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**College of Engineering
Academic Year 2023 - 2024**

Graduate Student Handbook for Online Degree & Certificates

Revised 8.8.2023

Welcome

On behalf of the Integrated Innovation Institute (iii) faculty and staff, I welcome you to our online programs. I expect your experience at Carnegie Mellon University will be both productive and rewarding, and I look forward to getting to know you and working with you.

Whether you are joining us for one semester or a few years, the student handbook applies to all students in the iii online programs. This resource is intended to supplement University information found in the Carnegie Mellon University (The Word) and College of Engineering Graduate Student Handbooks. Please review these handbooks as soon as you can so you become familiar with iii and University policies. If you have any questions, please reach out to me directly or online-iii@andrew.cmu.edu.

Again, welcome aboard!

Peter Boatwright

Allan D. Shocker Professor of Marketing and New Product Development
Tepper School of Business
Director, Integrated Innovation Institute
Program Director, Online

While this handbook is specific to the student's academic experience at the Integrated Innovation Institute, there are several other resources and offices graduate students are encouraged to consult during their tenure at Carnegie Mellon University. Information about The Word (the student handbook), the Office of the Assistant Vice Provost for Graduate Education, the Office of the Dean of Student Affairs, and others are included in Appendix B of this handbook

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Carnegie Mellon University

Vision

Carnegie Mellon University will have a transformative impact on society through continual innovation in education, research, creativity, and entrepreneurship.

Mission

To create a transformative educational experience for students focused on deep disciplinary knowledge; problem solving; leadership, communication, and interpersonal skills; and personal health and well-being.

To cultivate a transformative university community committed to (a) attracting and retaining diverse, world-class talent; (b) creating a collaborative environment open to the free exchange of ideas, where research, creativity, innovation, and entrepreneurship can flourish; and (c) ensuring individuals can achieve their full potential.

To impact society in a transformative way — regionally, nationally, and globally — by engaging with partners outside the traditional borders of the university campus.

<https://www.cmu.edu/about/mission.html>

Statement of Assurance

Carnegie Mellon University does not discriminate in admission, employment or administration of its programs or activities on the basis of race, color, national origin, sex,

handicap or disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status or genetic information. Furthermore, Carnegie Mellon University does not discriminate and is required not to discriminate in violation of federal, state or local laws or executive orders.

Inquiries concerning the application of and compliance with this statement should be directed to the university ombudsman, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-1018. Obtain general information about Carnegie Mellon University by calling 412-268-2000.

Carnegie Mellon University publishes an annual campus security and fire safety report describing the university's security, alcohol and drug, sexual assault and fire safety policies, and containing statistics about the number and type of crimes committed on the campus, and the number and cause of fires in campus residence facilities during the preceding three years. You can obtain a copy by contacting the Carnegie Mellon Police Department at 412-268-2323. The annual security and fire safety report also is available online at www.cmu.edu/police/annualreports.

Information regarding the applicable grievance procedures for alleged violations of the Statement of Assurance is available at <https://www.cmu.edu/policies/forms-and-documents/soa-violations.pdf>. The Office for Institutional Equity and Title IX may be reached at 412-268-7125 or <https://www.cmu.edu/title-ix/>.

The Carnegie Mellon Code

Students at Carnegie Mellon, because they are members of an academic community dedicated to the achievement of excellence, are expected to meet the highest standards of personal, ethical and moral conduct possible.

These standards require personal integrity, a commitment to honesty without compromise, as well as truth without equivocation and a willingness to place the good of the community above the good of the self. Obligations once undertaken must be met, commitments kept. As members of the Carnegie Mellon community, individuals are expected to uphold the standards of the community in addition to holding others accountable for said standards. It is rare that the life of a student in an academic community can be so private that it will not affect the community as a whole or that the above standards do not apply.

The discovery, advancement and communication of knowledge are not possible without a commitment to these standards. Creativity cannot exist without acknowledgment of the creativity of others. New knowledge cannot be developed without credit for prior knowledge. Without the ability to trust that these principles will be observed, an academic community cannot exist.

The commitment of its faculty, staff and students to these standards contributes to the high respect in which the Carnegie Mellon degree is held. Students must not destroy that respect by their failure to meet these standards. Students who cannot meet them should voluntarily

withdraw from the university.

The Carnegie Mellon Code can also be found on-line at:

<https://www.cmu.edu/student-affairs/theword/>

University Policies & Expectations

It is the responsibility of each member of the Carnegie Mellon community to be familiar with university policies and guidelines. In addition to this departmental graduate student handbook the following resources are available to assist you in understanding community expectations:

- The Word/Student Handbook:
<https://www.cmu.edu/student-affairs/theword/index.html>
- Academic Integrity Policy:
<https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html>
- University Policies Website:
<https://www.cmu.edu/policies/>
- Office of Graduate and Postdoctoral Affairs:
<https://www.cmu.edu/graduate/policies/index.html>
- Additional Departmental Policy Resources can be found in [Appendix B](#).

Due to the changing nature of conditions and expectations surrounding public health and safety requirements please visit: <https://www.cmu.edu/coronavirus/> for the most up to date information.

Please see [Appendix B](#) for additional information about The Word and University resources.

Academic Calendar

The Official Academic Calendar can be found at:

<https://www.cmu.edu/hub/calendar/index.html>

and provides information on all deadlines including registration dates, class start dates, add/drop deadlines, exam dates and more.

Integrated Innovation will release an [academic calendar](#) for online programs. Integrated Innovation tries to respect scheduled holiday breaks and special events within the University's Academic Calendar and reserves the right to adjust the schedule of classes as needed.

The iii

Background Statement

The Integrated Innovation Institute is built on three primary disciplines: engineering, design, and business. Just like successful products or services, successful innovation covers technological performance (engineering), human interface (design), and economic value (business). The Integrated Innovation Institute focuses on education and research in innovation methods and practice. We are one of the few top educational institutions that unites the three disciplines to cross train students to become elite innovators, which enhances the effectiveness of thinking and generating results.

The Integrated Innovation Institute has homes at two of the Carnegie Mellon University campuses: Pittsburgh and Silicon Valley. The Institute is administratively housed within the College of Engineering.

In 2022, the III launched our online programs – a series of certificates, which can be taken alone or stacked into our Master of Integrated Innovation for Products & Services degree. This curriculum is designed for the fully online student and will complement our residential degrees.

