Statement on Inclusion

At the University of Portland, a Catholic University guided by the Congregation of Holy Cross, all dimensions of our communal life – teaching and learning, faith and formation, and service and leadership – are informed and transformed by prayer, scripture, and the Christian tradition. Our belief in the inherent dignity of each person is founded upon the social teaching of the Catholic Church. At the center of that teaching is the fundamental mandate that every person, regardless of race, color, religion, gender, sexual orientation, social or economic class, age, or disability shall be treated with respect and dignity.

Moreover, we seek to create and sustain an inclusive environment where all people are welcomed as children of God and valued as full members of our community. We condemn harassment of every kind, and assert that no one in our community should be subject to physical or verbal harassment or abuse. Further, no one shall be denied access to programs, services, and activities for any unlawful reason. We provide all who live, learn, and work at the University the opportunity to actively participate in a vibrant, diverse, intellectual community that offers a broad range of ideas and perspectives, so that we may all learn from one another.

*from The University Policies and Community Standards*
WELCOME

Dear Shiley Student:

Welcome to the Donald P. Shiley School of Engineering at the University of Portland!

We created this document to help you understand the various policies, procedures and opportunities in the Shiley School. This handbook will introduce you to the School, the faculty and staff, student programs and resources, as well as provide information on School policies, procedures, and requirements. **You are expected to read this document.** It will help you to become aware of the requirements you must meet, and also the opportunities available to you.

This handbook addresses specifics of the Donald P. Shiley School of Engineering, although it makes mention of some other University regulations as well. We have specifically tried not to duplicate University regulations and policies found elsewhere. **This handbook is meant to augment, not override, information provided in The University of Portland Student Handbook and The University of Portland Bulletin. University requirements not necessarily mentioned in this handbook still apply.**

If you should have any questions, feel free to see your faculty advisor, other professors, program counselors, the Dean, or the Associate Dean. We are here for YOU!

Good luck with your studies. We look forward to helping you on your way.

Sincerely,

The faculty and staff of the Donald P. Shiley School of Engineering
# Table of Contents

Statement on Inclusion ........................................................................................................... i  
WELCOME ........................................................................................................................ ii  
ABOUT THE DONALD P. SHILEY SCHOOL OF ENGINEERING ..................................... 6  
  Administration ................................................................................................................ 6  
  Faculty ............................................................................................................................. 6  
  Staff ................................................................................................................................. 6  
  Donald P. Shiley Hall Facilities ...................................................................................... 7  
  Computer and Software Services .................................................................................... 7  
  Receiving Information .................................................................................................... 7  
CURRICULA IN THE SHILEY SCHOOL OF ENGINEERING ..................................... 8  
  Donald P. Shiley School of Engineering Vision ............................................................. 8  
  Donald P. Shiley School of Engineering Mission .......................................................... 8  
  University Core Curriculum ........................................................................................... 8  
  Engineering and Computer Science Programs ............................................................... 9  
  Communication Skills ..................................................................................................... 9  
  Teamwork Skills ............................................................................................................. 9  
SENIOR DESIGN: DISCIPLINARY & MULTI-DISCIPLINARY PROJECTS ........... 11  
GETTING HELP .............................................................................................................. 12  
  Tutoring Resources ....................................................................................................... 12  
  University Resources .................................................................................................... 13  
CONDUCT IN THE SHILEY SCHOOL OF ENGINEERING ..................................... 14  
  Code of Academic Integrity ......................................................................................... 14  
  Classroom Conduct ...................................................................................................... 16  
  Laboratory and Shop Conduct ...................................................................................... 16  
  Vehicle and Transportation Policy ................................................................................ 17  
  Accommodations for Students with Disabilities ......................................................... 17  
  Professional Engineers and Professional Conduct ....................................................... 18  
  Grievance Procedure .................................................................................................... 18  
CO-CURRICULAR OPPORTUNITIES .......................................................................... 19  
  International Experiences ............................................................................................. 19  
  Leadership, Entrepreneurship and Innovation ............................................................. 20  
  Leadership Certificate Program .................................................................................... 21  
  Faith-Based Leader Program ......................................................................................... 21
Ongoing Consultation and Workshops: ......................................................... 21
Minors ............................................................................................................. 21
Pre-Professional Programs ........................................................................... 21
Engineering Student Organizations ............................................................. 22
Service Learning ............................................................................................ 24
Internships ....................................................................................................... 24
SHILEY SCHOOL POLICIES FOR MECOP/CECOP PARTICIPANTS ..... 25
UNIVERSITY POLICIES FOR MECOP/CECOP PARTICIPANTS .......... 26
Undergraduate Research ................................................................................ 26
Scholarships .................................................................................................... 27
ADVISING AND REGISTRATION ................................................................. 28
Academic Program Counselors and Faculty Advisors ................................ 28
Declaring or Changing Your Major ............................................................... 28
Registration Procedure ................................................................................ 29
Transferring Courses .................................................................................... 29
Course Substitutions and Prerequisites ....................................................... 29
Academic Standing and Probation ............................................................... 30
PREPARING FOR GRADUATION ................................................................. 30
Career Planning .............................................................................................. 30
POST-GRADUATE FELLOWSHIPS ............................................................... 32
UNIVERSITY OF PORTLAND MASTERS IN BIOMEDICAL ENGINEERING ...... 32
PROFESSIONAL REGISTRATION .............................................................. 33
APPENDIX A: SHILEY SCHOOL OF ENGINEERING FACULTY AND STAFF .... 34
APPENDIX B: SCHOOL OF ENGINEERING SHOP ACCESS POLICY ............... 37
Conclusions .................................................................................................... 40
DONALD P. SHILEY

Donald P. Shiley, a 1951 graduate of the University of Portland, served in the Navy during World War II. After the war, he decided to get an undergraduate degree in engineering. The first time he visited campus, the sight of the brand new engineering building convinced him that he should attend the University of Portland.

Mr. Shiley invented the Bjork-Shiley heart valve, credited with saving more than a million lives. The idea for the valve came to him when he asked himself the question “What if….?” Mr. Shiley had a rare combination of attributes which allowed a concept to become reality: brilliant intellect, common sense, willingness to work hard, a realistic approach, and an entrepreneurial outlook. In short, he combined theoretical underpinnings and practicality to solve problems.

A hands-on person, Mr. Shiley followed up on his ideas by sketching and then building models. He had a sound understanding of the theoretical aspects of a potential invention, as well as how a device could be practically made and operated. A succession of three of Mr. Shiley’s sketches for the heart valve appears on the elevator doors on the second floor of Shiley Hall. There is also a display of his life story in the first floor atrium.

Donald Shiley was born in Yakima, Washington in 1920. His family owned a farm where he and his two brothers helped out by picking fruit. His mechanical abilities came partially from the fact that he was the one who fixed things when they needed repair. After graduating from UP, Mr. Shiley worked in Oregon with inventor Lowell Edwards and surgeon Albert Starr. He later used his engineering and entrepreneurial expertise to found Shiley Laboratory. He became very prosperous in large part because he also understood the business side of making a product successful.

In 2007, Donald’s wife, Darlene, decided to honor her husband by donating $12 million to renovate and expand the engineering building which now bears her husband’s name. In 2010, she provided an additional endowment to the University to help fund enhancements to the School. At that time, the School was named the Donald P. Shiley School of Engineering. Mr. Shiley died in the summer of 2010. Because he was in poor health for several years, he never got to see, first hand, the renovated and expanded building that bears his name.

Donald Shiley provided the following advice to graduates: “Find the gift God gave you. Sharpen, hone and train it. And then go use it. Go!”
ABOUT THE DONALD P. SHILEY SCHOOL OF ENGINEERING

Administration

Dr. Sharon Jones, Dean and Graduate Program Director
Dr. Mark Kennedy, Associate Dean of Undergraduate Programs

Faculty

Appendix A includes contact information and areas of expertise for full-time faculty:

Robert Albright  Matthew Kuhn
Rajaa Alqudah  Kenneth Lulay
Katie Bieryla  Nazanin Mansouri
Martin Cenek  Gregg Meyer
Heather Dillon  V. Dakshina Murty
Timothy Doughty  Andrew Nuxoll
Radana Dvorak  Peter Osterberg
Jordan Farina  Cara Poor
Christopher (C.J.) Hainley  Nikolene Schulz
Joseph Hoffbeck  Jen Symons
Aziz Inan  Mojtaba Takallou
Mehmet Inan  Ben Tribelhorn
Christy Ivler  Tammy VanDeGrift
Sharon Jones  Steven Vegdahl
Mark Kennedy  Shazib Vijlee

Staff

Advising Staff
Lindsay Chelton, Academic Program Counselor
Jaime Merritt, Academic Program Counselor
Kate Rohl, Industry Relations Manager

Administrative Support Staff
Lisa Bassett, Budget Coordinator
Kim Spir, Administrative Assistant to the Associate Deans
Jamie Strohecker, Faculty Secretary
Jessica Valentine, Administrative Assistant to the Dean

Technician Staff
Allen Hansen, Technician Supervisor
Jacob Amos, Engineering Technician
Christina Chrestatos, Engineering Technician
Jared Rees, Engineering Technician
Donald P. Shiley Hall Facilities

Faculty & staff offices, computer labs and most other labs are located in Shiley Hall.

During the fall semester, Shiley Room 110 will be set aside for EGR 110 students to work with their teams on the first-year design project. The project assistants for Shiley 110 process parts orders for devices for the project. EGR 110 students have access to hand tools and can make requests for machined parts. All other engineering and computer science labs are listed in Appendix B. All students using labs and shops need training and are expected to read the policy found in APPENDIX B.

