

PORTLAND STATE UNIVERSITY

ENGINEERING AND TECHNOLOGY MANAGEMENT

2017-18 STUDENT HANDBOOK



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WELCOME!

On behalf of the faculty and staff, I welcome you to the Department of Engineering and Technology Management (ETM) at Portland State University.

You are among a select group of individuals who have come from around the globe to study in what is recognized as one of the finest graduate programs in our field. The faculty and staff join me in our dedication to make this an academically and professionally rewarding experience for you.

The ETM faculty and students comprise a diverse group, not only in their personal backgrounds, but in their professional backgrounds as well. They are a group of men and women who are experts in their fields. Their academic and workplace credentials provide our students with depth both in research and in the application of that research in technical organizations. The leading edge research you will conduct with our faculty will be of critical importance to the management of technology for many years to come.

Portland State University's ETM Department also is home to one of the most prestigious international technology management conferences: Portland International Conference on Management of Engineering and Technology (PICMET). As a student, you will have the opportunity to be part of this conference, to meet scholars and researchers from around the world in formal and informal gatherings, and to make professional contacts well beyond the PSU campus.

This handbook has been provided to help smooth your first days in the program and to serve as a guide as you navigate your studies in the department. The handbook was compiled with suggestions from current students and contains information about the campus, the city, the programs offered by the department, and other essentials of academic life at PSU. Detailed information is available on the ETM website

I believe you will find it a great resource as you make your way from graduate student to one of the new leaders in technology management. Many opportunities will arise throughout your time in ETM and I encourage you to take advantage of these.

You have our best wishes for a successful experience at ETM. Welcome to the ETM Family!

Timothy Anderson, Ph.D, Chair
Department of Engineering & Technology Management
Maseeh College of Engineering & Computer Science

VISION, MISSION, OBJECTIVE AND GOAL

- **Vision** – To develop leaders for a world in which technology is the dominant force and management of technology is the requirement for global leadership.
- **Mission** – To be a nationally and internationally recognized center of excellence in research, education and implementation of technology management.
- **Objective** – To be the first choice knowledge source for world-class industry and for students striving to be leaders in engineering and technology management worldwide.
- **Goal** – To prepare professionals in engineering, science and technology-related fields for leadership through technology management.

ETM's VALUES

- Strive for uncompromised excellence
- Bring the best people to ETM
- Have an open, participative environment
- Help all members of the ETM Department reach their full potential in their fields

INTRODUCTION

Portland State University's ETM Department offers a variety of degrees and certificates, including Master's and Ph.D's. tailored to the needs of engineers, scientists and professionals in related disciplines.

Programs offered by the ETM Department provide students with a firm foundation in the creation of value through engineering and technology while giving them a sound management education. This integrated learning experience:

- enables graduates to deliver effectively in the rapidly changing and complex world of engineering and technology, and
- provides graduates with a broad knowledge base for making and implementing decisions necessary for leadership on both strategic and operational levels.

ETM's core requirements cover the critical areas of technical management while enabling students to maintain identity in their technical background. Emphasizing the value of technology, analytical decision-making, group project work, and people skills, the curriculum is designed to equip graduates with a resilient base of engineering and technology management competencies.

WHO ATTENDS ETM?

The ETM program is home to a diverse community of students with a wide range of academic and professional experience. This diversity adds a unique opportunity for our ETM students as they interact in classes, on research projects and in collaboration with individuals who contribute to each other's knowledge in ways not otherwise available.

- Most ETM students hold at least one degree in engineering-related disciplines.
- 20% have a Master's or Ph. D. in their technical specialties.
- 65% are employed full or part time while pursuing their degrees.
- ETM students' ages range from 24 to 58 and the average is about 32.
- The average work experience is 7 years.
- The job titles of those employed in industry range from President or CEO to engineer, researcher, or programmer.

"ETM opened up the way I approach decisions. By understanding the basics of decision analysis, one of the key principles of technology management, I was able to apply the same techniques to deciding whether to screen a population for disease or perform a particular diagnostic test. Upon graduation from the program, I confidently began my new position as faculty at a medical university."

Dr. Karen Eden, Assistant Professor,
Oregon Health & Sciences University,
Portland Oregon

INTERNATIONAL INITIATIVES AND OPPORTUNITIES

PSU's ETM Department not only hosts diverse faculty and students but it is also active in leading global initiatives that capitalize on the wide range of engineering and technology management expertise across borders and boundaries.

- ETM is the headquarters for **PICMET (Portland International Conference on Management of Engineering and Technology)**. The first PICMET was held in 1991. Beginning in 1997, it has become an annual conference that provides an invaluable opportunity for exchange of ideas, information, research results and experiences in development and implementation of technology management concepts. Leading decision makers, scholars and practitioners of technology management come together from more than forty countries to discuss existing and emerging issues in technology management and to present multiple perspectives in addressing them.
- From 1987 to 2002, ETM was the editorial headquarters for **IEEE Transactions on Engineering Management**, the prestigious, refereed international research journal, published by IEEE since 1954.
- Dr. Tugrul Daim is the Editor-in-Chief of *The International Journal of Innovation and Technology Management*.
- From 1987 to 2000, ETM was the editorial headquarters for the Wiley Series on Engineering & Technology Management, a book series which included twenty-three textbooks used in Engineering & Technology programs throughout the world.