Mission Statement

The Integrated Innovation Institute combines the strengths of engineering, design, and business to professionally cross-train students to be change makers and elite innovators, enhancing the innovation process and generating impact.

Online Degree & Certificates Offered

Online Certificates:

- New Product Management
- Technology for Product Management
- Methods & Tools for Product Innovation
- Product Design Innovation

Each certificate is comprised of 20 units, divided into two 10-unit classes. These courses can be completed simultaneously or sequentially.

Students interested in pursuing **the full degree - Master of Integrated Innovation for Products & Services** will complete all the certificates above, along with our capstone course – Product Development Implementation for 22 units.

Key Department Contacts

Susanna Zlotnikov, Online Program Director
susannaz@andrew.cmu.edu

Kristin Lavery, Online Program Manager
klavery@andrew.cmu.edu

Leadership

Peter Boatwright, iii Director
Allan D. Shocker Professor of Marketing and New Product Development
Tepper School of Business
pbhb@andrew.cmu.edu

Emma Zink, Director of Operations
emmazink@andrew.cmu.edu

Faculty

For a complete list of iii faculty, please visit our directory:
<https://www.cmu.edu/iii/innovators/faculty-staff/index.html>

iii Staff

Leia Delabahan, MSSM/MSTV Residential Academic & Student Services Advisor
ldelabah@andrew.cmu.edu

Phil Geist, Web Content Manager
pgeist@andrew.cmu.edu

Jess Ignasky, Communications Manager
jgnasky@andrew.cmu.edu

Mary Kilcoyne, Alumni Relations Manager
kilcoyne@cmu.edu

Carly Ochs, Associate Director of Marketing
cochs@andrew.cmu.edu

Gabi Rogers, MIIPS Residential Academic Advisor
grogers@andrew.cmu.edu

Brad Truxell, Assistant Business Manager
btruxell@andrew.cmu.edu

Athena Wintruba, Associate Director of Admissions
awintrub@andrew.cmu.edu

Logan Widhalm, Administrative Coordinator
loganwid@andrew.cmu.edu

Emma Wooten, Academic & Event Coordinator
ewooten@andrew.cmu.edu

After You Have Been Accepted

This section presents guidelines for accepted students prior to matriculation into their programs.

Deferral

CMU will accept deferral requests for students admitted to a iii Online Certificate or the MIIPS Online Degree. An offer of admission is valid for one year. Should you be unable to enroll within one year after your original admitted start term, you will need to reapply.

Applicant's Responsibility

It is the responsibility of the applicant to provide all required information on the program application.

As a condition of enrollment at Carnegie Mellon, applicants admitted to an Integrated Innovation Institute certificate or degree must submit final transcripts upon completion of their undergraduate or master's degree program from the institution conferring their degree. Failure to provide an official transcript confirming the conferral of an undergraduate degree one week before the first day of class at Carnegie Mellon, or failure to graduate, will nullify admission to the Integrated Innovation Institute.

Confidentiality of Communications

All information provided to students because of their application is considered confidential and should not be communicated to other applicants. Applicants are expected to comply with the confidentiality requirement as a condition of admission.

Academic Integrity

Please review the University Policy on Academic Integrity: <https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html>. The policy includes the University expectations around academic integrity and provides definitions of cheating, plagiarism, and unauthorized assistance.

A review of the University's Academic Disciplinary Actions procedures: <https://www.cmu.edu/student-affairs/theword/academic-discipline/index.html> is also recommended. These procedures outline the process for investigating, reporting, and adjudicating violations of the University Policy on

Academic Integrity. The procedures also outline the appeal process.

Departmental expectations and actions taken if students are found in violation are outlined in Violation of Student Conduct or Academic Standing section.

Important Resources for You

This section contains important links and information for graduate students. The resources specified below will be helpful to your success as an online student.

Computing Services

<https://www.cmu.edu/computing/index.html>

Computing Services at Carnegie Mellon manages email, provides software, and manages the technology help desk, among other services.

New students should access the Getting Started Guide on their website:

<https://www.cmu.edu/computing/start/students.html>. This has information on computer requirements, securing your device, accessing email, and various technology tools.

The HUB

<https://www.cmu.edu/hub/registrar/registration/certificate/>

The HUB is Carnegie Mellon's one-stop student service center. The staff in The HUB provide services related to enrollment including billing and payments, financial aid, course registration and scheduling, transcript and verification requests, diplomas, grades, and more. The HUB assists currently enrolled students, parents/guardians of currently enrolled students, faculty, staff, and departments with all the above.

Student Information Online

<https://www.cmu.edu/hub/sio/about.html>

Student Information Online (SIO) serves as the student's secure profile. Students should ensure it is kept up-to-date with their most recent contact information and emergency contact information. An Andrew User ID and password are needed in order to log in to SIO.

Within SIO, students are able to:

- View grades, QPA (grade point average), and enrollment status
- Order transcripts and verifications
- View student account invoices and activity
- Make payments via Online Banking and designate a bank account for electronic refunds
- Manage family and friend contact information and invite individuals to view student

- account invoices, make payments, and order verifications through My Plaid Student
- View important campus contact information (Academic Advisor and/or Associate Dean, Student Affairs contact and HUB liaison)

Canvas Learning Management System

<https://www.cmu.edu/canvas/>

Canvas, Carnegie Mellon's Learning Management System, is a tool for faculty and departments to communicate with students and distribute course documents, assignments, and other resources.

In addition, Canvas may be used for orientation materials, to share important information and resources (like this handbook), and for onboarding tasks essential to a students' success with the iii.

Box File Storage & Collaboration

<https://www.cmu.edu/computing/services/comm-collab/collaboration/box/index.html>

Box is an enterprise-level file storage and basic collaboration service. It provides an easy-to-use and protected way for CMU affiliates to consolidate files into 1TB of personal online storage. Users can upload and manage content using a browser or supported app from any web-enabled device.

Slack

<https://cmuiii-online.slack.com/>

Slack is an online communication and collaboration platform. Join our CMU iii Online slack channel to access resources and interact with the MIIPS Online community.

Google Mail

<https://www.cmu.edu/computing/services/comm-collab/email-calendar/google/index.html>

Students automatically receive a CMU Google Mail account when their Andrew userID is created. Google Mail, or Gmail, is an integrated cloud-based solution for email, calendar, contacts, notes and tasks offered by Google.