The Charles Howard Vollum Study Area is located on the first and second floors in the southwest corner of the building (Shiley 105/207). The study area is dedicated for student use only, and is also home to free tutoring for first-year and sophomore engineering students.

Immediately next door to the Charles Howard Vollum Study Center (Shiley 208), is the open computer lab. The open computer lab is managed by Information Services; open hours are posted on the door. The computers have the EGR/CS software installed, so you have access to the software needed to complete course assignments.

Computer and Software Services

All computer labs and facilities are overseen by the University’s Office of Information Services. Questions should be directed to the Help Desk at x7000 or help@up.edu. The Help Desk is physically located in Franz 112 should you need assistance with your personal computers. Residential Computing Consultants are available to assist you with computer and telephone support in the residence halls.

Information Services offers a client that allows you to access the engineering software build from your own computer. You may download the client for free here: https://desktop.up.edu/

Students have access to free Microsoft products through the Microsoft Imagine Premium program. Near the beginning of Fall semester, you will receive an email message from MIP with information about how to access, download and install free Microsoft software. If you have issues with the program, contact the Help Desk.

Receiving Information

There will be times when we need to contact you with general announcements or specific information just for you. We will rely on email to contact you. University officials also use your UP email address as their means of contacting you. Therefore, CHECK YOUR EMAIL DAILY!!! General information is also usually on PilotsUP.
CURRICULA IN THE SHILEY SCHOOL OF ENGINEERING

Donald P. Shiley School of Engineering Vision

The Donald P. Shiley School of Engineering prepares innovative professionals with the technical excellence, social integrity, environmental consciousness, and leadership traits essential to identify and solve the world's problems.

Donald P. Shiley School of Engineering Mission

The mission of the Donald P. Shiley School of Engineering is to provide the best possible education to its students, thus enabling the students to become competent practicing engineers and computer scientists. The programs also provide a base for both graduate study and lifelong learning in support of evolving career objectives. These objectives include being informed, effective, and responsible participants in the engineering profession and society. The School endeavors to develop qualities that are essential for the practice of engineering and beneficial service to the community. These qualities include knowledge of engineering principles, the ability to apply those principles to solve problems, and the development of professional, personal, and social values.

University Core Curriculum

All UP students, regardless of major, take a specific set of courses to satisfy the core curriculum. The core curriculum is essential for a liberal arts education, as it provides an opportunity for you to investigate questions regarding your identity, how the world works, how communities function, the role of beauty and imagination, God, and what constitutes a “good life.” These courses are highly valued in the School, because they will help broaden your perspective and give you an opportunity to take classes with students from a variety of majors. Strong communications skills also make you a more marketable engineering or computer science candidate as you enter the workforce!

The core courses include:

- ENG 112, Thinking Through Literature
- FA 207, Fine Arts
- PHL 150, Introductory Philosophy
- PHL 220, Ethics
- THE 105, Introduction to Theology
- THE 205, The Bible, Past and Present
- THE 3xx, (upper-division theology elective)
- Social Science (elective)*
- Social Science (elective)*
- HST 2xx or 3xx, (history elective)

*Social Science electives must be from two different subjects: SOC 101, PSY 101, ECN 120, POL 200, POL 203, POL 205, SW 205, and CST 225. Courses within the Shiley School curriculum meet the University’s math and science core requirement. Core
curriculum, program requirements, course descriptions, and pre-requisite information can be accessed online in the University of Portland Bulletin.

Engineering and Computer Science Programs

The Shiley School offers ABET-accredited degrees in Civil Engineering, Computer Science, Electrical Engineering, and Mechanical Engineering.

In general, all engineering and computer science students follow the same pattern of courses: basic science, applied science, introductory engineering or computer science, and advanced engineering or computer science (including technical electives). The first semester is common to all engineering and computer science majors.

Sample 4-year schedules outlining specific curricular requirements for each program can be found on the Shiley School PilotsUP page (log in, hover over “Pages,” click on “Engineering Students,” then click on the tab “Shiley Student Resources”). Requirements for graduation can be found in the University of Portland Bulletin.

Communication Skills

There are a number of important aspects of your engineering or computer science education that may not be covered in one specific course, or may be included in a number of courses. Communication is one example. Engineers and computer scientists are expected to be able to write and speak well, yet there is no specific course required in technical communications. Employer feedback stresses the need for concise, cogent communication – take every opportunity to practice these skills! Writing and public speaking are embedded in many of your engineering and core courses. The intent is to allow you to improve your communication skills as you progress through UP and develop competence in specific fields. The Learning Commons (BC 163) offers individual assistance on writing and speech. In addition, refer to the Shiley School of Engineering Writing for Engineers, and/or The Pocket Wadsworth Handbook (2015).

Teamwork Skills

Engineering and computer science problems are too complex to solve by lone individuals. Solutions are created by teams working together, and, in many cases, multi-disciplinary teams are needed to solve these complex problems. Teamwork is critical in industry. And teamwork experiences are critical to your own development as a student.

The primary mechanism for you to learn how to work with a team of people is to experience team projects during your undergraduate program of study. You will work in teams in EGR 110 and senior design, as well as many of your other courses and club projects.

Teamwork might seem scary and frustrating. You might think it is easier to just do the work yourself. However, each member of a team brings different experiences, perspectives, and talents. It is an opportunity for you to grow in areas where others have more strengths and expertise, and it is an opportunity for you to share your strengths and expertise with others. Often times, groups are more creative than one person alone, and
today’s technical challenges need creative and innovative solutions, so diversity in teams is crucial. Groups also offer a built-in checks and balances system, so errors are more likely to be identified.

Teamwork does not necessarily mean you all have to work together all the time. For some projects and for some parts of a project, all team members may need to be present for design and construction. Team projects often require delegation of tasks, so individuals carry the responsibility of certain tasks. Communication is absolutely critical for team projects to succeed. Inform your teammates if you are confused about an action item; share with your teammates if you are behind on a task; and update your teammates (and supervisors) about progress on your own tasks. Attend your team meetings.

Below are some suggestions for discussion the first time your team meets for a project. It is important to understand the perspectives, assumptions, and goals of all team members.

- What priority does this project have for you (with respect to your other courses and commitments)?
- What grade (or other outcome) do you want for this project?
- What are your strengths and what do you enjoy doing in a team/project (research, writing, presenting, analysis, leadership)?
- What challenges do you face with regard to group experiences?
- When are you available to meet?
- What is your contact information?
- What forms of communication (email, texts, phone calls) are good for you?

Should you decide your group or team could benefit from additional assistance, Group Process Assistants are located in the Learning Commons (BC 163).
SENIOR DESIGN: DISCIPLINARY & MULTI-DISCIPLINARY
PROJECTS

What is Senior Design? Senior design is the culmination of your four years of study in the field of engineering or computer science. An extensive project is undertaken by every student in the Shiley School of Engineering which is a synthesis of all their skills in engineering analysis and design learned throughout the academic program.

Intro to Capstone Project (EGR 300): The first step in preparing for senior design is to take the required junior level spring semester course EGR 300, Introduction to Capstone Project. This course includes an overview of the capstone process, requirements for project preference, student panels of current seniors and team assignments to capstone projects. Projects include student proposed, faculty sponsored, competition team and externally sponsored projects with industry, government or nonprofit clients. Students also attend the Founders Day sessions and the Shiley Showcase to hear presentations about the current senior capstone projects.

Disciplinary Senior Design Projects (CE/CS/EE/ME 483/484): These types of projects allow you to really focus on your own specialty of engineering or computer science. Structures, mechanical devices, computer hardware and software, etc. are designed from the ground up, tested, and, in many cases, built by the students. Some of these projects end up in national and international competitions sponsored by professional engineering societies in the U.S.

Multi-disciplinary Senior Capstone Projects (EGR 483/484): These projects involve students from different programs in engineering and computer science working on a complex problem that cannot be solved successfully by a single discipline. The primary emphasis for multi-disciplinary projects is project planning and communication which cannot be over emphasized because it will take a lot of interactions with people and agencies outside the Shiley School to make them a successful and satisfying experience for everyone involved. These kinds of projects are indeed as close to real world engineering practice as you can have in an academic setting.

Budgets for Capstone Projects: Each student team has up to $400 for project-related expenses and materials needed to build prototypes. The University Development Office and the Dean’s Office can provide help to student groups who need more funding. This additional funding is competitive; information on the application process can be requested from Lisa Bassett, bassett@up.edu.
**GETTING HELP**

If you need help with something, please know that **resources are available!** Within the Shiley School, the Academic Program Counselors, your faculty advisor, and your instructors are good places to start. If you are taking EGR 110, your peer workshop leader can help you make the transition to college. There are numerous university resources available to help you academically and personally with other issues.

**Tutoring Resources**

There are free tutoring services available on campus to assist you with your coursework. Take advantage of these services, and do so **early**; tutoring is much more effective early in the semester than after poor results or confusion midway through to the end.