- The Portland Chapter of ***OMEGA RHO International Honor Society***, which recognizes academic excellence in Operations Research and related disciplines, is located in the ETM Department. Omega Rho was founded in the spring of 1976 at a joint meeting of the Operations Research Society of America and the Institute of Management Sciences. Omega Rho is a Member Society of the Association of College Honor Societies. Chapters and members promote academic excellence in higher education and recognize superior scholarship and leadership in the fields of operations research and management science. Students from ETM, Business Administration, and Mathematics may qualify for membership. To be eligible, an ETM student must have a grade point average of 3.5 or better and have taken 27 hours of graduate courses and must then be nominated for membership.
- ETM has established a large number of ***international academic and research collaborations*** with universities and research institutes around the world. A small sample includes the University of Pretoria in South Africa, University of Bremen in Germany, Seoul National University in Korea, and ETRI (Electronics and Telecommunication Research Institute), also in Korea. The collaborative agreements cover joint research projects, faculty and student exchanges, courses, seminars, and other similar activities.

STUDENT LIFE

A significant aspect of any graduate program is the interaction among students—the exchange of ideas as well as the opportunity to establish lifelong friendships and professional relationships. Students in the ETM program have many options for engaging in this interaction within the program, campus-wide, and in the city and region.

The ETM program embraces diversity. Students in the program come from different countries around the globe as well as from a wide variety of local and regional industries, corporations, and professional backgrounds. In an increasingly global economy, this diversity greatly enhances the program by bringing many cultural and professional perspectives directly into our classrooms, seminars and study groups. Students can learn firsthand how engineering and technology management might be applied in different settings—geographically, culturally, and by engineering discipline.

It is the norm, not an exception, to have student teams with members from competing companies and diverse ethnic backgrounds. These teams develop projects focused on multiple industries in multiple countries.

"In this Department, students feel valued and wanted. This is what we need as students to be able to successfully pursue our studies...Students get any help they ask for and get even what they can't imagine. My experience has been positive. I am proud of being an ETM student."

**Valentin Havugiyaremye,
Rwanda, Africa**

SOCIAL EVENTS

In addition to more formal opportunities for academic and professional exchange, the ETM program sponsors several social events each year for students, their families, faculty and alumni.

These include a potluck dinner each year, a graduation awards and honors ceremony, as well as other informal parties organized by students and faculty. ETM students play on intramural sports teams, travel to regional tourist sites, and attend arts and cultural events together. Many students, including those from other programs, have commented favorably on the friendliness and “family” feel of the ETM Department.

STUDENT ORGANIZATIONS

In addition to social life within the Department, ETM students are invited to explore the nearly 200 student organizations on campus. These organizations include international clubs, special interest groups, athletic teams, business and professional organizations, and social and cultural groups. More information is available on the Student Affairs website (www.pdx.edu/studentaffairs/; 503-725-5249; ASRC 520).

FOR INTERNATIONAL STUDENTS

The ETM Department prides itself on the diversity of its students and faculty, and we provide guidance to our international students beyond traditional academic advising. While no formal program is established for this, we understand that language and other cultural issues may pose challenges to our international students as they adjust to life at Portland State University and in the city. All faculty, staff, and peers work to help students make these adjustments.

PSU has a well-established English as a Second Language (ESL) program, language tutors, a Writing Center, and an Office of International Affairs which offers information and services to international students and scholars.

Students, faculty, staff, and community members are invited to meet informally in the Multicultural Student Center (<http://www.pdx.edu/dmss/multicultural-center>; 503-725-5342; 228 Smith Memorial Center) to share in dialogue and activities that further understanding among people of different cultures. The Center presents programs and events that promote appreciation for cultural diversity.

THE PORTLAND ADVANTAGE

Portland is known as the Rose City and is situated in one of the most beautiful and livable areas in the world. The city serves as a center for high technology industries that helped nickname it the Silicon Forest, and it owes the name to the presence of a large semiconductor community, spearheaded by Intel’s largest site in the world, and on an ocean of pristine forest.

But Portland also is a cultural hub with a world class symphony orchestra; an opera company; theatre and dance; contemporary, ethnic, and traditional music; art galleries and museums; parks and outdoor activities, including waterfront festivals for all ages and interests. Many cultural organizations offer discounted prices to students with university identification.

Portland, and the region, affords ETM students unparalleled opportunities for professional advancement as well as unlimited recreational opportunities featuring the dramatic Pacific Ocean, the clear waters of myriads of streams, rivers, and lakes, and the snow-packed Cascade Mountains.

Students who wish to travel outside the Portland area will find additional historic, cultural, economic, recreational, and industrial attractions in all areas of the northwest from Seattle and the beautiful San Juan Islands in the north; to the Willamette Valley (a primary agricultural center for the state) and California in the south; and the Cascade Range and the deserts and farmlands of eastern Oregon, Washington and Idaho to the east.