Miro

<https://miro.com/sso/login>

Miro is an online whiteboard tool that allows for a distributed workforce to visually collaborate while working on a project. CMU provides all students with a free Miro account. You can login to your Miro account using CMU Web Login/Single-Sign On (SSO).

Online Student Requirements

Please read this section to learn about online degree & certificate requirements.

Academic Progress

Student Responsibilities

To earn the online Master of Integrated Innovation for Products & Services, students are required to complete four stackable certificates, which may be taken in any order and the final capstone course. While this degree is flexible in nature, it is the sole responsibility of the student to manage the academic progression of their program. Students are expected to ensure that they are taking the necessary prerequisites and courses to complete degree requirements.

To earn an individual certificate, students are required to complete the courses required per certificate. Certificate courses may be taken simultaneously or sequentially. Course and certificate offering will vary per semester. Upon finishing a certificate, students will receive a digital Certificate of Completion.

Statute of Limitations

As outlined in the Master's Students Statute of Limitations:

<https://www.cmu.edu/policies/student-and-student-life/masters-students-statute-of-limitations.html>

students will complete all requirements for the master's degree within a maximum of five years from original matriculation as a master's student, or less if required by a more restrictive department, school or college policy. Once this time-to-degree limit has lapsed, the person may resume work towards a master's degree only if newly admitted to a currently offered master's degree program under criteria determined by that program.

Under extraordinary circumstances, such as leave of absence, military or public service, family or parental leave, or temporary disability, a school or college may, upon the relevant department's recommendation and with the written approval of the dean (or designate), defer the lapse for a period commensurate with the duration of that interruption. Students who are pursuing a master's degree as part-time students for all semesters of their program, as approved by their program, may also appeal to their program or department for extension of the time to degree limit.

Double Counting Courses

No course that has been counted toward another degree can be counted toward fulfilling course requirements in graduate programs, unless explicitly authorized for a particular program as set forth in the specified requirements for the program, or by the department head(s) of the primary department(s) of the graduate student. See <https://engineering.cmu.edu/education/academic->

[policies/graduate-policies/registration-grading-credit.html#double-counting-of-course-units-for-m.s.-and-ph.d.-degrees](https://www.cmu.edu/policies/graduate-policies/registration-grading-credit.html#double-counting-of-course-units-for-m.s.-and-ph.d.-degrees)

Pass/Fail Policy

Courses must be taken for a letter grade as opposed to pass/fail (often called pass/no-pass).

Audit Policy

Auditing courses is not permitted within the Integrated Innovation Institute. Students must register for a course through SIO for the units allocated in order to sit in a course.

Program and Credit Transfer

Transferring between programs within and outside of the Integrated Innovation Institute is not permitted. This includes transferring between the MIIPS Online and MIIPS Residential degree formats. Students are encouraged to reach out to their program director for questions about this policy.

The Integrated Innovation Institute does not accept transfer credit.

Transfer Courses and Pittsburgh Council on Higher Education (PCHE)

<https://www.cmu.edu/policies/student-and-student-life/transfer-credit-evaluation-and-assignment.html>

Carnegie Mellon University offers students the opportunity to take courses for credit through a cross-registration program (see Pittsburgh Council on Higher Education (PCHE) and Cross-registration below) and through the receipt of transfer credit from other accredited institutions. The Carnegie Mellon University transcript will include information on such courses as follows: Carnegie Mellon courses and courses taken through the university's cross-registration program will have grades recorded on the transcript and be factored into the QPA. All other courses will be recorded on this transcript indicating where the course was taken, but without grades. Such courses will not be taken into account for academic actions, honors or QPA calculations.

Final Exams

All students must attend final exams and project presentations as scheduled by the University and individual course instructors. If a student believes that a final exam or presentation presents a scheduling conflict, they must discuss the issue with the course instructor.

Enrollment Verifications

Enrollment Services is the only University office that can provide an official letter of enrollment, official transcript, and enrollment verification. Enrollment verifications can be requested online through SIO.

Change of Address

Students are responsible for updating their address through their student account on SIO in a timely manner and will be held responsible for any failure to receive official college notices due to not having a correct address on file.

Standard Degree Requirements & Degree Certification

Carnegie Mellon graduate students are expected to complete their degree requirements within the standard length of time for their program of study as outlined in the relevant Graduate Student Handbook. Standard program lengths for graduate students vary significantly – ranging from two semesters for some full-time master’s programs to several or more years for doctoral programs. Upon completion of the graduate program degree requirements, the degree will be certified by the student’s academic program in the semester in which the student completes the requirements.

Early Completion

Graduate students who consider the completion of all degree requirements in less than the standard length of time for their program of study may consult with their degree-granting program or department to determine if early degree certification is allowed and under what circumstances.

Extended or Longer-than-Standard Completion

Longer-than-standard degree completion may occur due to academic interruptions in making progress toward the degree as defined by the academic program, interruptions of full-time study or progress towards the degree due to serious, documented medical issues, or other unusual or unforeseen circumstances.

Master’s students who require longer than the standard time to complete their degree requirements are expected to remain in close contact with their graduate program, and will be certified at the end of the semester in which they have completed their degree requirements. Students shall reference CMU Policy on Master’s Student Statute of Limitations: <https://www.cmu.edu/policies/student-and-student-life/masters-students-statute-of-limitations.html> regarding guidelines and restrictions which place an upper limit on the maximum length of time allowable for master’s degree completion and certification.

Online Certificate Requirements

Students must complete a minimum of 20 units per certificate and successfully complete all required courses to be eligible for a Certificate of Completion. The average grade of 20 units applied to the certificate shall be at least a B (3.0 QPA). Individual course grades below a C (2.0 QPA) are considered unsatisfactory for the certificate requirement.

Online MIIPS Degree Requirements

Students must successfully complete the four stackable certificates and the final capstone course for a minimum of 102 units to be eligible for graduation. The average grade of 102 units applied to the degree shall be at least a B (3.0 QPA). Individual course grades below a C (2.0 QPA) are considered unsatisfactory for the degree requirement.

The MIIPS Degree at Carnegie Mellon University is accredited through a voluntary, peer-review process coordinated by the Middle States Commission on Higher Education (MSCHE or Middle States).