<table>
<thead>
<tr>
<th>I need assistance with…</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>My EGR110 Design Project</td>
<td>Project assistants and the technicians are available to help with EGR 110 projects. Hours are posted in Shiley 110. For more information: <a href="mailto:hansena@up.edu">hansena@up.edu</a>, (503) 943-8626</td>
</tr>
<tr>
<td>First-year physics, math, engineering courses</td>
<td><strong>Tau Beta Pi Tutoring</strong>&lt;br&gt;Shiley Hall Vollum Study Room (207)&lt;br&gt;Please see posted hours on door for information about availability.&lt;br&gt;For more information: <a href="mailto:osterber@up.edu">osterber@up.edu</a> (503) 943-7416</td>
</tr>
<tr>
<td>Sophomore EGR Courses</td>
<td><strong>Sophomore Fellows Tutoring</strong>&lt;br&gt;Learning Commons, BC 163&lt;br&gt;For more information: <a href="mailto:merritt@up.edu">merritt@up.edu</a> (503) 943-7612</td>
</tr>
<tr>
<td>CS Courses</td>
<td><strong>CS Tutoring</strong>&lt;br&gt;Andy Nuxoll: Shiley 217, <a href="mailto:nuxoll@up.edu">nuxoll@up.edu</a> (503) 943-7688</td>
</tr>
<tr>
<td>Physics</td>
<td>Physics Tutoring&lt;br&gt;For more information: <a href="mailto:mayers@up.edu">mayers@up.edu</a> (503) 943-7257</td>
</tr>
<tr>
<td>Math</td>
<td>Learning Commons&lt;br&gt;Buckley Center 163&lt;br&gt;For hours and more information: <a href="mailto:sarc@up.edu">sarc@up.edu</a>, (503) 943-8002</td>
</tr>
<tr>
<td>Chinese, French, German or Spanish</td>
<td>Learning Commons, Buckley Center 163&lt;br&gt;<a href="mailto:chinesetutor@up.edu">chinesetutor@up.edu</a>&lt;br&gt;<a href="mailto:germantutor@up.edu">germantutor@up.edu</a>&lt;br&gt;<a href="mailto:frenchtutor@up.edu">frenchtutor@up.edu</a>&lt;br&gt;<a href="mailto:spanishtutor@up.edu">spanishtutor@up.edu</a></td>
</tr>
<tr>
<td>Writing</td>
<td>Learning Commons, Buckley Center 163&lt;br&gt;By appointment (supports students across all disciplines; generally, there is at least one consultant who is specifically trained in engineering)&lt;br&gt;For more information: <a href="mailto:writing@up.edu">writing@up.edu</a>, (503) 943-8002</td>
</tr>
<tr>
<td>Public Speaking Speech &amp; Presentation</td>
<td>Learning Commons, Buckley Center 163&lt;br&gt;By appointment to assist students with public speaking.&lt;br&gt;For more information: <a href="mailto:speech@up.edu">speech@up.edu</a>; (503) 943-8002</td>
</tr>
<tr>
<td>Teamwork, Study Skills, Time Management,</td>
<td>Learning Assistance Counseling&lt;br&gt;Buckley Center 163&lt;br&gt;For more information: <a href="mailto:giumenta@up.edu">giumenta@up.edu</a>, (503) 943-8716</td>
</tr>
</tbody>
</table>
University Resources

The university has other resources to assist you personally, as you make the transition to college life and to support you while you are here.

<table>
<thead>
<tr>
<th>I need assistance with…</th>
<th>Service</th>
</tr>
</thead>
</table>
| The Transition to College | Shepard Academic Resource Center  
Buckley Center 101  
A one-stop place for students to come for support, counsel, and assistance.  
Director: Brenda Greiner  
For more information: sarc@up.edu, (503) 943-7895 |
| My Physical Health or Mental Health | Health and Counseling Center  
Orrico Hall Upper Level  
Assists with physical health and mental health  
For more information: health@up.edu  
To schedule an appointment, call (503) 943-7134  
For after hours assistance call (503) 934-7134 and choose option 3 |
| My Disability or my Accommodation Plan | Accessible Education Services, Buckley Center 163  
Assists students with disabilities and preparing accommodation plans for students with learning challenges  
Coordinator: Melanie Gangle, gangle@up.edu, (503) 943-8236  
Program Assistant: Susan Ayres, ayres@up.edu, 503-943-8985 |
| Career Opportunities, Internships, Resumes, Interviewing, or Graduate School | Career Center  
Orrico Hall Lower Level  
For more information: career@up.edu or (503) 943-7201 |
| My Faith | Campus Ministry  
St. Mary’s Student Center  
Assists with faith development, counseling, Bible study groups, joining the church, and retreats. Pastoral residents are available in the residence halls.  
For more information: ministry@up.edu, (503) 943-7131 |
| My Living Situation | Residence Life  
Tyson 123  
Supports the on-campus residential community through programs and events  
For more information: reslife@up.edu, (503) 943-7205 |
| Research, Finding Resources, and Finding Information | Clark Library  
To view the library’s current hours of operation, please visit their site at library.up.edu.  
Heidi Senior is the Reference & Instruction Librarian who specializes in engineering and computer science subjects. senior@up.edu, (503) 943-8037 |
| My Safety, my Bike, Parking Permits, my ID Card | Public Safety  
Haggerty Hall 100  
Public Safety maintains the safety for all members on campus, should they find themselves a victim of a crime or are concerned about their safety. The office is open 24/7. Between 10 pm and 7 am, use the callbox at the front door.  
For more information: publicsafety@up.edu, (503) 943-7161 |
| My Computer, Laptop, Network Connection, Email, University Computer Account | Information Services  
Franz 112  
Contact the help desk if you are encountering any computer-related problems.  
For more information: help@up.edu, (503) 943-7000 |
| My Tuition, my Scholarships | Financial Aid  
Waldschmidt 120, hours are 8:30 am – 4:30 pm (Mon – Fri)  
For more information: finaid@up.edu, (503) 943-7311 |
| Registration Holds, my On-Campus Job or Payment | Student Accounts  
Waldschmidt 130, hours are 8:30 am – 4:30 pm (Mon – Fri)  
For more information: stu-acct@up.edu, (503) 943-7347 |
CONDUCT IN THE SHILEY SCHOOL OF ENGINEERING

The Shiley School is committed to maintaining a safe environment for students, faculty, and staff to engage in learning and teaching, faith and formation, and service and leadership. Every person should feel safe to learn, to teach, and to work. Maintaining this safety is the collective responsibility of all members of the Shiley School, including you.

Code of Academic Integrity (from The University of Portland Bulletin)

Academic integrity is openness and honesty in all scholarly endeavors. The University of Portland is a scholarly community dedicated to the discovery, investigation, and dissemination of truth, and to the development of the whole person. Membership in this community is a privilege, requiring each person to practice academic integrity at its highest level, while expecting and promoting the same in others. Breaches of academic integrity will not be tolerated and will be addressed by the community with all due gravity.

Violations of academic integrity include cheating, forgery, and plagiarism. The following are presented as examples only, not as a comprehensive list. The entire policy can be found in the University of Portland Bulletin.

Cheating: Cheating is the violation of the letter or spirit of an academic endeavor in order to gain an advantage, put someone else at a disadvantage, or both. It includes, but is not limited to: 1) using or attempting to use unauthorized materials, notes, information, and study aids on an examination; 2) copying someone else’s paper; 3) fabricating or falsifying information; 4) submitting the work of another as one’s own; 5) using or circulating previous examination materials without the instructor’s permission; 6) submitting the same work for more than one class without the permission of both instructors; 7) accessing or using computer information without authorization; 8) encouraging, assisting, or otherwise facilitating any violation of academic integrity; 9) any form of intentional obstruction or destruction that inhibits the progress, accomplishment, or evaluation of academic endeavors in order to gain an advantage, put someone else at a disadvantage, or both.

Forgery: Forgery refers to falsifying or inventing information, data, and citations. It includes, but is not limited to: 1) fraudulently using academic records; 2) falsifying or inventing academic credentials or letters of recommendation; 3) falsifying official signatures of any member of the University community; 4) altering documents affecting academic records.

Plagiarism: Plagiarism is the use or representation of words or ideas of another without attribution, so that they appear to be one’s own. It includes, but is not limited to: 1) using another’s words, ideas, methodology, or formulation of a problem without proper acknowledgment; 2) using approximate wording or paraphrasing inappropriately; 3) claiming someone else’s work as one’s own; and 4) allowing students or research assistants to gather research information without
recognition of their work; 5) failure to acknowledge all sources of information or contributions to an assignment or other academic work.

All violations of academic integrity will be penalized as deemed appropriate. In determining the appropriate penalty, consideration should be given to the knowledge-level and experience of the person committing the violation, the degree of intention in the violation, the nature of the violation, and whether or not this is the first offense or a repeat offense.

**Level 1:** Level 1 violations may occur because of the violator’s lack of knowledge in cases where this knowledge could be reasonably expected. The violation is not intentional and is the first offense. In general, the nature of the violation is minor and may involve only one assignment in a course. Penalties are educative rather than punitive, and may include: 1) making up the assignment; 2) requiring the student to rewrite a paper for a minimally passing grade; 3) requiring acquisition of specific knowledge related ethics; 4) community service for a specified number of hours.

**Level 2:** Level 2 violations are of a more serious nature. The violation occurs when the violator has some knowledge or experience and the violation was committed with some degree of intent. Penalties may include: 1) an academic warning for a stated period of time (not to exceed one year) during which time any further violation will constitute grounds for a Level 3 penalty; 2) assigning no credit to the work; 3) assigning a failing grade in the course; 4) writing a short paper on the ethical issues related to the violation and what was learned from the experience.

**Level 3:** Level 3 violations are of a very serious nature. The violation is intentional and premeditated. It directly benefits the violator or harms others, or both. The nature of the violation is major. Repeated Level 2 violations may constitute a Level 3 offense. Mitigating circumstances may include the acceptance of responsibility by the violator when confronted. Penalties may include: 1) academic probation for a stated period of time (may exceed one year and include the loss of some or all benefits of programs, university related scholarships, and the like); during this time any further violation will constitute grounds for a Level 4 penalty; 2) assigning a failing grade in the course; 3) restitution for damages; 4) probated suspension from the University for one or more semesters with notification that further violations will result in dismissal from the University; 5) withdrawal of University funding.