TRANSPORTATION

Portland has long been known as a clean, green and friendly metropolis, with lots to do and even more to see. Leading the “City of Roses” into the 21st century is its economical, easy-to-use public transit system called Tri-Met, which offers buses, MAX trains, and the Streetcar. In addition, bike and walking trails abound, and twelve bridges span the Willamette River linking the eastern and western sections of Portland. PSU is well served by public transportation, and discounted Tri-Met passes are available for students. Additional information is available at PSU’s Transportation & Parking Services Department (<http://www.pdx.edu/transportation/> 503-725-3442).

FUNDING AND WORK OPPORTUNITIES

GRADUATE STUDENT ASSISTANTSHIPS

The ETM Department does not offer financial assistance to students at the Master’s level.

Applicants admitted as full-time Ph.D. students can request to be considered for Graduate Student Assistant positions. Because of the large number of applications to the department, Graduate Student Assistant (GSA) awards are highly competitive. A typical award includes tuition remission plus a modest monthly stipend. The workload required of the GSA is generally 10-15 hours per week.



This does not cover all expenses, however, and a GSA must provide additional support from his/her own resources external to the university.

Criteria for choosing GSAs are similar to those for admission—grades, references, GRE scores, overall academic ability, and need.

RESEARCH ASSISTANTSHIPS

Faculty in the department often have research grants that support one or more Research Assistants (RA). Faculty members choose RAs on an individual basis, but the most important criterion is the student's ability to contribute to the professor's research program. Ordinarily, students are given a research assistantship only after they have been in the graduate program for at least one year and have taken at least one class from the professor.

"The core of my ETM education was in project management and systems thinking with technology roots. This combination is perfect for fostering successful technology executives."

Dr. Janice Forrester,
Statistician,
WebMD,
Portland, Oregon

OTHER UNIVERSITY SOURCES OF FINANCIAL AID

Additional sources of financial assistance are administered by other PSU offices. Students should contact the office of Financial Aid (<http://www.pdx.edu/finaid/>; 503-725-3461; 174 Neuberger Hall) for information. (**NOTE: Some of these sources have early deadlines.**)

The PSU Laurels Graduate Award provides support to academically qualified Oregon residents on a competitive basis; contact the Office of Graduate Studies for further information (<http://www.pdx.edu/ogs/ogs-scholarships-and-awards#laurels>; 503-725-8402).

A limited number of *scholarships* and other financial support options are available for graduate students; the Office of Graduate Studies posts information on these at <http://www.pdx.edu/ogs/financing-your-education>.

A list of *on-campus job opportunities* is posted outside the Human Resources Office, 5th floor Market Center Building.

Loans and work-study programs are administered by the office of Financial Aid (see above).

OFF-CAMPUS JOBS

Portland State is fortunate to be surrounded by high-tech and other industries, and ETM majors are in demand as part-time employees at local companies. Information about other job opportunities in the Portland area is posted regularly at: <http://www.pdx.edu/careers/jobs-databasecareerconnect>.

INTERNSHIPS

ETM students have opportunities to serve as interns for industry and high tech companies in the area. An internship often is used to evaluate a potential full-time employee. Upon graduation, interns may be permanently employed by the company, although there is no guarantee.

Earning Credits through Internships....

In general, ETM students do not have to register internships, unless they want to earn elective credits for their work as interns. However, for visa reasons international students need to register all internships.

Registering a credit-bearing internship:

- Find an adequate internship in the field of engineering and technology management that provides meaningful learning opportunities. (Not all internships qualify).
- Meet with your academic adviser and discuss the scope, timeline, expected work load, and potential learnings of the internship. Bring the offer letter and – if available – also the position description to this meeting.
- Register the internship with a By-Arrangement-Request Form. Specify how many credits you want to earn with this internship – you will be charged for the credits you register. Ten hours of work per week for eight weeks can earn one internship credit. It is acceptable to register for less than four credits though.
- **The maximum number of internship credits that you can apply towards your degree is 4 credits.** They will be graded as pass/no-pass.

Note to International students: Off-campus internships for international students are possible through a process called Curricular Practical Training (CPT). Because of CPT, you can only register internship credits that count towards graduation requirements. This limits you to 4 credits. If you use all of them in one turn (e.g. for an intense summer internship) you cannot do any additional internships! Please plan accordingly

Internship Documentation / Grading

Be sure to submit a report. Briefly describe the work that you have done. For all major activities, discuss how they relate to ETM topics and if and how they have contributed to your education and career development.

The report is due by the end of finals week (Friday, 5:00 PM). Ask your adviser how you submit (e-mail, D2L, print-out, etc.). Failure to submit the report on time results in an “incomplete”.

Disclaimer: This document only covers the basics. Always check for up-to-date information at: <http://www.pdx.edu/careers/getting-experience-through-internships>

JOBS & INTERNSHIPS PORTAL

Visit the Maseeh College Jobs and Internships Portal (intranet.cecs.pdx.edu/careers/) to sign up for departmental mailing lists that advertise additional internship and employment opportunities and career events. A PSU username and password is required for access. Alumni or prospective

students may go to portlandstate.qualtrics.com//SE/?SID=SV_3EkUJ4fJMPI4X1r to request access.