Online Certificate of Completion Process

Certificate of Completion is awarded each semester, after final grades are reviewed. Certificates are digital records of achievement and university credentials. However, requirements for earning a certificate are different from those needed to earn a degree, and a certificate is not equivalent to a diploma.

Degree Title & Graduation Certification Process

Degree Title: Master of Integrated Innovation for Products & Services

Certification process:

- Graduation certification processed each semester – fall, spring, summer
- Certified by iii Online Program Director

Academic Standards

This section contains information and policies about grades, performance, etc.

Grades

University Grading Standards

The general grading policy is described on the University's grading policy website: <https://www.cmu.edu/policies/student-and-student-life/grading.html>.

This policy offers details concerning the University's grading principles for students taking courses and covers the specifics of assigning and changing grades, grading options, drops/withdrawals, and course repeats. It also outlines graduate grading standards.

Drop/Add/Withdraw Procedures

Students taking undergraduate and Masters' level courses must follow the procedures and deadlines for adding, dropping, or withdrawing from courses as identified on the academic calendar.

Note: Certificate only students are not eligible for course vouchers.

Information can be found at <https://www.cmu.edu/hub/registrar/course-changes/index.html>

College of Engineering Grading Standards

The College of Engineering's grading policy is described below and on the Graduate Policies website:

<https://engineering.cmu.edu/education/academic-policies/graduate-policies/registration-grading-credit.html>.

Project work may be given an S (Satisfactory) grade on a semester-by- semester basis, but a letter grade (A, A-, B+, B, B-, C+, C, C-, D+, D, or R) must be given in the final semester for a multi-semester project. The units with an S grade are counted toward degree requirements but are not included in computing the average grade.

Coursework or graduate project units with a grade of C- or lower are not acceptable toward graduate degree requirements.

Process for Appealing Final Grades

<https://www.cmu.edu/student-affairs/theword/academic/appeal-of-grades-and-academic-actions.html>

Final grades will be changed only in exceptional circumstances and only with the approval of the instructor and the department, unit or program. Grading is a matter of sound discretion of the instructor and final grades are rarely changed without the consent of the instructor who assigned the grade. The following circumstances are the unusual exceptions that may warrant a grade appeal: (a) the final grade assigned for a course is based on manifest error (e.g. a clear error such as arithmetic error in computing a grade or failure to grade one of the answers on an exam), or (b) the faculty or staff member who assigned the grade did so in violation of a University policy.

Academic Performance

Grade Point Average

To graduate, students must have a grade point average (QPA) of at least 3.0 in all required coursework and total units for the degree. Additionally, the cumulative QPA for all units taken as a graduate student at Carnegie Mellon must be at least 3.0.

Coursework or graduate project units with a grade below a C (2.0 QPA) will not be considered toward graduate degree requirements; however, they will be calculated into the student's cumulative QPA.

Academic Standing

Good academic standing is defined as having a QPA of at least 3.0. A student will receive a probation letter for a QPA below 3.0 in the most recently completed semester. Students will have one semester to improve their QPA to at least 3.0 to return good academic standing. If a student is not in good academic standing, it is their responsibility to consult with their program director to discuss next steps. Students not in good academic standing for more than one semester could be subject to academic suspension or dismissal from the Integrated Innovation Institute/Carnegie Mellon University.

A student can be in good academic standing and on student conduct probation at the same time due to incidents unrelated to their academic performance.

Retaking a Course

If a student does not pass a required course, they must either retake the course or take a different course that will fulfill the requirement. Retaking a course is also necessary if students do not meet the QPA requirement for the degree or a specific course.

All grades are recorded on the transcript and factored into the cumulative QPA computation.

Student Services & Resources

Office of Disability Resources

<https://www.cmu.edu/disability-resources/>

Accommodations for students with disabilities

If you have a disability and require accommodations, please contact Catherine Getchell, Director of Disability Resources, 412-268-6121, getchell@cmu.edu. If you have an accommodations letter from the Disability Resources office, we encourage you to discuss your accommodations and needs with your faculty as early in the semester as possible. Faculty will work with you to ensure that accommodations are provided as appropriate.

Student Academic Success Center (SASC)

<https://www.cmu.edu/student-success/index.html>

SASC offers a variety of academic coaching, communications support, tutoring and workshops for all CMU students throughout the year.

As an online student, start with the following quick links to learn more:

- [Preparing to learn online](#) - tips and resources to help prepare you to learn in an online environment.
- [Student Tech Quick Start](#) - make sure your computing resources are in place for the start of class.

Statement on Diversity and Inclusion

We must treat every individual with respect. We are diverse in many ways and this diversity is fundamental to building and maintaining an equitable and inclusive campus community. Diversity can refer to multiple ways that we identify ourselves, including but not limited to race, color, national origin, language, sex, disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information. Each of these diverse identities, along with many others not mentioned here, shape the perspectives our students, faculty, and staff bring to our campus. We, at CMU, will work to promote diversity, equity and inclusion not only because diversity fuels excellence and innovation, but because we want to pursue justice. We acknowledge our imperfections while we also fully commit to the work, inside and outside of our classrooms, of building and sustaining a campus community that increasingly embraces these core values.

Each of us is responsible for creating a safer, more inclusive environment. Unfortunately, incidents of bias or discrimination do occur, whether intentional or unintentional. They contribute to creating an unwelcoming environment for individuals and groups at the university. Therefore, the university encourages anyone who experiences or observes unfair or hostile treatment on the basis of identity to speak out for justice and support, within the moment of the incident or after the incident has passed. Anyone can share these experiences using the following resources:

- [Center for Diversity & Inclusion: csdi@andrew.cmu.edu](mailto:csdi@andrew.cmu.edu), (412) 268- 2150
- **Report-It online anonymous reporting platform:** [Report It](#) username: tartans password: plaid
- All reports will be documented and deliberated to determine if there should be any following actions. Regardless of incident type, the university will use all shared experiences to transform our campus climate to be more equitable and just.

Office of International Education

<https://www.cmu.edu/oie/index.html>

The Office of International Education is the primary resource for any questions regarding international student status for students at Carnegie Mellon University. This is an available resource for international students on campus, however, online students are not eligible for F-1 or J-1 visas through CMU.