**Level 4:** Level 4 violations are the most serious violations. The violation is intentional and premeditated. It directly benefits the violator and harms others. Repeated Level 2 or 3 violations may constitute a Level 4 offense. Penalties may include: 1) dismissal from the University; 2) permanent notation on the student’s transcript; 3) restitution for damages; 4) revocation of an awarded degree.

The University and the Shiley School hold that a consistent, active commitment to its standard of academic integrity benefits all members of the University community and is the responsibility of each and every member.
Procedure within the Shiley School: All individuals accused of a violation of academic integrity have the right to notice of the specific charge, a fair consideration of the charge, a fair review of the evidence, and confidentiality as allowed by law and in fairness to other affected persons.

Any person who believes that there has been a violation of this policy and wishes to report it, should report it to an appropriate faculty member. In some cases, the faculty member will be the only person aware that there may have been a violation.

The faculty member will: a) meet with the student to discuss the incident and to determine if a violation occurred, b) gather and preserve any relevant evidence, c) document the incident and the evidence as soon as possible, d) if a violation is deemed to have occurred, prepare a report for the associate dean (delegated responsibility by the dean), including a description of the incident, the evidence, and the penalty, e) normally the faculty member is expected to take action and/or make a recommendation within one week after receiving a report or witnessing the incident.

The associate dean will review the report, including any recommendation, and maintain a file of all reports. If the associate dean agrees that a violation has occurred, he or she will determine the appropriate penalty, document the violation, and notify the dean and the provost if further action is necessary. The student and faculty member will be informed of the charge and the penalty.

Classroom Conduct

The Shiley School faculty are committed to protecting a classroom environment in which respect is shown to everyone in order to facilitate and encourage the expression of a variety of ideas and opinions. Students are expected to conduct themselves in a manner that keeps them and those around them safe. Any activity, such as physical assault, verbal assault, and harassment will not be tolerated. Disruptive behavior includes, but is not limited to: receiving cell phone calls during class, habitually leaving class early or coming to class late, talking out of turn, and working on assignments for other courses during class. Students are expected to participate fully in classroom activities and discussions. Faculty have the authority to determine if a student’s behavior is disruptive and the student will be warned about behavior that jeopardizes the respectful classroom environment. Faculty can ask disruptive students to leave class.

Laboratory and Shop Conduct

Students in the Shiley School have considerable latitude in the use of laboratories and shop facilities. Because we have a small student body, we allow student access to facilities that would not generally be granted at a large university. With this opportunity, however, comes responsibility. Lab etiquette, or proper use and care for lab and shop facilities and equipment, is extremely important for the effective use and operation of these facilities for all concerned. Please see Appendix B for lab functions and responsible personnel.
**Access to the Machine Shop (Shiley 116) & Project Fabrication (Shiley 118):** Students may use the machine shop and project fabrication facility only after they have received training from a School technician, and only during regular working hours with School technicians present. In general, students (even if trained) are not allowed in the shops after hours. Shop training may be included as part of the Senior Capstone courses to facilitate the use of the shop for prototype and project construction.

**Access to the Laboratories:** Access to the labs depends on the lab, the specific activity undertaken, and the student’s purpose in requesting its use. Academic labs are available for students during scheduled laboratory sessions, as well as by specific arrangement with the relevant faculty member. In certain instances, students may work in labs during open building hours. To gain access during non-laboratory hours, the technician supervisor must contact Public Safety and make appropriate arrangements.

**Access to the Roof:** If your lab requires access to any of the Shiley roofs, you must obtain a copy of the “Roof Access Policy for Educational Use” from your professor.

**Etiquette:** A clean and well-organized lab is essential for effective and safe operation. It is critical that each individual leave the lab in perfect condition for the next person. This may mean that you will need to leave it in better shape than when you arrived. Every piece of equipment should be returned to its appropriate place, all trash should be placed in a garbage can, all surfaces and floors should be swept to remove sawdust, filings, wrappers, and other debris.

**Safety:** There are numerous safety concerns, ranging from dangerous chemicals to sharp tools. Students must learn appropriate procedures for each lab before using any of the equipment. Of utmost importance is the fact that you never work alone. In general, do not assume that you can figure out how to use an unfamiliar piece of equipment on your own.

Please refer to APPENDIX B for additional information.

**Vehicle and Transportation Policy**

Activities during your years here may include off-campus travel for groups of students (such as for site visits to project locations for senior project teams or travel to the MECOP Industry Day). Any travel that includes University-owned vehicles or privately-owned vehicles when they are used for University sponsored activities must adhere to the University Vehicle and Transportation Policy. Please refer to the policy on the Public Safety website.

**Accommodations for Students with Disabilities**

**Accessible Education Services (AES),** located in BC 163, serves a number of students with disabilities and learning challenges each semester. The University of Portland is committed to full access and inclusion of all qualified students. Students with disabilities have equal opportunity for participation in the University’s academic programs and functions. If you have an accommodation plan, you should make appointments to meet
with your professors to discuss your accommodations. Accommodations can only be made for students who have plans through AES.

**Professional Engineers and Professional Conduct**

Studying engineering or computer science is your embarkation into a profession. Each major program has an associated professional society, a body of knowledge, and a code of ethics. It will be important for you to familiarize yourself with your professional society as you go deeper into your course of study at the University.

The value of belonging to professional societies in the engineering profession and networking with their members cannot be over-emphasized. This networking connects you to the whole profession and lets you hone your skills of human interactions and leadership. It can also make it easier for you to find internships and permanent jobs. Consider becoming a member of a society of your choice (ASCE, IEEE, etc.) while you are still a student at UP. The Shiley School has active chapters of all the relevant engineering societies on campus – find more and become a member of those in your area of interest!

Professions are licensed when the health, safety, or welfare of the public is at stake. For your selected profession, becoming a licensed engineer may be important and necessary. The first step is to pass the Fundamentals of Engineering (FE) exam. After working and being supervised by a professional engineer, you take the Principles and Practice of Engineering Exam (PE). Requirements vary by state; see the National Society of Professional Engineers website for more information.

In the modern times, practicing engineers have to be fully aware of all the ethical, moral, and legal implications of their decisions. This is accomplished by consulting the various codes and standards promulgated by the different professional organizations in the engineering profession. The National Society of Professional Engineers has the Code of Ethics and other relevant case studies on their website. Some of this material will be covered in various courses in your curriculum but you should make yourself aware of what is available on the NSPE website and how to use it to learn more on this topic.

**Grievance Procedure**

The Shiley School seeks to provide an environment that values communication, fair treatment, and respect among all members of the community. People do have misunderstandings and the Shiley School believes that misunderstandings can best be resolved informally. However, if resolution cannot be met among the parties, a student can file an official grievance. Individuals or groups have the right to grieve matters deemed to be unfair or unreasonable on the part of the Shiley School. For grievances regarding grading appeals, see the University of Portland Bulletin. Students who wish to grieve a matter should first discuss the problem with the individuals involved. If the student is dissatisfied with the response, he or she may address their grievance to their academic advisor, who may meet with the individuals to facilitate a resolution. If resolution is not reached at the advisor level, the student may discuss the grievance with the Associate Dean, and if no successful resolution is reached, the student will be asked to write a formal letter to the Dean about the grievance. The Dean will review the
grievance and talk to the parties involved and make a decision to resolve the grievance. If
the student is still dissatisfied, he or she may submit a formal grievance to the Provost.
Students filing a grievance should follow this order, so that resolution can happen at the
lowest level possible.

CO-CURRICULAR OPPORTUNITIES

UP offers a variety of wonderful educational opportunities. Some are events that you
might take advantage of on a one-time basis (e.g., special lectures) while others are more
long-term, and some of these co-curricular programs require careful planning on your
part due to curriculum requirements.

International Experiences

Global competency is essential for the 21st century engineer and computer scientist.
Studying overseas is a wonderful way to gain a global perspective of your field and of the
world. UP offers some great chances to study overseas, including programs geared for
engineering and CS students and programs for general UP students. However, as
engineering students, you need to plan carefully so that you can take advantage of these
possibilities. The Study Abroad liaison for the Shiley School can help you plan your
degree.

Programs designed for engineering and CS students

Engineering Salzburg Summer Session 1: Study abroad in Salzburg, Austria for six
weeks during the summer after your first, sophomore or junior year. This program
includes one engineering course and one core course.

Engineering Salzburg Spring Semester Program: The Salzburg semester program is
currently designed for the sophomore spring semester, with preference for civil and
mechanical engineering majors. Students take core electives and a German language
course at the Salzburg center, as well as two engineering courses, Dynamics and Strength
of Materials, at the University of Applied Sciences Upper Austria (located about one
hour by train from Salzburg.) All courses except the German language course are taught
in English. Students in this program can graduate in four years with careful planning;
note that summer work may be required.

Global E3 Program (GE3): GE3 is a program offered through the International Institute
of Education (IIE). This program provides engineering students with an opportunity to
study abroad during their sophomore or junior years in several different countries. For
more information please contact merritt@up.edu.

General programs

Summer Session and One-Semester Programs: UP offers many summer and semester
abroad programs that allow you to complete core courses or language minors, even
though engineering and CS courses are not offered. These might appeal to you based on
theme, destination, or minor. These programs will require careful curriculum planning to
ensure your major requirements are satisfied.
**Salzburg Year Program:** This is the longest and most established program that UP offers and allows students to complete all core requirements while abroad during the sophomore year. Most engineering students who choose this option will likely be on a 5-year plan to satisfy the major requirements. This extra year affords students to get a second major or pursue a minor if they wish. Computer science students may be able to complete a 4-year plan including a year abroad, but must work very closely with the Study Abroad liaison for the Shiley School as soon as they start their first year if considering this option.