FACILITIES AND RESOURCES

PSU BOOKSTORE

The Portland State Bookstore located at S.W. Fifth Avenue and Montgomery Street within the PSU Urban Center Plaza., handles all textbooks and course-packs for the University. In addition, the Bookstore has an extensive selection of general books including bestsellers, popular fiction, special interest, computer books and children's books. The store carries a complete selection of school, office, engineering, and art supplies and is the main supplier of PSU sportswear, imprinted souvenirs, and gifts.

COMPUTER LABS AND RESOURCES

ETM Strategic Decisions Lab

The Department of Engineering and Technology Management provides computer access to ETM students in the departmental computer lab with 18 computers.

The ETM Strategic Decisions Lab has a wireless system for screensharing called Sharelink. Students and faculty can use it for presenting from Windows, Mac, iOS, and Android devices without cables. Directions can be found at: bit.ly/Sharelink-SDL-instructions

Engineering Computer Labs

The Intel Computer lab is right across from the hall from the ETM Main Office. Accessing these computers requires an engineering computer account and your student ID card. These high performance computers have wide range of engineering software installed. For more information, visit the CAT page cat.pdx.edu/

University Computer Labs

Additional computer labs are located on campus and are available for use by students, faculty, and staff. Computers in these labs have a wide variety of software and applications. Laboratory attendants are on duty at all times, and user guides, manuals and tutorials are available. For information on and locations of labs go to: www.pdx.edu/oit/computer-labs-classrooms

Other Computer Resources

The Computer Action Team (CAT) and PSU's Office of Information Technology (OIT) maintains and supports the application programs used for class work and the computer labs. Some programs also are available in a student version and ETM students can obtain these from OIT (www.pdx.edu/oit/personal-technology-discounts).

The Computer Action Team's web page has a lot more information on issues such as antivirus, virtual private networks, and configuring your accounts. cat.pdx.edu/

PSU LIBRARY

The PSU Millar Library on the western Park Blocks is the primary source for research materials and assistance. The Library's Graduate Student program has been designed to provide personalized assistance with thesis, dissertation, and other research projects.

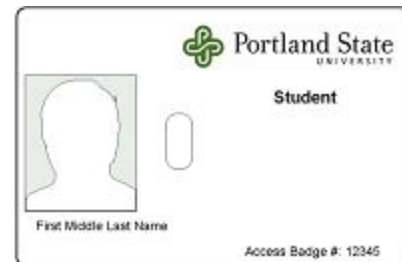
Librarians can be contacted in person or online (library.pdx.edu/), and many resources are available online as well. Tours can be arranged to acquaint students with the many services of the Library as well as the location of particular collections you will need for your academic research. Graduate students also can participate in special topics workshops, connect with a Library subject specialist in their fields, and obtain personalized consultation services for in-depth research.

For more information on Graduate Student Library Services, contact Michael Bowman, Engineering Librarian, bowman@pdx.edu, 503-725-3690 or Qi (Kerry) Wu, Business Librarian, wuq@pdx.edu, 503-725-4124.

In addition to its own extensive collection, PSU is part of a network of institutions that participate in the Interlibrary Loan (ILL) program. This means students can access nearly any book, journal or newspaper microfilm, dissertation, video, or other published documents available in any library. Materials are generally available from 6-10 days after request and request forms are available online. Contact the Library to learn more about these services (library.pdx.edu/, 1875 S.W. Park Avenue).

STUDENT I.D. CARD

PSU students have an official PSU ID card which is used for access to facilities, the library, and other important resources. In particular, ETM students can use it to get access to the Intel Computer Lab and the Fourth Avenue Building. To get the ID card, go to Neuberger Hall, Room 179.



PSU WRITING CENTER

The PSU Writing Center (www.writingcenter.pdx.edu/, 503-725-3570, 188F Cramer Hall), offers assistance with writing at any level and in any discipline. Highly trained consultants—writers and teachers from the English and Linguistics departments—assist student writers with revision of work in progress, interpreting assignments, and working with documentation. The consultants also help students develop powerful, effective writing that presents student ideas, research, scholarship, and expertise in the best form.

RECREATION

Students who wish to participate in informal recreation on campus may use the PSU facilities on campus in the PSU Student Rec Center, which is only a couple of blocks from the ETM Department. Any registered student is eligible, with proper ID. Activities include badminton, basketball, general exercise, jogging, handball, table tennis, sauna, swimming, tennis and golf. Dedicated lockers are available for a fee. Free day-use lockers with your own lock. For information, call 503-725-2931.

HEALTH SERVICES AND COUNSELING

The Student Health and Counseling Center (SHAC) is located in the University Center Building at 1880 SW 6th Ave. Contact SHAC to determine your eligibility for health services and for information on services available to students, including counseling and emergency treatment. Call 503-725-2800. Additional information is available online at www.pdx.edu/shac/

CAREER SERVICES

PSU career services are for both current students and alumni. These include job fairs, resume databases, listings for job openings, and more. These services are provided for the full university at www.pdx.edu/careers/. Also, MCECS provides services for engineering and computer science students at www.pdx.edu/cecs/jobs-and-internships. Frank Goovaerts, Director of Student Career Success for MCECS, conducts free weekly events on topics such as:

- How to Create an Impactful Resume
- Behavioral Interview Skills
- Networking, LinkedIn, and Job Boards
- How to Work with Recruiters
- Public Speaking Skills



ACADEMIC LIFE

ACADEMIC HONESTY

The purpose of an academic career in a program such as ETM is to create new knowledge building on what has been done before. Students who claim the work of others as their own cheat not only the University, the program, and their peers; but also themselves.

