APPLIED & COMPUTATIONAL MATHEMATICS MS (ONLINE) SUPPLEMENTAL GUIDE

ADMISSIONS/APPLICATIONS

Can I start any quarter?

- We accept applications for our online MS once per year. The start date is for autumn quarter. Applications are due July 1st of each year.

Do I need a bachelor's degree in Math or Applied Math to apply to your program?

- Prospective students ideally hold a bachelor's degree in mathematics, applied mathematics, or another branch of science or engineering, but we will consider applicants from other disciplines. Specifically, you should have completed coursework in calculus, differential equations, linear algebra, and numerical analysis or scientific computing. Applicants should have the ability to program in Matlab, C, C++, Python, Fortran, or a similar scientific computing language.

What is the minimum score needed on the GRE General Exam?

- We do not use a minimum score to eliminate applications. GRE tests are used as a supplement to the rest of the application.
- We recommend a score above 160. (The score ranges up to 170.)

How competitive is the program in terms of admissions?

- Since this is a distance-learning program, we don't have a set enrollment limit; so, it is not competitive in that sense. For the autumn 2020 start, 55% of our applicants were offered graduate admission. Some of the applicants that were denied graduate admission were offered graduate non-matriculated (GNM) status with the goal of improving their academic record for reapplication to the degree program later.

Would I be eligible for an F-1 Student Visa if I studied in your MS program online?

- No. However, you can do our MS program from anywhere in the world. If you are an international student, you may study our MS program from your home country.

How do I find courses equivalent to your prerequisite courses?

- Most universities and community colleges have courses similar to our prerequisites. We have listed our prerequisite topics below. We do not keep a list of equivalent coursework at other institutes. Instead, you may use these descriptions to compare to undergraduate courses offered at other regionally accredited institutions OR you may take these courses at UW as a non-matriculated (NM) student if you are local. (A calculus series, prior to these classes, is assumed.)

  -Numerical Analysis

  Beginning Scientific Computing (AMATH 301) or equivalent coursework
  Introduction to the use of computers to solve problems arising in the physical, biological, and engineering sciences. Application of mathematical judgment, programming architecture, and flow control in solving scientific problems. Introduction to MATLAB and Python routines for numerical programming, computation, and visualization.

  Differential Equations

Introductory survey of ordinary differential equations; linear and nonlinear equations; Taylor series; and. Laplace transforms. Emphasizes on formulation, solution, and interpretation of results. Examples drawn from physical and biological sciences and engineering.

Linear Algebra

Analysis and application of numerical methods and algorithms to problems in the applied sciences and engineering. Applied linear algebra, including eigenvalue problems. Emphasis on use of conceptual methods in engineering, mathematics, and science. Extensive use of MATLAB package for programming and solution techniques.

Recommended: We recommend a course in either advanced calculus or real analysis

Do the prerequisite courses need to be completed before I submit my application?

- They may be "in progress" on a transcript, with the understanding that they will be finished before the quarter of admission. However, this will delay review and decision on your application.

Can I complete the prerequisites while starting the graduate coursework? (i.e. conditional acceptance)

- No.

Would I be able to count the prerequisite courses towards my graduate course and credit total requirements OR can I transfer these courses?

- No. The prerequisite courses are undergraduate level courses and cannot be counted towards any graduate level requirements. They are needed as background to our grad level courses.

Who can write my three letters of recommendation?

- Professors familiar with the student and his/her work (preferred).
- Supervisors and superior officers may write letters.

What should be in a letter of recommendation?

- The best letters provide specific examples of each student's related academic/research work.
- They would preferably cover information that would make the student a good candidate for a graduate program in Applied Math.

What are the transfer rules for GNM students?

- GNM students can take courses towards the MS program. If admitted to the full degree program, up to 12 qualified credits taken as a GNM student may be applied to the MS.

Can an exception be made for me if I do not meet the requirements for English proficiency?

- No. The UW Graduate School sets English proficiency requirements. Online MS applicants must meet the requirements as listed. Work experience or years in the U.S. is not considered.

FINANCIAL

Are there any grants/scholarships available?

- No grants or scholarships are available through our department, but students may be eligible for financial aid. For questions regarding Financial Aid, please visit the UW Financial Aid office webpage.

Are there any unusual expenses associated with the program?

- Matlab and Simulink Student Edition software is highly recommended and may be required

by some courses. It can be purchased through MathWorks at a student discount of $99 currently.

I am a state employee. Do I qualify for tuition exemption?

- No. This program is not funded by the state and therefore cannot accept state funded waivers.

When is tuition/fees due?

- Please refer to the payment procedures help guide to see when payment is due and for info on various payment methods.

PROGRAM SPECIFICS

How long has the online program been running?

- The entire distance program began in 1983 as Televised Instruction in Engineering (TIE). It was renamed EDGE in 1999. It has been offered online since 2007.

How is this program different from other similar programs?

- This program is one of the nation's few online master's degrees in applied mathematics. In terms of reputation and quality of online education, it is arguably the best.
- Students receive the same quality curriculum taught by UW faculty as those who attend classes on the Seattle campus.
- Students also have the flexibility of enrolling on a full or part time basis, allowing them to complete the required coursework typically in one to three years.