Note that most study abroad program applications are due well in advance of studying overseas. See Jamie Merrett in Shiley 244 (merritt@up.edu) for more information about these programs. For general information about studying abroad, contact Eduardo Contreras (contrera@up.edu), Director of the University’s Office of Studies Abroad.

**Medical Instrument Repair in the Developing World:** The course covers medical equipment commonly seen in a low-resourced hospital, including principles of operation and typical problems. The class focuses on learning hands-on and technical knowledge required to complete basic electronic and mechanical repairs and concludes with a 3-week trip to the Dominican Republic to repair medical equipment in hospitals.

**Global Engineering:** This course provides an introduction of how to design, make decisions, and communicate effectively in a global technology environment through the use of various case studies. The course also includes a week-long exploration of engineering practices in another country.

**International Internships:** Please see the section on Internships for international work and research opportunities.

**Service Learning:** Please see the section on Directed Study, Research, and Service Learning for international service learning opportunities.

**Leadership, Entrepreneurship and Innovation**

The University’s Franz Center for Leadership, Entrepreneurship and Innovation offers opportunities for students to learn about being an entrepreneur, having an innovation mindset, and becoming a leader. With so many new innovations in engineering and technology, this is a fantastic opportunity for Shiley students to work with students in other disciplines to lead in the creation of new products and ventures. Several students have taken advantage of the opportunity to utilize their technical expertise in an entrepreneurial business setting. The program offers courses related to each of the three areas. The office also has a “Maker Space” for students to ideate and brainstorm. For more information, see Peter Rachor in the Franz Center, Franz 123.

One program of particular interest to Shiley students is the E-scholars Program. Applications to participate in E-scholars are due in December of your sophomore year. E-scholars typically take three courses during junior year, so working this into your course schedule requires some planning.

Another opportunity offered by the Center is the $100,000 Challenge Venture Competition, a university-wide competition open to students to present their business
plans in April of each year. Shiley students participate in, and routinely win, this competition; projects are usually related to senior design. The award includes cash and in-kind services for students who want to start their own ventures.

The Pamplin School of Business offers an Entrepreneurship Minor for students who want more extensive experience with the entrepreneurial process and business planning. The minor requires nine credits of business courses and six credits of electives from business, engineering and computer science, drama, and communication studies.

Leadership Certificate Program
Students may choose to participate in this experiential journey focused on preparing the next generation of leaders with the knowledge, tools, and mindset that model, motivate, and engage others to make right and just choices for the common good. Students take two leadership courses, complete three real-world leadership experiences, and are coached by role models along their leader development journey.

Faith-Based Leader Program
Students may choose to participate in this experience for faithful young men and women to discern how God is calling them to a vocation by learning first-hand from organizations that can best put their talents and gifts to use. Students take one course, complete an internship in a Faith-Based or Not-For-Profit with an executive mentor, and are mentored on reflecting theologically as well as being coached along their leader development journey.

Ongoing Consultation and Workshops:
The Franz Center provides guidance to students from across the campus by connecting them to mentors and entrepreneurs from the region, by giving one-on-one feedback on business ideas, and conducting workshops on important topics related to successful business practices. UP and this Center are well connected with the local and regional entrepreneurship organizations such as the Oregon Entrepreneurs Forum (OEF) and these connections can be leveraged by the students to jump start their business ideas.

Minors

The University of Portland offers several minors in addition to the Entrepreneurship Minor described above, ranging from STEM subjects to foreign language. A minor is a great way for engineering and computer science students to explore a complementary interest. Check out the complete list of minors offered at the University.

Pre-Professional Programs

Some of you may be interested in graduate work in medicine or law. If so, it is important that you take the required pre-med or law courses in addition to your degree requirements. Below is a list of contacts for those interested in medicine or law:

- **Pre-Med:** Becca Henley, vandrimm@up.edu, BC 201, x7221
- **Pre-Med:** Kyle Flann, flann@up.edu, Swindells 108, x8850
- **Law:** Dr. Bill Curtis, curtisw@up.edu, BC 447, x8563
Engineering Student Organizations

There are a number of student-run organizations/clubs, most of which are aligned with different majors. Membership in an organization is a great way to gain experiences and information not necessarily found in the classroom. You are encouraged to join anytime! Information regarding meetings and events is usually emailed to students and posted to the Shiley School of Engineering whiteboard calendar (located on the 2nd floor on the wall by the open computer lab). Attend the meetings and get involved in these clubs and their projects; it is a great way to meet new people and apply what you are learning in the classroom.

Professional Society Chapters

The American Society of Civil Engineers (ASCE) is a national professional society dedicated to the fundamentals of Civil Engineering. Faculty Advisor: Mojie Takallou.

The Association for Computing Machinery (ACM) is the oldest professional organization for software professionals. Faculty Advisor: Steve Vegdahl.

Biomedical Engineering Society (BMES) is comprised of STEM students who share an interest in using biomedical sciences to advance human health and well-being. Faculty Advisor: Kathleen Bieryla.

Engineering World Health (EWH) improves the quality of health care in hospitals in the developing world by installing, building and maintaining medical equipment. Please note that EWH and BMES merged beginning in academic year 2018-2019. Faculty Advisor: Kathleen Bieryla.

The Institute of Electrical and Electronic Engineers (IEEE) is an international non-profit technical association dedicated to promoting the engineering process for electrical, electronic, and information technologies and sciences. Faculty Advisor: Aziz Inan.

The Mechanical Engineering Student Association (MESA) is for students interested in mechanical engineering. There are four professional societies that ME majors typically join, listed below. Faculty Advisor: Shaz Vijlee.

The American Society of Mechanical Engineers (ASME) enhances the education of Mechanical Engineering students and provides a social setting for its members. Faculty Advisor: Tim Doughty.

The Society of Automotive Engineers Collegiate Design Series (SAE CDS) provides opportunities to gain broader insight into the transportation fields within the engineering profession. Faculty Advisor: Jordan Farina

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). The objectives of this student branch are: the advancement of the
sciences of heating, refrigerating, and air-conditioning engineering, the education of members through lectures, demonstrations, and publications, the rendition of career guidance to students, and the encouragement of scientific research. Faculty Advisor: Heather Dillon.

American Society for Metals (ASM) provides opportunities to gain broader insight into engineered materials and processes. Faculty Advisor: TBD.

The Society of Hispanic Professional Engineers (SHPE) changes lives by empowering the Hispanic community to realize its fullest potential and to impact the world through STEM awareness, access, support and development. Faculty Advisor: Sharon A. Jones.

The Society of Women Engineers (SWE) encourages women to achieve full potential in careers as engineers and leaders, expands the image of the engineering profession as a positive force in the quality of life, and demonstrates the value of diversity. Male and female Shiley students welcome. Faculty Advisor: Tammy VanDeGrift.

The Tau Beta Pi (TBP) National Engineering Honor Society recognizes engineering and computer science students and alumni who have conferred honor upon their Alma Mater through distinguished scholarship and exemplary character. Faculty Advisor: Peter Osterberg.

Student Interest Groups

The Global Engineering Initiative partners with disadvantaged communities to improve their quality of life through implementation of environmentally and economically sustainable engineering projects, while developing internationally responsible engineering students. Faculty Advisor: Niki Schulz.

The League of Inventors provides opportunities to explore the experience of turning ideas into products by pursuing hands-on design projects. Faculty Advisor: TBD.

The Mobile App Development Club educates students on how to develop mobile applications for the Android, iOS and Windows platforms, while focusing on creating new mobile applications and collaborating about bettering existing applications. Faculty Advisor: Andrew Nuxoll.

The Organization for Diversity and Inclusion for Engineers (ODIE), improves the diversity of engineers by building connections between community members from many backgrounds and experiences. Faculty Advisor: Sharon A. Jones.

The Robotics Club is a multidisciplinary engineering and computer science club that explores the capabilities of autonomous and remote-controlled robotics. Faculty Advisor: Ben Tribelhorn.

Students for the Exploration and Development of Space (SEDS) provides opportunities and projects to students of any major who have an interest in space and astronomy. Faculty Advisor: Ken Lulay
**Service Learning**

University of Portland students have numerous opportunities to engage in activities benefiting our local and global communities. The student organizations are active in outreach activities focusing on engineering and computer science; our Global Engineering Initiative and Engineering World Health chapters create engineering and computer science solutions to serve others. Many senior design projects work with clients on projects that serve the community. We also offer a Service Learning course (EGR 387), which is a faculty-led student outreach experience in a community setting. Before enrolling, a student must meet with a faculty member to define goals for the project.

The Moreau Center for Service and Leadership organizes volunteer opportunities for you to work locally and serve through immersion experiences. There are also opportunities to do work study positions with local non-profit organizations. For more information, contact the [Moreau Center](#), located in St. Mary’s Student Center.

**Internships**

There are many opportunities available to engineering and computer science students to enhance their four-year academic programs through participation in internship opportunities with local and regional industrial organizations.

It is strongly recommended to complete an internship before graduating to assist you in securing a permanent job in your field in a reasonable time period. For those of you interested in learning more about internships, there are several paths:

- Connect with our Industry Relations Manager
- Check your email and web resources. An e-newsletter called “Focus on Internships”, created by the Career Center and distributed every other week, will provide a summary of internship postings currently listed on Handshake, the university-wide system for job postings.
- Consult with your faculty advisor and professors about opportunities.
- Attend the SHPE STEM Career Expo in late October and the SWE Science and Engineering Career Fair in late February to meet potential employers.
- Attend the monthly “Lunch with an Engineer” events to connect with industry representatives in fields you are interested in pursuing a career.
- Attend other networking opportunities in Portland, Seattle and Bay Area throughout the year.

As you find an internship opportunity, be sure to use the Career Center’s resources to prepare yourself for your internship search. Their services include resume writing, mock interviews, networking tips, cover letter enhancements, access to an alumni database, and even how to dress for the Career Fair and interviews.