Academic honesty is a cornerstone of any meaningful education and a reflection of each student's maturity and integrity. The Office of Student Affairs is responsible for working with University

faculty to address complaints of academic dishonesty. The Student Conduct Code, which applies to all students, prohibits all forms of academic cheating, fraud, and dishonesty.

These acts include, but are not limited to:

- plagiarism
- buying and selling of course assignments and research papers
- performing academic assignments (including tests and examinations) for other persons
- unauthorized disclosure and receipt of academic information
- other practices commonly understood to be academically dishonest.

Allegation of academic dishonesty may be addressed by the instructor, may be referred to the Office of Student Affairs for action, or both. Allegations referred to the Office of Student Affairs are investigated following the procedures outlined in the Student Conduct Code. Acts of academic dishonesty may result in one or more of the following sanctions:

- a failing grade on the exam or assignment for which the dishonesty occurred
- disciplinary reprimand
- disciplinary probation
- loss of privileges
- required community service
- suspension from the University for a period of up to two years
- dismissal from the University.

In addition to the University policy, the ETM Department has developed its own Department-specific policy on academic honesty and plagiarism. Copies are available in the office and on the ETM website.

All students must read and adhere to the Academic Honesty policy.

ACADEMIC ADVISING

All students will be assigned an academic advisor to help guide decisions about courses to take, research projects, and general issues that come up during graduate studies. Students will meet initially with their advisors to establish a plan for the student's academic career in the department. Additional meetings will be scheduled jointly by the advisor and the student.

As required by University graduate procedures, doctoral students must form a four-person doctoral committee which will include the committee chair, at least one more member from ETM, and a faculty representative for the Graduate Office.

Students pursuing the master's degree by completing a thesis will form a thesis committee of at least three and not more than five faculty members, including the candidate's advisor as chairperson and a representative of the Office of Graduate Studies. ETM master's degree students choosing to complete a capstone project (ETM 506) or the Synthesis course (ETM 590) will not need to form a thesis committee.

PROGRAM LENGTH

Students pursuing a master's degree full-time generally complete the program within two years. All coursework must be completed within seven years.

ETM graduate certificates generally consist of four 4-credit courses and, with good planning, one can usually be completed while doing a Master's or doctoral degree without additional time or coursework. Doing a graduate certificate alone usually takes two to four quarters. Be sure to coordinate your graduate certificate plan with your advisor carefully.

Students pursuing a doctoral degree are expected to advance to candidacy within one year after the comprehensive, upon the acceptance of the dissertation proposal by the student's doctoral committee. Doctoral research must be completed with the minimum 27 dissertation credits and defense within five years of advancement to candidacy.

ACADEMIC LOAD

The normal minimum academic load for a full-time graduate student is 9 credits each term including coursework and thesis. Graduate students must seek approval to register in excess of 16 credits a term. Actual course load for students in ETM will vary depending on a student's particular work and academic situation.

The ETM program is designed to be accessible for part-time students working full-time in the Portland Metro area. Most part-time students take one class a term and the Master's program may then take thirteen quarters. Some people will use a sabbatical from work to complete a critical mass of courses to expedite completion of the degree.

Academic load for doctoral students will be determined in consultation with the student's advisor.

REGISTRATION

PSU has an efficient online registration system that is fully explained in the Schedule of Classes Bulletin available online at: www.pdx.edu/academic-affairs/psu-bulletin. Advance registration is scheduled according to priority dates published in the Schedule of Classes.

The registration site is available from www.pdx.edu/registration/. Registration and changes are continuous, and students may register online through the first week of a term and by a paper form through the second week of a term. A student is formally registered only when all procedures have been completed and tuition and fees paid for the term. Students are financially responsible for all classes and credits in which they are registered on or after the first day of the term. *A pre-registered student must drop all courses prior to the first day of the term in order to avoid a refund percentage charge.*

GRADES

A complete explanation of PSU Graduate Grading System is included in the Bulletin/Catalog issued each year. Graduate courses are graded on a standard A through F system with a limited number of courses offered on a Pass/No pass basis. Students must have a B average (3.00 GPA) on courses fulfilling degree requirements (courses listed on the GO-12 form for master's students). Incompletes may be assigned when essential coursework is not completed and when work to date is at a C- level or better. Work must be completed by an agreed-upon deadline. An Incomplete grade becomes part of the permanent transcript record after the deadline expires.

Students may also withdraw from classes through the end of the third week with no record on the transcript and no explanation for the action. As a courtesy, students are advised to notify the instructor concerned of the intended or completed withdraw. Students who withdraw after the third week must fill out a Deadline Appeal and will have a W recorded on the transcript.

ACADEMIC PROBATION

Students who do not maintain a 3.00 GPA may be placed on academic probation. If there is the possibility that your GPA will drop below this, you must meet with your advisor to discuss the situation. Students on academic probation will not be permitted to graduate, to be advanced to doctoral candidacy, to receive or continue to hold an assistant-ship, or to register for more than a total of 9 credits in any term. Students who raise the GPA to 3.00 within the next 9 graduate credits in graded courses will be removed from academic probation.