Health & Wellness

As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. CMU services are available, and treatment does work. You can learn more about confidential mental health services available to all CMU students at <https://www.cmu.edu/counseling/>.

Support is always available (24/7) from Counseling and Psychological Services: 412-268-2922.

Note: CaPS resources will vary depending on student location. For more information and assistance, reach out to 412-268-2922.

[Thriving Campus:](#) CMU is a part of the Thriving Campus community. Thriving Campus is a search tool that is specific to clinical providers interested and experienced in working with the higher education population in the United States. Students can search for specialty insurance, demographic preferences, etc. And contact clinical providers directly to obtain appointments. To see and access clinics near you in the United States, go to the CMU Thriving Campus website and click "Use My Location" in the top left corner of the page, or click change and type in your City/State and click update in the bar on the right. Consider also reaching out to a friend, faculty, staff, or family member you trust for help getting connected to the support that can help.

Tuition & Fees

The current Integrated Innovation Institute tuition rate and other University fees can be found on the iii website: <https://www.cmu.edu/iii/online/admissions/index.html#onlinetuition>.

Tuition Billing & Payment

The tuition rate for all CMU students is set each spring for the following academic year (fall, spring, summer terms).

Tuition will be charged the per-unit rate each semester a student is enrolled.

The HUB handles the tuition billing and payment process for all Carnegie Mellon students. For the University's billing and payment policy, please refer to the Billing & Payments section on The HUB website: <https://www.cmu.edu/sfs/billing/index.html>.

Please note the add/drop deadlines each semester. This could impact tuition charges. It is the student's responsibility to meet appropriate deadlines for registration within all colleges/schools at Carnegie Mellon.

Student Financial Obligation & Past Due Accounts

Integrated Innovation Institute students are subject to, and must be aware of, the Carnegie Mellon policy regarding student financial obligation: <https://www.cmu.edu/sfs/billing/sfo.html>.

Departmental & University Policies & Expectations

It is the responsibility of each member of the Carnegie Mellon community to be familiar with University policies and guidelines. In addition to this departmental Graduate Student Handbook, the following resources are available to assist you in understanding community expectations:

- The Word/Student Handbook: <https://www.cmu.edu/student-affairs/theword/index.html>
- Academic Integrity Website: <https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html>
- University Policies: <https://www.cmu.edu/policies/>
- Office of Graduate and Postdoc Affairs: <https://www.cmu.edu/graduate/policies/index.html>

Please see [Appendix B](#) for additional information about The Word and University resources.

iii Procedures for Violation of Student Conduct or Academic Standing

The Integrated Innovation Institute has outlined a specific procedure for handling student cases as

they relate to poor academic performance, violation of university/department academic regulations or violation of student conduct as outlined in The Word. They are designed to help students complete certificates and degrees (where possible) and equip them to succeed after graduation despite the challenges they face. A violation will result in a student being placed on academic or student conduct probation

Notice of Probation

Students will receive a written notification of academic probation by the Leadership team, if they have violated a departmental academic or student conduct regulation for one of the following reasons:

- Overall QPA drops below 3.0
- Failing grade within a degree required course
- Reported Academic Integrity Violation
- Violation of CMU Community Standards

Academic Probation Process

Once notification of academic probation is sent, students will be required to meet with their Academic Advisor and Program Director to establish an Academic Improvement Plan (AIP) at least 5 business days before the start of the semester.

The student will be responsible to meet all AIP milestones and achievements as noted within the plan as part of their probationary status. There will be a mid-semester review of AIP milestones against the plan. If milestones have not been completed as outlined, a registration hold will be enforced. The student cannot register for courses in the following semester until AIP milestone progress is up to date.

Student Conduct Probation Process

Once notification of student conduct probation is sent, students will be required to work through the resolution process with the [Office of Community Standards & Integrity at CMU](#).

Duration of Student Probation

A student placed on academic probation will have one academic semester to complete their academic improvement plan. If a student fails to make progress on their academic improvement plan and resolve their probation issues after one semester, the student is subject to dismissal from their academic program.

If a student's QPA drops below a 3.0 QPA or they fail a required course in their final semester, a student will be ineligible to graduate. Students placed on probation at the end of their final semester will have two years to resolve any academic probation issues and complete their degree requirements. The Statute of Limitations timeline to complete a degree may limit the student to have less than two years. In this case, students would have the remaining time to resolve their academic probation issues.

A student placed on student conduct probation will receive notice of their probation duration and next steps for a resolution within their probation letter.

Documentation Process

Notice of Academic or Student Conduct Probation and Academic Improvement Plan will be part of student record at CMU and with the III. If notice is related to academic integrity violation, additional documentation and notification processes required by [CMU's Office of Community Standards & Integrity](#) will be included. See additional details about Academic Integrity Violation below. The students' Academic Advisor will update status updates/milestones in S3 via Memos.

Request for Appeal

To keep this process just, students have the right to request an appeal to the CIT dean's office. The specific process to do so will be included in the student's academic integrity violation letter. Additionally, details about the process for appealing can be found on the [College of Engineering website](#) under the Resolution of Grievances section.

Specific Notes on Academic Integrity Violations

Please review the University Policy on Academic Integrity <https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html>

The policy includes the University expectations around academic integrity and provides definitions of cheating, plagiarism, and unauthorized assistance.

A review of the University's Academic Disciplinary Actions procedures <https://www.cmu.edu/student-affairs/theword/academic-discipline/index.html> is also recommended.

These procedures outline the process for investigating, reporting, and adjudicating violations of the University Policy on Academic Integrity. The procedures also outline the appeal process.

Expectations on Academic Integrity

Students at Carnegie Mellon are engaged in intellectual activity consistent with the highest standards of the academy. The relationship between students and instructors and their shared commitment to overarching standards of respect, honor, and transparency determine the integrity of our community of scholars. The actions of our students, faculty, and staff are a representation of our university community and of the professional and personal communities that we lead. Therefore, a deep and abiding commitment to academic integrity is fundamental to a Carnegie Mellon education. Honesty and good faith, clarity in the communication of core values, professional conduct of work, mutual trust and respect, and fairness and exemplary behavior represent the expectations for ethical behavior for all members of the Carnegie Mellon community.

Examples of Academic Integrity Violations

Cheating occurs when a student avails her/himself of an unfair or disallowed advantage, which includes but is not limited to:

- Theft of or unauthorized access to an exam, answer key or other graded work from previous course offerings.