Specific internship opportunities include:
**Skanska Internship/Scholarship:** Skanska USA provides a scholarship and internship position to one UP junior student each year. Application information is typically available in early October with applications due shortly thereafter and interviews in early November.

**SSOE Internship/Scholarship:** SSOE provides a scholarship and internship to one UP student starting in 2018-19 academic year. Application information is available through financial aid.

**IAESTE:** The International Association for the Exchange of Students for Technical Experience (IAESTE) offers professional internships abroad, social and intercultural reception programs, international networking, and other career activities in more than 80 countries. Information on application deadlines and the application process is typically available at an Information Session in early November.

**DAAD RISE:** The German Academic Exchange Service (DAAD) offers a summer internship program known as Research Internships in Science and Engineering. These are competitive internships for students from the US, Canada and the UK in science and engineering. Undergraduate students work with research groups at universities and research institutions across Germany for a period of 2 to 3 months during the summer. About 300 scholarships are currently being awarded; online registration occurs in December and January with applications due by mid-January.

**MECOP/CECOP**  
The Shiley School of Engineering is a member of MECOP (Multiple Engineering Cooperative Program). MECOP partners industry with academia, so students get to experience two six-month internships during their undergraduate programs. This opportunity is available for civil engineering (CECOP), computer science, electrical engineering, and mechanical engineering students. The internships are paid, usually at least 70% of the salary for an entry-level engineer or computer scientist. The internships take place during the summer/fall after the third year at UP and the summer/fall after the fourth year at UP. MECOP/CECOP interns, therefore, complete their degree in five years (note that internships constitute one full year). However, you must plan your courses carefully to ensure you can be away at internships during fall semesters of your fourth and fifth years.

There is an application and interview process to participate in the MECOP/CECOP program. Students apply during March of their sophomore year. Selected students then go through an interview screening process in May. Those selected into the program take a MECOP/CECOP seminar course during the fall of their junior year and go through a placement screening process for the company/intern match in January. The first internship starts in June after the student’s third year. If you are interested in participating or want to learn more, contact Kate Rohl, the Industry Relations Manager.

**SHILEY SCHOOL POLICIES FOR MECOP/CECOP PARTICIPANTS**

Careful planning of courses is required to ensure that MECOP/CECOP students stay on track for a 5-year graduation while taking the necessary courses prior to their internships. Students need to consult regularly with their academic advisors for specific course planning to accommodate MECOP/CECOP and the major. MECOP/CECOP and UP
strongly discourage students from taking courses while on the internship. Students will not be able to participate in the program if:

- they do not stay on track per the approved MECOP/CECOP 5-year graduation plan
- they are not in good academic standing
- they have any academic dishonesty actions

UNIVERSITY POLICIES FOR MECOP/CECOP PARTICIPANTS

As a participant in MECOP/CECOP, students are required to take a leave of absence from the University during the internship period. When on leave, the following policies apply:

- There may be payment due on student loan(s) after the initial waiting period (the office of Financial Aid will reach out to discuss each student’s particular situation).
- Access to the Beauchamp Center will be allowed by payment of a fee (the same fee charged to alumni).
- Tickets can be purchased to athletic/arts events at the alumni discount rate.
- Students will not be able to access the following:
  - Health and Counseling Center services
  - Non-public Clark Library/IS software
  - Campus housing (students on leave may not live in traditional, or off-campus University rentals)
  - Residence halls, ID-card controlled laboratories, or other limited access facilities
- Students will have access to their UP email accounts.
- Online class pre-registration with a PIN will occur at the regularly scheduled time. The Program Counselors will notify the Registrar’s Office to temporarily lift the hold so that students may register; the hold will be restored after the pre-registration period.

NASA Oregon Space Grant Consortium

The University of Portland is a member of the NASA Oregon Space Grant Consortium. Through the consortium, students are eligible to apply for scholarships, internships, sponsored projects, and research grants. Various internship opportunities exist, including working at a single NASA facility over the summer, working for NASA Academy and spending several weeks at multiple NASA facilities, and receiving a fellowship to work on a specific research project. For more information, go to intern.nasa.gov and look under Student Opportunities for eligibility and details.

Undergraduate Research

Students have the opportunity to work one-on-one or on a small team with a faculty member on a research project. In some cases, this project can serve as a technical elective for your major or can be a paid research project. These projects can be conducted during
the academic year or during the summer, subject to faculty approval. See Appendix A for faculty areas of expertise to find a good mentor for your areas of interest.

**Directed Study (XX490)** This option opens up many possibilities for taking courses that are not listed in the University Bulletin, but are at a more advanced level in your field of interest.

**Directed Research (XX493)** This option allows you to work on a research project with a faculty member for credit. Research opportunities are very important if you are considering graduate school. They also allow you to have a very different type of learning experience. Sometimes a directed research course may lead to a paid research opportunity in the summer.

**Research Opportunities at UP:** Local research opportunities may be available through engineering faculty members via research funding that the faculty member has from an external organization or the Dean’s Office. Students may be approached by a faculty member to consider an opportunity but students should advise faculty of the interest directly. Summer research opportunities at UP typically include a stipend and lab access.

**Research Experience for Undergraduates (REU):** Participation in the National Science Foundation’s REU programs is an excellent way to prepare for graduate school. These summer opportunities provide great research experience as well as some monetary compensation at reputable institutions of higher learning throughout the United States. If you are seriously considering graduate education in engineering, then talk to your Faculty Advisor and other faculty members in your major and get a better feel for the REU opportunities before applying. The [NSF REU website](#) contains information on all of the possible opportunities. Notification of some specific REU opportunities may be included in the weekly e-newsletter. Many UP students have participated in these programs and have come back excited about engineering research and graduate education.

**Scholarships**

A college education can be a huge financial investment, so you might be wondering how you can get more scholarships to cover your tuition and other expenses. The [Office of Financial Aid](#) handles institutional scholarships. The [Oregon Student Access Commission](#) is a clearinghouse for scholarship information. The Noyce Scholarship discussed above is another option. Otherwise, use your honed Internet searching skills to find scholarships that match your interests, background, and experiences. Many professional societies offer scholarships for engineering and computer science students. Check out their websites to find out more!
ADVISING AND REGISTRATION

Academic Program Counselors and Faculty Advisors

Academic advising is a critical component of student success in the Shiley School of Engineering. Our Academic Advising Program empowers you – the Student – to take responsibility for your academic success through a collaborative relationship between you, your faculty advisor, and the Academic Program Counselors (APC’s).

All Shiley students are assigned to a faculty advisor throughout their program of study. First-year students are assigned an EGR 110 instructor as their faculty advisor for their first semester. At the end of your first fall semester, you will be assigned a faculty advisor in your major discipline. Your faculty advisor will then remain the same until you graduate (unless you change your major).

While advising is available to students year-round, the majority of advising occurs just prior to students registering for courses (October/November for spring registration; March/April for fall registration). Students must meet with their faculty advisor to discuss their overall degree plan in order to determine the best set of courses to register for in the subsequent semester. Students are emailed their registration PIN number (password) after they have demonstrated that they have met with their faculty advisor. A different PIN number is needed for each semester of registration to ensure that students continue to check in with their faculty advisor each semester throughout their program.

In the fall of your first year, you will meet with your faculty advisor (your EGR 110 instructor). Optional appointments with an APC are always available for all Shiley students who may have questions about degree requirements, academic policies and procedures, or how special programs such as MECOP might affect their degree plan. As you progress into your major, your faculty advisor will serve as a valuable professional mentor to help you select your electives, as well as explore different career paths in your discipline. You can always find your faculty advisor’s contact information on Self Serve in PilotsUP or DegreeWorks.

Declaring or Changing Your Major

You may transfer out of the Shiley School or change your major within the Shiley School at any time. The APC’s are the initial point of contact for changing your major. If you are changing majors within the Shiley School, you must meet with the Program Chair in your new major, provide a short written reflection of your decision to the Associate Dean, and submit your request electronically through PilotsUP. Once you have provided the Associate Dean with this reflection, the APC’s will approve your new major and assign you a new faculty advisor. The faculty advisor in your new discipline will help you understand your new degree requirements and provide you with guidance about that profession.

To transfer out of the Shiley School to a discipline in a different professional school or the College of Arts and Sciences, you will need to complete an electronic PDF form
called the Request for Transfer Within the University, print, sign, and obtain a signature from one of the APC’s or Associate Dean in the Shiley School. You will then need to walk the paperwork over to your new Dean’s Office, where they will advise you on your new degree requirements and assign you a faculty advisor in your new major. The paperwork is then forwarded to the University Registrar to update your new major.

**Registration Procedure**

Your first-semester registration was done for you by an Academic Program Counselor. Subsequently, it is your responsibility to own your degree by seeking out advising when needed and registering for each remaining semester. Note that if you are an athlete, honors student, or have an AES accommodation for priority registration, you will bring your form to either Athletics, Honors, or the Shepard Academic Resource Center, respectively, by the date they communicate to you.

The APC’s and your faculty advisor set aside a great deal of time for meeting with advisees. Please schedule (and follow through with) appointments and register for courses during your designated registration time; this helps you secure a seat in required courses, and the University manage overall course enrollment. Schedule adjustments can often be made after the designated online registration time windows if necessary.

