: Mathematical Statistics I (3 credits)
MATH 564: Mathematical Statistics II (3 credits)
MATH 625: Analysis for Applied Mathematics (3 credits)

*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 chemistry, computer science, economics, finance, management information systems, and physics.

‡The MS in Applied Mathematics requires a minimum of 27 credits of course work in addition to the research requirement listed below.

IV. RESEARCH REQUIREMENTS (3–6 CREDITS)

Option I MATH 795: Thesis (3 credits) or
Option II MATH 698: Internship (6 credits).

The MS in Applied Mathematics-Community College Track consists of the following graduate courses: (Total: 33–36 credits)

I. CORE COURSES* (15 CREDITS)

MATH 545: Deterministic Models in Operations Research (3 credits)
MATH 546: Probabilistic Models in Operations Research (3 credits)
MATH 563: Mathematical Statistics I (3 credits)
MATH 564: Mathematical Statistics II (3 credits)
MATH 625: Analysis for Applied Mathematics (3 credits)

*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 (18–21 CREDITS)) †

1. Choose two from: MAED 611, MAED 613, MAED 614, MAED 654
2. Choose two from: MATH 640, 641, MATH 643, MATH 645, MATH 665, MATH 667
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.

III. RESEARCH REQUIREMENTS (3–6 CREDITS)

Option I MATH 795: Thesis (3 credits) or
Option II MATH 698: Internship (6 credits).

The MS in Applied Mathematics Specialization for Business Analytics consists of the following graduate courses:

I. CORE COURSES* (21 CREDITS)

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

MATH 618 - Data Science Theory & Application (3 credits)
MATH 625 - Analysis for Applied Mathematics (3 credits)
MATH 546 - Probabilistic Models in Operations Research (3 credits)
MATH 511 - Univariate Data Analysis (3 credits)
MATH 512 - Multivariate Statistics (3 credits)
MATH 516 - Data Science Fundamentals (3 credits)

Choose one of:
MATH 545 - Deterministic Models in Operations Research (3 credits)
or MGMT 537 - Supply Chain Modeling and Analysis (3 credits)

II. Controlled Electives†** (9 credits)

† At least 9 cr. must be at the 600 level.
** Business Analytics focused students should consider selecting MATH 665 and 667, and one of MATH 645, and/or 647

MATH 640 - Numerical Mathematics Credits: 3
MATH 641 - Ordinary and Partial Differential Equations Credits: 3
MATH 643 - Graphs, Networks, and Combinatorics Credits: 3
MATH 645 - Nonlinear Programming Models Credits: 3
MATH 647 - Advanced Simulation Credits: 3
MATH 665 - Applied Regression Analysis and Design of Experiments Credits: 3
MATH 667 - Applied Statistical Methods Credits: 3

MGMT 637 - Operations and Supply Chain Management Credits: 3
QBUS 601 - Mathematical Modeling and Decision Making **Credits:** 3

III. Additional Electives‡

Other graduate-level mathematics courses may be selected with the 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 chemistry, computer science, economics, finance, management information systems, and physics.

‡ The MS in Applied Mathematics requires a minimum of 27 cr. of course work in addition to the research requirement listed below.

IV. RESEARCH REQUIREMENTS (3–6 CREDITS)

Option I MATH 795: Thesis (3 credits) or
Option II MATH 698: Internship (6 credits).

Total Required Credits: 33-36

The MS in Applied Mathematics Specialization for Data Science consists of the following graduate courses:

I. CORE COURSES (21 credits)*

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

MATH 516 - Data Science Fundamentals (3 credits)
MATH 545 - Deterministic Models in Operations Research (3 credits)
MATH 546 - Probabilistic Models in Operations Research (3 credits)
MATH 563 - Mathematical Statistics I (3 credits)
MATH 564 - Mathematical Statistics II (3 credits)
MATH 618 - Data Science Theory & Application (3 credits)
MATH 625 - Analysis for Applied Mathematics (3 credits)

II. Controlled Electives (9 credits) At least 9 cr. must be at the 600 level. Data Science focused students should consider selecting MATH 665 and MATH 667, and one of MATH 645, and/or MATH 647

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)

III. Additional Electives‡

Other graduate-level mathematics courses may be selected with the 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 chemistry, computer science, economics, finance, management information systems, and physics.

‡ The MS in Applied Mathematics requires a minimum of 27 cr. of course work in addition to the research requirement listed below.

IV. RESEARCH REQUIREMENTS (3–6 CREDITS)

Option I MATH 795: Thesis (3 credits) or
Option II MATH 698: Internship (6 credits).

Total Required Credits: 33-36

Course Descriptions

https://www.iup.edu/math-computer-sciences/grad/applied-mathematics-ms/course-requirements.html

Course Rotations*

Even Year		Odd Year	
Fall	Spring	Fall	Spring
MATH 546 *(Probabilistic Models in OR) (Req)* **MATH 641** (ODE/PDE) **MATH 667** (Applied Statistical Methods) MATH 547 (Modeling and Simulation)	**MATH 647** (Advanced Simulation) **MATH 665** (Applied Regression Analysis and Design of Experiments) **MATH 550** (Topics in Applied Computational Mathematics)	***MATH 563*** *(Mathematical Statistics I) (Req)* ***MATH 625*** *(Applied Mathematical Analysis) (Req)* **MATH 640** (Numerical Mathematics)	***MATH 545*** *(Deterministic Models in OR) (Req)* ***MATH 564*** *(Mathematical Statistics II) (Req)* *MATH 645* (Nonlinear optimization)- Alternates with **MATH 643** (Graphs, Combinatorics, Networks)

* If you are in the community-college track, please meet with Dr. Adkins or Dr. Chrispell to determine your schedule.