If you are concerned about your academic status, meet with your advisor and develop a strategy for completing your work with full academic standing.

ACADEMIC DISQUALIFICATION

Disqualification occurs if:

A student on academic probation fails to achieve a cumulative graduate GPA of 3.00 or higher within the next 9 letter-graded graduate credits after beginning probation status;

or

A student becomes subject to academic probation for a second time.

A student who is disqualified may not register for any graduate courses at PSU.

DISSEMINATION OF GRADES

Grades are posted to the Student Information System approximately one week after finals week. Students may access grades through Banweb or by requesting an official transcript from PSU (see <http://www.pdx.edu/registration/transcript-requests>).

SAFE LEARNING ENVIRONMENT

Technology fields are enriched by people coming from many different backgrounds. The ETM Department and PSU value this. It is a core value that everyone, no matter their gender, religion, or other characteristic is treated with respect - whether faculty, student, or staff.

Portland State is committed to providing an environment free of all forms of prohibited discrimination and sexual harassment (sexual assault, domestic and dating violence, and gender or sex-based harassment and stalking). If you have experienced any form of gender or sex-based discrimination or sexual harassment, know that help and support are available. PSU has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and on-housing accommodations, helping with legal protective orders, and more. Information about PSU's support services on campus, including confidential services and reporting options, can be found on PSU's Sexual Misconduct Prevention and Response website at: <http://www.pdx.edu/sexual-assault/get-help> or you may call a confidential IPV Advocate at 503-725-5672. You may report any incident of discrimination or discriminatory harassment, including sexual harassment, to either the [Office of Equity and Compliance](#) or the [Office of the Dean of Student Life](#).

Please be aware that all PSU faculty members and instructors are required to report information of an incident that may constitute prohibited discrimination, including sexual harassment and sexual violence. This means that if you tell me about a situation of sexual harassment or sexual violence that may have violated university policy or student code of conduct, I have to share the information with my supervisor, the University's Title IX Coordinator or the Office of the Dean of Student Life. For more information about Title IX please complete the required student module [Creating a Safe Campus](#) in your D2L.

Access and Inclusion for Students with Disabilities

PSU values diversity and inclusion; we are committed to fostering mutual respect and full participation for all students. My goal is to create a learning environment that is equitable, useable, inclusive, and welcoming. If any aspects of instruction or course design result in barriers to your inclusion or learning, please notify me. The Disability Resource Center (DRC) provides reasonable accommodations for students who encounter barriers in the learning environment.

If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable accommodations. The DRC is located in 116 Smith Memorial Student Union, 503-725-4150, drc@pdx.edu, <https://www.pdx.edu/drc>.

- If you already have accommodations, please contact me to make sure that I have received a faculty notification letter and discuss your accommodations.
- Students who need accommodations for tests and quizzes are expected to schedule their tests to overlap with the time the class is taking the test.
- Please be aware that the accessible tables or chairs in the room should remain available for students who find that standard classroom seating is not useable.

- For information about emergency preparedness, please go to the [Fire and Life Safety webpage](#).

PROGRAMS AND DEGREES

ETM's objective is to generate and transfer knowledge for making and implementing decisions that provide leadership in the management of engineering and technology. The ETM program addresses these issues at both strategic and operational levels of decision making.

ETM programs are designed for engineers and scientists moving toward technical management responsibilities while maintaining identity in their technology field.

ACADEMIC PROGRAMS AND DEGREES OFFERED

- Ph.D. in Technology Management-TECD
- Master of Science in Engineering and Technology Management-MS ETM

"As a business unit manager trying to move into the world of information technology, I found that PSU's Engineering and Technology Management program provided me with the tools I needed. The faculty and staff are knowledgeable and approachable and the diverse cultural blend among students and staff is enlightening."

--Bridget Haggerty, MSEM '03,
Manager, Academic Application,
Oregon Health Sciences
University

Graduate Certificates

- Graduate Certificate in Project Management-GCPM
- Graduate Certificate in Technology Management-GCTM
- Graduate Certificate in New Product Development Management-GCNPD
- Graduate Certificate in Strategic Management of Technology-GCSMT
- Graduate Certificate in Technological Entrepreneurship-GCTE

Two other graduate certificates are closely aligned with ETM:

- Graduate Certificate in Business Intelligence and Analytics-GCBIA
- Graduate Certificate in Energy Policy and Management-GCEPM

The ETM contact for GCEPM is Dr. Daim, and for GCBIA, it is Dr. Anderson.

Dual Degree Options

- M.S. in ETM and M.S. or MEng. in another Engineering discipline
- M.S. in ETM and MBA
- M.S. in ETM and M.S. in another discipline offered at PSU.

PROGRAM INFORMATION

Master of Science in Engineering & Technology Management

The M.S. in Engineering & Technology Management (MS ETM) provides students with a comprehensive program to meet the needs of engineers and scientists whose objective is to advance to technical management positions in business, industry, or government. Students in this program may complete a Capstone Project approved by the faculty member who supervises the work in lieu of a thesis.

Note: Classes for the MS degree also are available at the Willow Creek campuses.