- Use of an alternate, stand-in or proxy during an examination.
- Copying from the examination or work of another person or source.
- Submission or use of falsified data.
- Using false statements to obtain additional time or other accommodation.
- Falsification of academic credentials

Plagiarism is defined as the use of work or concepts contributed by other individuals without proper attribution or citation. Unique ideas or materials taken from another source for either written or oral use must be fully acknowledged in academic work to be graded. Examples of referenced sources include but are not limited to:

- Text, either written or spoken, quoted directly or paraphrased.
- Graphic elements.
- Passages of music, existing either as sound or as notation.
- Mathematical proofs.
- Scientific data.
- Concepts or material derived from the work, published or unpublished, of another person.

Unauthorized assistance refers to the use of sources of support that have not been specifically authorized in this policy statement or by the course instructor(s) in the completion of academic work to be graded. Such sources of support may include but are not limited to advice or help provided by another individual, published or unpublished written sources, and electronic sources. Examples of unauthorized assistance include but are not limited to:

- Collaboration on any assignment beyond the standards authorized by this policy statement and the course instructor(s).
- Submission of work completed or edited in whole or in part by another person.
- Supplying or communicating unauthorized information or materials, including graded work and answer keys from previous course offerings, in any way to another student.
- Use of unauthorized information or materials, including graded work and answer keys from previous course offerings.
- Use of unauthorized devices.
- Submission for credit of previously completed graded work in a second course without first obtaining permission from the instructor(s) of the second course. In the case of concurrent courses, permission to submit the same work for credit in two courses must be obtained from the instructors of both courses.

Generative Artificial Intelligence (Generative AI)

Students in the Integrated Innovation Institute are expected to approach all work that they do, academic or otherwise, with ethics & integrity. The use of artificial intelligence tools known as Generative AI (including but not limited to ChatGPT, addy.ai, DALL-E, & Midjourney) is not permitted unless explicitly stated. Course instructors will clearly state in their syllabi whether Generative AI can be used for assignments, exams, or projects. If the use of Generative AI is permitted, the instructor will indicate allowable ways that it can be used. In situations where Generative AI use is explicitly allowed, the expectation is that students accurately cite & disclose

when assistance has been used for transparency in their process.

Unauthorized use of Generative AI to assist with course-related assignments, exams, & projects will be considered a violation of the Academic Integrity Policy. Students who have questions about whether the use of Generative AI is permitted should consult directly with their instructor.

Attendance Policy

We consider the Carnegie Classroom to be a highly enriching and valuable experience for students. For each certificate course, classroom attendance is a significant component of a student's overall grade. Students are allowed to miss only one Carnegie Classroom session in a course before their attendance grade is negatively affected.

Leave of Absence/Withdrawal

<https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/>

A leave of absence (LOA) is taken when a student needs to leave the University temporarily, with the firm and stated intention of returning. A withdrawal means a student leaves the University with no intention of returning.

Students should discuss their plans to leave the University with the corresponding contact for their program. Together, graduate students, staff, and the iii director will help to develop a plan for departure and potential return to the Integrated Innovation Institute.

If taking a LOA, return plans should be discussed and noted in the student's academic file. Please note the Statutes of Limitation for degree seeking students.

Forms for Departure or Return from Leave of Absence with the University are housed on the University Registrar's website.

Online Etiquette

Being a student in an online environment requires you to be mindful of how you communicate with your professors and peers. With the lack of non-verbal cues, it is important to remember the following etiquette guidelines for facilitating effective communication between students and professors. (Adapted from [Kent State](#))

- **Avoid Strong or Offensive Language**

Because the reader cannot hear voice inflections in the written word, it is easy for your writing to be misinterpreted. If you are trying to make a point, read and re-read your comments to make sure the reader is not offended. Although the intent of humor and sarcasm are to keep conversations interesting, they are often misinterpreted and can be offensive to the reader. You can avoid these pitfalls by keeping your writing matter of fact and professional.

- **Keep your Writing Focused and on Point**
Courses taken online require a lot of reading and writing. Be considerate when writing – keep sentences brief and to the point. Avoid wordy paragraphs that confuse the reader.
- **Read then Write**
You will be tempted to jump right in and begin posting! However, to avoid repeating comments or questions, please first take the time to read the posts and comments of fellow students and professors before you write and post.
- **Double Check Before You Send**
Once you hit the “send” button, there is no going back! Be sure to double-check your comments to make sure your writing clearly conveys your intent.
- **You are still in a Classroom**
Although you are learning via an online environment, you are still in a classroom. As such, appropriate classroom behavior is expected and mandatory. It is important to respect your peers and professors, just as you would in an on-ground classroom.
- **Language**
Avoid writing in all capital letters – the reader will interpret this as shouting. Do not write as you would when you are texting. Remember, you are in an academic environment, complete sentences with correct spelling and grammar are expected. You will get to know your peers through your online interaction with them. You may find it helpful to convey emotions (ex: 😊) but avoid overuse.
- **Remember Other People’s Privacy**
Before giving out other people’s personal information (e-mail, phone number, address etc.), ask permission.
- **Keep Attachments and File Size Manageable (if possible!)**
- **Use of Inappropriate Material will not be tolerated**
Do not forward inappropriate information such as spam, virus warnings, chain letters, or jokes, etc. to classmates or professors. Additionally, the sharing of pornographic material is forbidden.

Graduate Student Appeal & Grievance Procedures

<https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html>

Graduate students will find the Summary of Graduate Student Appeal and Grievance Procedures on the Graduate Education Resource webpage. This document summarizes processes available to graduate students who seek review of academic and non-academic issues. When an informal

resolution cannot be reached, however, a graduate student who seeks further review of the matter is to follow the formal procedures outlined in the procedures. These appeal and grievance procedures shall apply to students in all graduate programs of the University. Students should refer to the department-specific information in this handbook for department and college information about the administration and academic policies of the program.

Emma Zink, iii Director of Operations, serves as a resource for graduate students in iii to assist with difficult academic or personal situations where a confidential sounding board and/or an intermediary can be helpful. Examples of situations where students are encouraged to seek advice or assistance include:

- Difficulty in communications with advisor, particularly when those difficulties may lead to considering changing advisors or leaving the program
- Conflict with other group members that is difficult to resolve within the group
- Issues related to diversity or the departmental climate for those in groups who are historically underrepresented
- Personal concerns that interfere significantly with the ability to make timely progress in program requirements. These might be due to health, family, or financial challenges.