**Transferring Courses**

Occasionally, students may wish to take a course at another school and transfer the credit to UP. Since the Shiley School is a professional school with ABET accreditation, you should formally obtain approval for the course(s) from the APC’s before you spend your time and money taking the course. This process ensures ahead of time that there are no issues with the course fulfilling a degree requirement in accordance with our ABET accreditation. There are *Transfer Course Pre-Approval Request* forms available in the Dean’s office. The APC’s will consult with the appropriate campus departments and carefully advise if and how the course will transfer to ensure it meets ABET accreditation requirements. Failure to obtain a pre-approval and assuming a course will transfer appropriately may result in delaying your graduation. If you do get approval to transfer a course, the minimum acceptable grade is a C or higher (as per University policy).

**Course Substitutions and Prerequisites**

Students are expected to follow the approved curriculum for their major as outlined in the Bulletin. Substitutions for required courses are made only in exceptional cases and require a *Course Substitution Request* form signed by your program chair and the Shiley School Associate Dean.

Students are expected to fulfill prerequisites for each course. The curriculum is carefully designed to maximize student success. If you encounter a unique hardship and cannot fulfill a prerequisite prior to taking a course, please obtain a *Prerequisite Exemption Request* form and obtain a signature from your program chair and the Shiley School Associate Dean.
Academic Standing and Probation

Students are expected to maintain good academic standing by earning a minimum semester GPA of 2.0. If your semester GPA falls below a 2.0, you will be placed on academic probation during the subsequent semester, and you will be limited to 15 credits for the subsequent semester. This limit on your credit load is intended to help you aim for excellence and to help you improve your academic standing. It is also recommended that you take the one-credit ED 102 course (University Success course). Students on academic probation are counseled by the Associate Dean. Please note that any student who is placed on probation for two semesters in any twelve-month period may be dismissed from the University. Please refer to more information in the Bulletin.

PREPARING FOR GRADUATION

Graduation is a major milestone in your life and the culmination of all the hard work that you put into your engineering education at the University of Portland. Make sure that everything goes smoothly by taking care of all the details up front. Check with the Academic Program Counselors if you have any questions or concerns about your degree progress. They can help reassure you that there are no “holes” left in your degree audit and you have fulfilled all degree requirements.

An application process is required for graduation and it begins at the Office of the Registrar. You can download the Graduation Application from their web page, fill it out, and submit it to that office, along with the required fee. After this step is complete, the Academic Program Counselors check your file thoroughly for any missing pieces, and will let you know what needs to be completed in order for you to graduate successfully from UP. Application deadlines can be found on the Registrar's web page.

Career Planning

It is never too early to start your career planning. As you progress through your years at UP, there are many opportunities for you to learn more about possible options for after graduation. Now is the opportunity to learn more as you consider your choices.

- Information Sessions: These sessions occur regularly with representatives from industry, graduate school, and research opportunities. Watch the e-newsletter for announcements of Events and take advantage of as many as possible to learn about the broad spectrum of engineering options.
- Internships: As mentioned earlier, participation in an internship is a great opportunity to get an in-depth understanding of a professional field and an engineer’s role. The internship also provides the sponsoring company a good understanding of your ability as a potential employee.
- Career Expo & Career Fair: Visit several companies at the SHPE STEM Career Expo in late October and the SWE Career Fair in late February to hear about opportunities and openings at their firms.
- Networking: Networking events are scheduled in Portland during the academic year, as well as in Seattle and the Bay Area during academic breaks. Monthly “Lunch with an Engineer” events give you an opportunity to meet with industry representatives to hear about fields you might be interested in pursuing a career.
Visit Kate Rohl, the Industry Relations Manager, to learn more about companies and get more information about upcoming networking events.

• Career Center: Continue to work with the Career Center on your resume, LinkedIn profile, and other professional tools to be prepared when the right opportunity arises. Take advantage of the literature from various companies in the area that describes what these companies do, their product lines, and contact information. Visit Handshake, the Career Center’s active online job and internship platform for the most current information about any job/internship postings by companies in the area.

• Student Clubs: Attend meetings of the Student Clubs affiliated with professional engineering organizations to learn more about these organizations as well as to listen to industry speakers and to network with these individuals. Also consider attending the meetings of the professional societies as a student.

Graduate School

Graduate education in engineering is an exciting endeavor whether you are thinking of staying in the industrial job market or embarking on a career in teaching and research. Most of the medium to large universities in the US offer teaching and research assistantships to their graduate students while some of the larger universities have fellowships with impressive amounts of stipends attached. If you plan ahead and prepare, it is very likely that you may end up with one of these fellowships. Many UP graduates in engineering have gone on to prestigious academic institutions across the nation to earn their graduate degrees.

If you are seriously considering graduate education, speak with your Faculty Advisor and other faculty members in your major about your plans and choice of school that you might be considering. They can give you valuable advice which may or may not be available on the web sites of the universities on your list.

If you do make the decision to apply for graduate school, you will need recommendations from faculty members. To assist your professors in writing these recommendations, please have your personal statement and CV prepared as background material and provide these to the professor. In addition, please prepare a list of the schools needing recommendations as well as the dates that the recommendations are due. Best practice is to provide these items at least one month in advance of the first due date to allow the professors adequate time to prepare the recommendations as they continue their regular tasks.

Opportunities for Fellowships, Research Assistantships, or Teaching Assistantships will be communicated via email from the Industry Relations Manager.
POST-GRADUATE FELLOWSHIPS

There are different kinds of support that a student might receive to pursue graduate studies. Teaching assistantships and research assistantships are typically offered by specific graduate programs. In many cases, all students applying for the graduate program are automatically considered for these assistantships without a separate application. Some fellowships, however, are awarded by institutions and can be used at a school of the student’s choice. The deadlines for these fellowships are independent of graduate program deadlines and are sometimes much earlier.

NSF Graduate Research Fellowship Program: This program recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based Master’s and doctoral degrees at accredited US institutions. Fellowships are granted for a three-year time period and provide $34,000 annual stipends for the student with a $12,000 grant for the institution to cover educational costs; these amounts will adjust over time due to cost of living considerations. Applications are typically due near the end of October and require an online registration. Two thousand Fellowships were granted for applications submitted in 2018. Juniors considering research-oriented graduate studies should contact the Dean (Dr. Jones) for additional information on how to prepare for a successful application.

Whitaker International Programs: The Whitaker International Program sends emerging leaders in US biomedical engineering overseas to undertake a self-designed project. The goal of the program is to assist the development of professional leaders who are not only superb scientists but who will also advance the profession through an international outlook. Typically, the program funds 50 Fellow and Scholar Grants and 25 Summer Grants. Applications open in mid-August and are typically due in mid-January and early February.

In addition to the two specific programs noted above, there are several Fellowships, Grants, and Scholarships that you might consider for post-bachelor degree experience. These include the US Fulbright Student Program, the Gates Cambridge Scholarship, the George J. Mitchell Scholarship, the Marshall Scholarship, and the Rhodes Scholarship, among others. All granting agencies are looking for students who are on a clear trajectory and can identify why a specific scholarship, fellowship, or grant is essential to helping them attain their goals. It’s important to think carefully about your career path and the steps you will be taking in order to get to that ultimate goal—your undergraduate research or internship may help define that goal and show movement toward that pursuit.

The UP Office of Fellowships and Grants will assist you as you consider these programs and make your application. Please visit Fellowships and Grants for more information.

UNIVERSITY OF PORTLAND MASTERS IN BIOMEDICAL ENGINEERING

The University of Portland Masters in Biomedical Engineering program guides students interested in this interdisciplinary field through a 12-month on-campus program that includes an experiential learning opportunity as well as a year-long 3-course sequence to
allow students to develop and market a medical device. Students become skilled in the
technical as well as the business and patient care aspects of the health care industry.
Student cohorts for this program begin during a UP summer session with graduation the
following May. Current UP juniors with interest in this program are encouraged to apply
by January 15 of junior year. Current UP seniors may apply by December 1 of their
senior year. Please see additional details on the program and application requirements at
the program website or contact Sharon A. Jones (joness@up.edu), the Graduate Program
Director.

PROFESSIONAL REGISTRATION

The profession of engineering in the United States has a similar process of certification
and registration as medicine and law. For engineering, this is a two-step registration
process. The first step involves passing an examination in the basics of engineering.
This examination, called the Fundamentals of Engineering (FE) exam, is a computer-
based exam that is administered in every State. The exam includes 110 multiple-choice
questions over a 6 hour appointment time. The FE is offered in seven disciplines:
Chemical, Civil, Electrical and Computer, Environmental, Industrial, Mechanical, and
Other Disciplines.

After having cleared the FE examination, you must work for a designated number of
years (may vary by state) under a licensed professional engineer (PE) before you are
allowed to appear for the PE licensure examination. This eight-hour exam is fully in your
area of interest and tests you on advanced concepts in the field of your choice. Once you
have cleared this examination, you may title yourself an “Engineer” and practice the
profession in the State where you are licensed. This licensure is kept current by paying
an annual fee to the State Board of Engineers and Land Surveyors where you originally
registered yourself and fulfilling any continuing education requirements. You may be
able to carry this registration over to other States if there are reciprocity arrangements
between the State where you originally registered and the one where you plan to practice
your profession.
# APPENDIX A: SHILEY SCHOOL OF ENGINEERING FACULTY AND STAFF

<table>
<thead>
<tr>
<th>FACULTY</th>
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</tr>
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<tr>
<td>Albright, Robert</td>
<td>216</td>
<td>x7115</td>
<td><a href="mailto:albright@up.edu">albright@up.edu</a></td>
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<td>Alqudah, Rajaa</td>
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<td>x7152</td>
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<td>x7176</td>
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<td>209</td>
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<td>x7309</td>
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<td>242</td>
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<td>Hainley, C.J.</td>
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<td>215</td>
<td>x7429</td>
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<tr>
<td>Meyer, Gregg</td>
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<td>x8519</td>
<td><a href="mailto:vijlee@up.edu">vijlee@up.edu</a></td>
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<td>110</td>
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Katie Bieryla  Step Mechanics, Bioinstrumentation, Medical Device Assessment

Martin Cenek  Complex systems, artificial intelligence, data science.