All courses listed above are usually offered during late afternoon to evening on Monday to Thursday. MATH 563 is offered every fall semester; however, it may be during the day-time.

Evaluation of Students

For information regarding School of Graduate Studies and Research policies on grading, view the Graduate Catalog: https://www.iup.edu/registrar/catalog/index.html

A program assessment exam will be offered every fall semester for students who completed 18 credits prior to the fall semester. The goal of this exam will be to assess student retention of core concepts from courses taken in the program.

Degree Completion

Requirements for graduation include that each student must complete at least 9 courses and fulfill all program requirements including five required courses (italic text in the course rotation table) and five elective courses, plus 6 credits in internship or 3 credits in thesis. You must maintain a minimum GPA of 3.0. At least 50% of your total credits must be at or above the 600 level. The program coordinator will review the graduation application according to the curriculum requirements.

For more information, view the Graduate Catalog: https://www.iup.edu/registrar/catalog/index.html

Thesis and/or Dissertation Completion

Thesis Defense Protocol

- The candidate must send the thesis to the committee members at least two weeks prior to the day of the defense.
- The announcement of the defense should be sent out by the committee chair at least one week prior to the day of the defense.
- The defense of a thesis/dissertation is open to the public. The committee will have the opportunity to continue communication with the candidate in a closed session.

Evaluation Outcome for Dissertation and/or Thesis

Thesis/Dissertation Defense Department Process or Protocol about how the dissertation and/or thesis are evaluated and possible results and what they mean for the student. For example, pass, pas with revisions, revise and resubmit, fail.

For students admitted after Fall 2017 – Dissertation and 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.

For students admitted prior to Fall 2017 – Dissertation and 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 Graduate Catalog: https://www.iup.edu/registrar/catalog/index.html

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/

The Following University and SGSR policies can be found at
https://www.iup.edu/registrar/catalog/index.html
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

https://www.iup.edu/registrar/catalog/index.html
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 well-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, you can expect faculty to select course content that is appropriate and assign work that enhances student understanding of the content. Assignments will be graded

carefully, objectively, and returned in a timely manner. Faculty will be competent in using technology and capable of using collaborative approaches to teaching and learning. You can also expect that the faculty will treat each student respectfully and be available and welcoming during scheduled office hours. Instructors are also available by appointment, as well as before, during, and after class.

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.

Departmental Clubs: All students are welcome to participate with the Math Club or the Actuarial Club. You can also start your own club!

Colloquia: The Mathematics Department colloquia will be announced during the semester. Please pay attention to the flyers and announcements on the web. Contact the chair of the Colloquium Committee if you are interested in giving a presentation.

Professional Organizations: Students are encouraged to participate in professional organizations which are free or have discounted rates for students. Professional organizations offer students the opportunity to present or attend regional and national meetings.

- Society for Industrial and Applied Mathematics: www.siam.org
- As the department has the membership, students are encouraged to sign up for a free SIAM membership: http://www.siam.org/students/memberships.php
- American Mathematical Society: www.ams.org
- Mathematical Association of America: www.maa.org
- Institute for Operations Research and the Management Sciences: www.informs.org

External Resources

Mathematics Publication Database: http://www.ams.org/mathscinet/

Thesis Guidelines

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. 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.html

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:

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.

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.

Responsibilities – Acclimate yourself not only with your responsibilities but also with the responsibilities of all of those individuals involved in the thesis process.

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.

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 may provide resources which you may use to facilitate a properly written thesis.

In addition to any requirements contained within the TDM, the Department strongly suggests that your thesis be typeset using a LaTeX compatible typesetting software package. Packages such as Scientific Notebook and MiKTeX are 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.

Internship Guidelines

Internship experience is valuable for any mathematics student who is considering a career in industry or in government agencies. Real world experience gives graduates advantages in job applications. You should contact the internship coordinator for more detail information.

Graduate internships carry up to 6 credit hours. All interns are assigned a faculty supervisor by the internship 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 internship coordinator early in the Fall semester to craft a resume and start a search in a timely manner. The student will be assisted in the search by the department internship coordinator, but it is ultimately the student's responsibility to find an internship.

Internship Qualifications:

All graduate interns must have completed a minimum of 12 semester hours, with a minimum 3.0 GPA, before their internships commence.

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 6-credit internship requires 240 hours of internship work.

Graduate students must register for the departmental internship course MATH 698 to receive IUP credits for the internship.

Interns must also complete the math department's electronic experiential education information form before commencing their internship.

Intern Responsibility:

Interns are expected to complete the following requirements:

- Record daily activity logs.
- Provide weekly updates to the faculty supervisor.
- Write a final written report.
- 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. 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 company personnel. 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.

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.