Upon the student's request, information shared will be kept in confidence, as long as no laws require otherwise. Should help be needed from additional sources, the student would be asked before sharing confidential information.

Additionally, students may confer with a staff member from the Division of Student Affairs, on issues of process or other concerns as they navigate conflicts. Initial outreach should be directed to Amy Burkert, Vice Provost for Education.

Student Privacy Rights

Under the Family Education Rights and Privacy Act (FERPA), students have the right to:

- inspect and review their education records;
- request an amendment to their education records if they believe they are inaccurate or misleading;
- request a hearing if their request for an amendment is not resolved to their satisfaction;
- consent to disclosure of personally identifiable information from their education records, except to the extent that FERPA authorizes disclosure with their consent; and
- file a complaint with the U.S. Department of Education Family Policy Compliance Office if they believe their rights under FERPA have been violated.

Policy on Photo & Video Release

Students at the Integrated Innovation Institute will be asked to sign a photo and video release form prior to student orientation each year. Student photos and videos may be used in internal and external communications regarding the Integrated Innovation Institute.

Intellectual Property

<https://www.cmu.edu/policies/administrative-and-governance/intellectual-property.html>

All Carnegie Mellon students are expected to adhere to the Intellectual Property guidelines as set forth in this policy.

Safeguarding Educational Equity

Assistance for Individuals with Disabilities

<http://www.cmu.edu/education-office/disability-resources/>

The Office of Disability Resources at Carnegie Mellon University has a continued mission to provide physical, digital, and programmatic access to ensure that students with disabilities have equal access to their educational experience. We work to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973. Students who would like to receive accommodations can begin the process through Disability Resources' secure online portal:

<https://rainier.accessiblelearning.com/cmu/>

or email access@andrew.cmu.edu to begin the interactive accommodation process.

Students with physical, sensory, cognitive, or emotional disabilities are encouraged to self-identify with the Office of Disability Resources and request needed accommodations. Any questions about the process can be directed to access@andrew.cmu.edu, or call (412) 268-6121.

Sexual Misconduct Policy

The University prohibits sex-based discrimination, sexual harassment, sexual assault, dating/ domestic violence, sexual exploitation, stalking and violation of protective measures. The University also prohibits retaliation against individuals who bring forward such concerns or allegations in good faith.

The University's Sexual Misconduct Policy is available at:

<https://www.cmu.edu/policies/administrative-and-governance/sexual-misconduct/index.html>

The University's Policy Against Retaliation is available at:

<https://www.cmu.edu/policies/administrative-and-governance/whistleblower.html>

If you have been impacted by any of these issues, you are encouraged to make contact with any of the following resources:

- Office for Institutional Equity and Title IX

<http://www.cmu.edu/title-ix/>

412-268-7125

institutionalequity@cmu.edu

- University Police

<https://www.cmu.edu/police/>

412-268-2323

Additional resources and information can be found at:

<https://www.cmu.edu/title-ix/resources-and-information/index.html>

Consensual Intimate Relationship Policy Regarding Undergraduate Students

<https://www.cmu.edu/policies/student-and-student-life/consensual-relationships.html>

This policy addresses the circumstances in which romantic, sexual or amorous relationships/interactions with undergraduate students, even if consensual, are inappropriate and prohibited. The purpose of this policy is to assure healthy professional relationships. This policy is not intended to discourage consensual intimate relationships unless there is a conflicting professional relationship in which one party has authority over the other as in the policy.

Gestational and Parental Accommodations

<https://www.cmu.edu/graduate/programs-services/maternity-accommodation-protocol.html>

Providing holistic student support is a top priority at Carnegie Mellon. The protocols on this page are designed to support the parental needs of students and their families.

Students seeking any of the Parental Accommodations described below must register with the Office of the Dean of Students by contacting the office for an appointment by calling 412-268-2075.

Students are encouraged to register with the Office of the Dean of Students ninety (90) days in advance of the anticipated arrival of the child as applicable in the individual circumstance. At the time of registering, students will have the opportunity to consult about resources, procedures, funding options and preparation for discussing academic accommodations with the student's academic department. Students should also consult with their academic advisors either before or in conjunction with registering with the Office of the Dean of Students.

Accommodations for Gestational Parents

The birth of a child is a significant life event that may require time away from academic pursuits for delivery and recovery from delivery of a newly born child. Students whose anticipated delivery date is during the course of a semester may need to take time away from their academic responsibilities. Carnegie Mellon students seeking time away are afforded two options as possible accommodation:

- **Short-Term Accommodation for Gestational Parents** – A short term absence from academic responsibilities up to a maximum of six (6)

weeks. Short-Term Accommodation may be extended by two (2) weeks, for a total of eight (8) weeks, where a longer absence is medically necessary. Prior to the absence students must work with relevant university faculty and staff to adjust their course work, research, teaching and other academic responsibilities during the period of absence. This may include extensions of time to complete assignments, incomplete grades, and/or dropping courses, shifting research responsibilities and adjusting TA assignments. Students who take a Short-Term Accommodation will remain enrolled.

- **Formal Leave of Absence**– A formal leave of absence under the Student Leave Policy. Generally, the Student Leave Policy permits students to take a leave of absence for a full-semester, mini-semester, or for the time remaining in the semester during which the leave is taken. Students who take a Formal Leave of Absence (<https://www.cmu.edu/policies/student-and-student-life/student-leave.html>) drop all remaining courses for the semester and are unenrolled for the semester. International students must consult with the Office of International Education (<https://www.cmu.edu/oie/>) before considering this option due to visa implications.

Financial Assistance for Student Parents

Carnegie Mellon also offers the following options for financial assistance to students who become parents while enrolled:

Interest Free Loan – Any student who becomes a parent is eligible to apply for an interest-free parental loan (<https://www.cmu.edu/student-affairs/dean/loans/>) from the Office of the Dean of Students.

Grandfather Clause

When policies are changed it is because the department believes the new rules offer an improvement; any such changes that affect currently enrolled students will be discussed at a meeting with those graduate students. However, students currently enrolled whose degree program is affected by a change in policy may choose to be governed by the older policy that was in place at the time of their matriculation. In case degree requirements are changed and certain courses are no longer offered, the department will find some alternative courses that allow those students to satisfy the original requirements.