Dvorak, Radana  Artificial Intelligence, Human Computer Interaction, Software Design, Educational Technology for Veterans and Workforce


C.J. Hainley  FEA and Simulation, Experimental Statistics, Casting and Foundry Processes, Mining and Construction, Human Factors Engineering


Aziz Inan  Electromagnetics, Microwave Engineering, Circuits, Electronics, Radio and Mobile Communications

Mehmet Inan  Structural and Building Engineering and Design, Earthquake Engineering

Christy Ivler  Aeronautics & Astronautics

Sharon A. Jones  Environmental Engineering, Engineering Decision-Making, GIS, Engineering Infrastructure and Policy
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<td>Mark Kennedy</td>
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<tr>
<td>Matthew Kuhn</td>
<td>Geotechnical Engineering, Engineering Mechanics</td>
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<tr>
<td>Kenneth Lulay</td>
<td>Engineered Materials, Manufacturing, Failure Analysis, Experimentation, Measurement, Non-Destructive Testing</td>
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<td>Dakshina Murty</td>
<td>Hydraulics and Fluid Mechanics, Turbo Machinery, Finite Element Modeling, Computational Fluid, Dynamics</td>
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<td>Peter Osterberg</td>
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<td>Cara Poor</td>
<td>Fluid Mechanics, Environmental Engineering, Hydraulics, Water Resources, Interdisciplinary Design</td>
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<td>Nikolene Schulz</td>
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<td>Jen Symons</td>
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<td>Mojtaba Takallou</td>
<td>Transportation and Traffic Engineering, Construction Engineering Management, Highway Safety, Engineering Economics</td>
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<tr>
<td>Tammy VanDeGrift</td>
<td>Computer Science Theory, Media-on-Demand Systems, Networking, Educational Technology, Multimedia, Computer Science Education, Computational Biology</td>
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<tr>
<td>Steven Vegdahl</td>
<td>Compilers, Compiler Testing, Parallel Computer Architectures, Functional and Object-Oriented Programming Languages, Program Transformation Systems, Java</td>
</tr>
<tr>
<td>Shazib Vijlee</td>
<td>Mechanical Engineering, Alternative Fuels, Sustainability, Combustion</td>
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APPENDIX B: SCHOOL OF ENGINEERING SHOP ACCESS POLICY

This policy applies to everyone: students, faculty and staff. Anyone needing access to the shop should receive School of Engineering Shop Access training. Proper training is required before access to the shop is granted, so please plan ahead if you think you will need to use the shop at some point in time. *If your lab requires access to any of the Shiley roofs, you must obtain a copy of the Roof Access Policy for Educational Use from your professor.

Emergency Procedures
If there is a fire, chemical spill, accident, or other potentially hazardous situation, call Public Safety immediately (they will notify 911), take action (use fire extinguisher, apply first aid, or just get out). After you have taken appropriate action and help is on the way, call the Technician Supervisor.

Phone Numbers:
Public Safety Emergency: 503-943-4444
Technician Supervisor: 503-789-0518

Before receiving approval for general shop use, a technician will also show you where the fire alarms and extinguishers are located, inform you of how to use a fire extinguisher, and what kind of extinguisher is appropriate for each kind of fire. The fire extinguisher portion is merely informational and does not substitute University fire extinguisher training, nor does it authorize you to use fire extinguishers except in extreme emergency cases.

Basic Safety Requirements
Never work alone and never be in the shop after shop hours alone – at all, ever!

While in the shop, you are required to wear close-toed shoes, full length pants (no shorts or dresses), and wear proper personal protection (including safety glasses and/or earplugs). Loose clothing, neckties and jewelry are prohibited from being worn near power equipment as they pose a “tangle hazard.”

Do not mix chemicals or use a chemical for anything other than its intended use. Prior to using a chemical, review the appropriate Safety Data Sheets (SDS) and follow the handling, storage and safety procedures listed. Safety Data Sheets are available for review electronically on PilotsUP, through a link to MSDSonline.com for the campus specific chemicals. Make sure there is appropriate ventilation at all times. Please ask a technician for help if needed.

In all cases, NEVER use chemicals, equipment or tools that you are not properly trained to use. If you need help – ASK! It is much better to wait patiently for help than to risk injury or damage. Please do not put yourself, others, or the School’s property at risk. All of the equipment and tools are capable of causing severe damage to people and property. If you are not trained or feeling a little unsure, do not use that equipment; contact a technician and get the proper instruction.
**Need for this Policy**
Rules and limitations must be in place in order to assure the shop will serve the educational needs of all constituents. The policy described in this document reflects the need to maintain a safe, orderly and effective shop.

While the shop and the technicians are here to support student education, limited access as defined in this policy is in place in order to satisfy a variety of demands. The primary purpose of the shop and technician team is to support the School’s educational laboratories and courses (including maintenance and fabrication of equipment and First-Year Projects). The secondary purpose of the shop and technician team is to support students and faculty with special School related projects.

In addition to maintaining and developing laboratory equipment, the technicians are here to assist students and faculty with School related projects. Please utilize them and the equipment provided. They can help you brainstorm ideas, locate materials and supplies (on or off campus), fabricate parts for you, teach you to operate shop equipment, and assist you in a variety of other ways. However, **because the technicians have many responsibilities, it is necessary for anyone wishing to receive help to plan ahead, make appointments, and give sufficient time to work their needs into the technicians’ schedules.** The shop supports over 40 faculty/staff members, 700 hundred students, and all of the School’s laboratories (each with dozens of pieces of equipment).

**Limited Access and Usage**
Students, faculty and staff that wish to utilize the School of Engineering’s shop (Shiley 116, 118) and/or equipment must first receive proper training and approval from a technician. Access is granted at two levels:

- **School of Engineering Shop Access:** This allows approved students to use the shop for school related projects during posted shop hours. Under special circumstances, a technician may grant extended hours to include normal building hours (8AM-11PM seven days a week). Access approval is for specific individuals and does not give authorization to that individual to grant access to any others. If another individual requires access to rooms and/or equipment the request must be approved in writing by a technician each time.

- **Special Tools:** in order to use **any tools** besides basic non-powered hand tools, special training and approval is required beyond that received for shop access.

As part of the general training, individuals are required to read and understand this document. If there are any questions, please be sure to ask a technician.

**General Rules**
The following are “common sense” rules that all are expected to follow:

- If you break or lose something or come upon something broken, worn, or out of place, notify a technician so it can be repaired or replaced as funds permit. There is a bin in the shop with “tag out” cards. Use this to remove worn or damaged equipment from service.
• Allow enough time before you leave for the day to clean and put away tools. Cleaning provides a safe environment and allows for an efficient shop.

• Equipment must not be taken out of the shops without permission from a technician – even if faculty have given you permission. If you need to take something out of the shops for school related projects, ask a technician. You will be required to sign acknowledging you have removed the equipment and will return it by a specified date. When equipment is removed from the shop without the technicians’ knowledge, it is no longer available to others needing it – please treat others with the same respect you wish to receive.

• If you are the last to leave for the day, secure all of the doors, turn off all the lights and equipment, and make sure all gas tank valves are shut off.

**Shop Use as Education**

Engineering bridges the gap between the academic world and the physical world. An important part of an engineering education includes developing an understanding of how things are fabricated and assembled. The School’s workshops are here to help with that. However, there is more to this education than learning to turn a wrench. It must include learning proper shop and factory practices.

It is common for practicing engineers to need technician assistance. Technicians help with fabrication of prototypes and testing equipment, and they help with conducting tests and experiments. They are often critical team members. Engineers must understand that the technicians are there for the sake of the company and are not at the “beck and call” of engineers. There is an adage: “poor planning on your part does not constitute an emergency on my part.” In other words, as an engineer you need plan. Let technicians know well in advance of your needs. This is true in the School as well. Please be respectful of the technicians’ time and abilities. They have many duties and limited resources.

The workshop is designed to be a “visual workplace.” A visual workplace is a workplace where it is obvious to almost anyone that it is in order or how to return it to order if it is not. When using the shop, whether for a few minutes or for the school year, please follow the “3 S's”:

**Sort** – inventory your work area. If there are materials or tools in your area that you no longer use or need, please return them to the proper location.

**Set in order** – Most tools must be returned to their proper location immediately once you are finished using them. Please be sure to do so. Also, if you notice tools or materials in the shop in a location where they do not belong, take the initiative to put them in their correct location. If in doubt, place them in the bin marked “Items to be returned.”

**Sweep** – Clean and organize your area before starting work, keep it clean and organized as you work, and after you are done for the day do a final cleaning and organizing so that you are set for the next time you or others work. Cleaning will also give you the opportunity to identify worn, broken, or missing equipment (notify a technician if this is the case).
There is a place for everything and everything should be in its place!

**Conclusions**
At times, it may seem inconvenient or unreasonable to follow the above described policy. However, it is critical that everyone using the School’s laboratories and shops do so. They can be summarized as follows:

- Never work alone, ever. Never be in the shop alone after posted shop hours
- In an emergency, call Public Safety (they will notify 911): **503-943-4444**
- Individuals may be in the shop after posted shop hours *only with special approval*
- Only properly trained individuals may work in the shop
- Always wear protective clothing and proper Personal Protection Devices
- Never use tools, equipment or materials if you have not been properly trained
- Plan ahead, and communicate with a technician
- “Shop Access” training grants permission to use the shop during posted shop hours, and to use non-powered hand tools only
- When in doubt – ASK
- Never Eat or Drink in the shop around equipment or chemicals