Are transfer credits accepted?

- Students may be able to transfer up to 6-quarter credits (or 4-semester credits) if approved by the department and the Graduate School. Students should petition the Graduate School through the Graduate School website *after* admission to the program. Transfer of credit cannot be determined prior to admission. Credits may not have been used toward another degree.

How long does a student have to complete the program? Is part-time permitted?

- Students who are full-time complete the program in one academic year (3 courses per quarter).
- Most students complete the program on a part-time basis within 3 years, but students have up to 6 years total to complete the degree. (GNM and/or on-leave status counts toward the 6-years.)

What is the student to teacher ratio?

- Typically, courses have between 35 to 50 classroom students and between 15 to 25 online students. Courses will typically have teaching assistants (TA) in addition to the instructor, and TA positions are increased as registration goes up.

Is there a way to transition from the MS to the PhD program?

- Students may apply internally by the application deadline for the year they wish to start in the PhD program. Students' files will be evaluated with those of the other PhD applicants. To date, two students in the online MS program have entered the PhD program.
- Our PhD program is very competitive with approximately a 10% admission rate. Our admitted applicants have GPAs around 3.8 and above, outstanding letters of recommendation, and research experience.

Could I do your PhD program remotely and/or part-time?

- No. Our PhD requires a) additional coursework only available on campus, b) additional study

for qualifying and general exams, and c) intense, supervised work with an advisor.
    - We ask our PhD students to make a sacrifice to do this full-time work. However, they are guaranteed 5 full years of funding while doing said work.

Can I easily switch between the online and campus MS program?

- No, when admitted to this program you remain in this program until completion as we do not transfer into other programs.

Is there a thesis option?

- Not for students in the online program since it is too difficult for advisors and students to work as closely as needed for something as intensive as a thesis.

Is course enrollment required each quarter?

- Enrollment is required each quarter, with the exception of summers. Summers are not required, as we do not offer graduate level coursework. In standard quarters (autumn, winter, spring) you must enroll in at least one course or officially go on-leave through the Graduate School.

FORMAT & LOGISTICS

Can the program be completed completely at a distance? Do students ever need to be on campus?

- Students who live in the local Puget Sound area can sometimes choose to take their final exam on campus or set up an official proctor. (See below.)
- Students who do not live in the local Puget Sound area are not required to come to campus; the coursework can be completed entirely at a distance.
- Optional: online students are invited to attend the graduation celebration held on campus each June.

Where can I find class syllabi prior to a quarter?

- See the departmental website page Current Offerings. Remember, not all classes listed here are offered online!

How do I register?

- Graduate Non-Matriculated (GNM) Students: you will be emailed by Professional & Continuing Education (PCE) when registration is available. They will provide a registration form with instructions.
- Non-Matriculated or Single Course Enrollment Students: submit the (2) registration forms found here in the last section.
- Degree Students: registration dates are in the Academic Calendar. Online registration is accessible at MyUW. The UW PCE Time Schedule and access to online registration is located under the Registration section on the home page. A registration help guide may be found here.

How do online students interact with instructors?

- Email/phone/Skype/Gotomeeting; discussion boards

Can I participate during the live lecture?

- Unfortunately, no.

Is it possible to attend lectures on campus occasionally or take a course completely on campus?

- As long as there is room in the class, you may attend lectures on campus, even if you are enrolled in the online section.
- Similarly, students are allowed to enroll for courses that are not offered online, if their schedule allows and they are local. You may need to obtain an add code from the instructor

for registration. You still pay the same course fees.

As an online student, am I eligible to: receive a Husky Card, access the library, use the IMA Gym, or set up an email account?

- If you are local, you can obtain a Husky Card in person. You may also join the IMA.
- Access UW Libraries.
- All students are eligible to create a UW email account (yourNetID@uw.edu). Course and departmental information will be sent to your UW email address. Please see the Student Guide for details.

OUTCOMES

Is the degree earned through the online program identical to the degree earned in the classroom-based program?

- Graduates earn a Master of Science in Applied and Computational Mathematics- the diploma does not indicate that these classes were taken online.

Is there an internship or job placement program?

- No. However, students may access Handshake, which is the UW job and internship search system. The UW Career & Internship Center has helpful resources as well.
- You may also wish to explore where Amath alumni work on LinkedIn.

Will this degree qualify me to teach?

- This degree qualifies people to teach at most community colleges or junior colleges, but we cannot confirm this for any specific institution. A few institutions might require a math education or a pure math degree. Education coursework is not part of this program. The safest thing for applicants who have an institution in mind is to check with that institution. Given the reputation of the program, this is usually not an issue.

What jobs can you go into after finishing this program?

- There is an extremely wide range: some students go on to PhDs; others work at research labs. Most graduates go on to work in industry. Typically, we have graduates who have gone into finance, pharmaceutical industries, insurance, engineering firms, biotech companies, software, tech companies, etc. It is a very marketable degree, offering a wide range of possibilities.
- A great resource for exploring career options is available at SIAM: Thinking of a Career in Applied Math?