Dual Degree Options

Motivated and qualified students may work on completing two master's degrees simultaneously. Up to one third of the credits in the program with the *lesser number* of credits may be applied towards the other master's degree.

For example, to pursue a Master of Science in Electrical Engineering and an M.S. in Engineering and Technology Management, a student must be admitted to both programs, develop an approved curriculum plan with the help of the departments' advisors, and then can use up to 15 credits from the Electrical and Computer Engineering department to fulfill electives in the Engineering and Technology Management department. The rule is that the number of credits shared between the two degrees is one-third of the smaller of the two degrees.

In the past, students have successfully completed dual master's degrees resulting in an M.S. in Engineering & Technology Management combined with an M.S. in another Engineering department, an MBA, or a master's degree in other disciplines.

POST-BACCALAUREATE STUDENTS

Prior to admission to the ETM, a student may apply to the university for admission as a Post-Baccalaureate student. Such students are allowed, with permission of the department, to take ETM courses to demonstrate their academic performance for evaluation by the ETM Admissions Committee upon completion of twelve credits.

SPECIAL STUDENTS

ETM courses are available to students admitted to other graduate programs at PSU. A limited number of non-admitted students may also be considered for enrollment in select courses as special students with permission of the Department Chair.

PH.D. PROGRAM – PH.D. TECHNOLOGY MANAGEMENT

The Ph.D. in Technology Management provides students with opportunities to pursue in-depth investigation towards advancing the state-of-the-art knowledge in the field of Engineering Management.

Students conduct their research in a wide range of areas including:

- Benchmarking
- Conflict Resolution
- Creativity
- Data Envelopment Analysis
- Decision Modeling
- Decision Support Systems
- Innovation Management
- Judgment Quantification
- Knowledge-based Systems
- Manufacturing Management
- New Product Development
- Organizational Culture
- Productivity Analysis
- Project Management
- R&D Management
- Reengineering
- Resource Optimization
- Simulation
- Strategic Management
- Team Building
- Technology Acquisition
- Technology Assessment
- Technology Management
- Technology Marketing

There is a separate, dedicated PhD Student Handbook with more information for the ETM Technology Management doctoral program available on the ETM website or contact the ETM PhD Program Director, Dr. Tugrul Daim.

M.S. ENGINEERING AND TECHNOLOGY MANAGEMENT

The Master of Science in Engineering Management (MS ETM) provides students with a comprehensive program to meet the needs of engineers and scientists whose objective is to advance to technical management positions in business, industry, or government.

Minimum course requirements: 52 credits in approved graduate courses distributed as follows:

28 credits in the Core Curriculum

4 credits (or 8 with thesis option) to meet the Capstone requirement

20 credits (or 16 with thesis option) in electives.

Core: 28 credits (All courses listed are 4 credits each.)

ETM 520	Management of Engineering and Technology
ETM 522	Communication and Team Building
ETM 530	Decision Making
ETM 535	Advanced Engineering Economics
ETM 540	Operations Research
ETM 545	Project Management
ETM 555	Technology Marketing

Capstone Requirement (One of the following):

ETM 503 M.S. Thesis (8 credits)

ETM 506 Capstone (4 credits)

ETM 590 Engineering & Technology Management Synthesis (4 credits)

Electives (20 credits or 16 credits with thesis option)

The Department of Engineering and Technology Management offers a wide range of elective courses. In addition, students may choose electives from several other programs throughout the University with the approval of their advisor.

Current (and typical) ETM electives include (*all courses are 4 credit hours each*):

ETM 525 Strategic Planning	ETM 546 Project Management Tools
ETM 526 Strategic Management of Technology	ETM 547 New Product Development
ETM 527 Competitive Strategies in Technology Management	ETM 548 Managing New Technology Introduction
ETM 531 Technology Assessment & Acquisition	ETM 549 Management of Technology Innovation
ETM 532 Technology Forecasting	ETM 556 User-Centered Innovation
ETM 533 Technology Transfer	ETM 561 Technological Entrepreneurship
ETM 534 Technology Roadmapping	ETM 562 New Venture Management
ETM 536 R&D Management	ETM 565 Research Methods
ETM 537 Benchmarking Using Data Envelopment Analysis	ETM 568 Energy Technology Innovation
ETM 538 Decision Support Systems & Data Warehousing	ETM 571 Management of Emerging Technologies
ETM 543 Front End Management of NPD	ETM 573 Management of Intellectual Capital
ETM 544 Organizational Project Management	ETM 575 Science and Technology Policy

MASTER'S PROCEDURES

The following outline is taken from the Graduate Studies website and summarizes the Portland State University procedural requirements for master's degrees. Additional requirements may be imposed by specific programs. Additional information can be found in the Graduate Studies section of the *Portland State University Bulletin* and online at www.pdx.edu/ogs/.

Be sure to also see the Graduate Candidates' Guidelines published by the Office of Graduate Studies.

Summary of Procedures for Master's Degrees from the office of Graduate Studies and Research

Steps marked with * are required for every master's degree.**

1. Apply for admission about six months prior to the beginning of the term for which admission is requested. Check with the specific department about the deadlines.
2. Prior to registration, become familiar with general regulations and procedures for the master's degree as described in the *Bulletin*.
3. Prior to first term registration, meet with assigned faculty advisor and plan a preliminary program of study.
4. If graduate courses taken while an undergraduate at PSU and not used in the bachelor's degree are to be considered for use in the graduate program, the ***Reservation of Graduate Credit*** form (**GO-10**) must be filed in the Office of Graduate Studies before undergraduate degree is awarded and no later than the term following admission to a graduate degree program. (Valid only for courses completed at PSU.)

5. If transfer credit from another accredited institution is to be presented, the ***Proposed Transfer Credit for Master's Degree*** form (GO-21) must be completed and approved by student's advisor and the department chair. It is suggested that this form be submitted early in the student's program; it must be approved by the department before the ***Graduate Degree Program*** (GO-12) can be approved.
6. If admitted to conditional or qualified status, remove all deficiencies and/or conditions. Most *university* conditional admissions will automatically be changed to regular status after completion of the first 12 graded graduate credit hours with a 3.00 or better GPA.
7. *** Submit a final ***Graduate Degree Program*** form (GO-12) to the department, approved by the faculty advisor and signed by the department chair or department graduate committee chair, no later than the first week of the term of graduation.
8. *** File ***Application for Awarding the Degree or Certificate*** form for each degree and/or certificate being completed with the Office of Graduate Studies no later than the first week of the term of graduation.
9. A minimum enrollment of one credit is required during the term in which oral or written exams are taken. A thesis student must be registered for at least one credit in every term in which the student is working on any phase of thesis, including data development or collection, writing, revision, defense, and finalization through acceptance by the Office of Graduate Studies.
10. If thesis is to be submitted:
 - a) thesis proposal, Human Subjects Research Review Committee approval, and appointment of departmental thesis committee must be completed before submission of the GO-12 (see #8 above);
 - b) advisor submits the ***Appointment of Final Oral Examination Committee*** form (GO-16M) for appointment of the Representative of the Office of Graduate Studies by the end of the first week of the term of graduation (earlier in summer term); see the *Bulletin* (p. 101) for committee requirements;
 - c) the oral examination must be scheduled at least five weeks prior to the end of the term and the Graduate Office Representative must receive a complete copy of the thesis at least two weeks prior to the examination date (for summer term, the oral examination must be held during the regular eight week session);
 - d) student must check with faculty advisor and thesis committee chair to assure completion of requirements prior to final examinations;
 - e) three copies of the unbound thesis and four copies of the abstract, in final approved form, must be submitted to the Office of Graduate Studies at least three weeks prior to close of the term in which the degree will be granted. Deadlines for each term are available in the Office of Graduate Studies. Required changes must be made before graduation.

"The knowledge I received during my Masters studies was an advantage during my interviews. I knew about Total Quality Management, which impressed my boss during our conversation. I learned at ETM how to perform in teams. My thesis at ETM was about multicultural/multifunctional teams and every day I use what I have learned."

—Matthias Pfeifer, Technical Support Engineer, Parametric Technology Corporation, London, England

11. Schedule and pass final master's examinations, if required, at least two weeks before date of graduation.
12. An Incomplete or In-Progress grade in any course, excluding thesis, which is on the approved program (GO-12) must be removed no later than two weeks before graduation.
13. The Dean of Graduate Studies certifies that all requirements for the degree have been met and recommends the awarding of the degree.
14. Graduation.

For specific deadlines for each term, see the Graduate Candidates' Deadlines available on the web and in the Office of Graduate Studies.

COMMONLY USED CONTACT INFORMATION

ENGINEERING AND TECHNOLOGY MANAGEMENT DEPARTMENT

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1900 S.W. Fourth Avenue
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e-mail: etminfo@pdx.edu
fax: 503 725-4667
www.etm.pdx.edu

<p>HOUSING PSU Housing & Residence Life The Broadway Building 625 SW Jackson Street, Suite 210 Portland, OR 97201 Phone: 503 725-4375 e-mail: housing@pdx.edu</p> <p>College Housing Northwest, Inc. 2121 S.W. Broadway, Suite 1119 Portland, OR 97201 Phone: 503 497-1188 e-mail: staff@chnw.org www.chnw.org</p> <p>INTERNATIONAL STUDENT AND FACULTY SERVICES Portland State University 212 East Hall Phone: 503 725-4094 www.pdx.edu/international-students/</p> <p>CAREER CENTER Portland State University 402 University Services Building Phone: 503 725-4613 e-mail: askcarc@carc.pdx.edu www.pdx.edu/careers/home</p>	<p>VETERANS RESOURCE CENTER Veterans Coordinator/Counselor Portland State University 118 Smith Memorial Center Phone: 503 725-3876 www.pdx.edu/veterans/vrc</p> <p>GRADUATE STUDIES - ADMISSIONS Portland State University 184 XSB, 1633 SW Park Ave. Phone: 503 724-8410 Fax: 503 724-3416 e-mail: grad@pdx.edu www.pdx.edu/ogs/future-students</p> <p>FINANCIAL AID OFFICE Portland State University 174 Neuberger Hall (lobby) Phone: 503 725-3461 e-mail: askfa@osa.pdx.edu www.pdx.edu/finaid/home</p>
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