Force Majeure Clause

Factors outside of the university's control may impact our students' ability to matriculate through their CMUiii program normally. In the event of a natural disaster, such as but not limited to violent storm, cyclone, typhoon, hurricane, tornado, blizzard, earthquake, volcanic activity, landslide, tidal wave, tsunami, flood, damage or destruction by lightning, drought; plague, epidemic, pandemic, outbreaks of infectious disease or any other public health crisis, including quarantine or other employee restrictions; explosion, fire or other life-altering event that prevents normal matriculation, CMUiii will allow for particular policy changes and will provide students with resources that are specific to the current situation. These changes may be enacted at a central level, campus level, or department level at any point during the academic year.

Employment Eligibility Verification

If you are receiving a stipend, are a TA, or are planning to have a position with CMU then Employment Eligibility Verification is required. Form I-9 must be completed within 3 business days of beginning work for any type of compensation (stipend or employment). Additional details are highlighted below. To ensure compliance with federal law, Carnegie Mellon University maintains the **Employment Eligibility Verification (I-9) Policy** [\[pdf\]](#) covering the university's I-9 and E-Verify requirements:

- Every individual receiving a stipend from CMU or employed by CMU must comply with the I-9 Policy by completing the Form I-9 within three business days following the first day of stipend start date/employment.
- Individuals who expect to work on a federally funded project are further responsible for submitting an E-Verify Processing Request Form to the Office of Human Resources if required.
- For more information, please see CMU's [Guidance for Completing the Form I-9 and E-Verify Requirements at CMU](#) or visit the Human Resources Service website to learn more about Form I-9 and E-Verify and to schedule an appointment to complete the Form I-9.
- Students who fail to complete the Form I-9 in a timely manner may have stipend payments suspended. If employed by the university, an individual who fails to timely complete the Form I-9 may be subject to disciplinary action up to and including termination of employment.

Appendix A: Online Course Offerings

49-600, **Introduction to Design Innovation**, 10 units

This course is an introduction to design principles for product development and instruct students in techniques and applications for tangible products. During the course, students will learn about the design process and the steps designers take from an understanding of user needs to the creation of a fully considered solution that meets those needs and delights the user. Building on the general principles introduced in the course, the course will give students the opportunity to apply their learning in the context of tangible products (research, sketching, model making, user testing, and presentation). Students experience the use of traditional design skills (drawing, mockups, and model making) in the visualization and representation of design concepts and solutions. This course not only introduces design innovation but also provides training in a physical product context so that students can hone skills and techniques needed to visualize and represent product concepts efficiently. The relationship among design, product development, and business is explored with class projects, readings, discussions, and the analysis of artifacts and process.

Through case histories, lectures, and a variety of hands-on exercises, students are exposed to design thinking and practice. Students will learn about and practice techniques that include: 1. Conducting observational research, 2. Analyzing information to inform team brainstorming, 3. Planning projects, 4. Developing concept strategies, 5. Generating ranges of solutions especially via methods of early prototyping and testing through the use of interactive and experiential mock-ups, 6. Selecting and refining concepts. Students will synthesize these techniques to solve a product design challenge in the course. Certain assignments will be completed as individuals and other assignments in teams.

49-601, **Innovation of Services & Experiences**, 10 units

This course will define and study services, experiences, and related systems. Students will also learn the basics of designing services and experiences. Innovators who focus on services and experiences create new offerings for businesses with a primary focus on the quality of the human interactions and experience that are often engendered in the context of functional and/or tangible products, meaning that this course will push students to consider holistic "product" offerings that span UI/UX, physical products, and human activity. In this course students will first study the nature of services and experiences and then work in small project teams to analyze leading designed solutions as well as to create new ones. Service and experience design frameworks will also be used both for the analysis of existing offerings as well as to propose and innovative

solutions.

The learning will take place via lectures, studio projects, and verbal and written exposition. Students will be working in familiar and unfamiliar forms including concepts for products, documents, events, spaces, activities, scripts, and software. Classwork will be done individually and in teams. By the end of this course, students should be able to: Easily distinguish and shift between different perspectives on the same design problem space, leverage service and experience innovation frameworks to explain how an offering unfolds for people, speak articulately about offerings that are made up of systems of products, services and other components.

49-602, **Designing for Production and Sustainability**, 10 units

This course will teach the basic principles and philosophies of engineering design, with emphasis on mechanical engineering due to the broad scope of applications of mechanical engineering which include but are not limited to stress analysis and fracture, heat transfer, kinematics, and systems packaging. Recognizing that design is a first step in a sequence of later decisions and steps (development, manufacture, distribution and life cycle of a product), this course will look at the influence of materials, manufacturing and other downstream decisions/actions on the overall design of a product. Some of the downstream influences that will be explored are decisions and actions that take place prior to the sale of the product: material selection, manufacturing processes, assembly, robustness and quality, platform design, product costing and safety.

However, what we design and how we develop it also impacts our environment for years to come, so importantly this course will also cover various aspects of sustainable design from a product life cycle perspective. Thus, students will be exposed to the fundamental concepts of Design for "X" and specifically the impact that DfM (design for manufacturing) and DfA (design for assembly) have on product development and how they affect design decisions. Students will also be exposed to the fundamental concepts of Sustainable Design (also known as Design for Sustainability - DfS, EcoDesign, Sustainability Engineering, LCA and others) and specifically the impact that DfS has on product development and how it affects design decisions. This class includes lectures and labs activities.

49-603, **Cyber-Physical Product Design**, 10 units

Driven by the combination of increased access to data, local data storage, computational power, interconnectivity, and improved algorithms, mainstream technologies increasingly incorporate sensing (IoT) and data science (AI) "smarts." As examples, thermostats, locks, power sockets, and lights are being imbued with sensors and connectivity. There is great potential to layer in machine learning, natural language and speech processing, expert systems, robotics, and vision. Early applications of these capabilities were designed to operate on their own, on very narrow tasks, based on pre-programmed knowledge. Today, we have the ability to design human-computer systems in which both human and computers act intelligently, adapt to the world and learn from experience, improving their performance over time. The course illustrates both the potential and current limitations of AI, data science, and interactive connected products with examples from a

variety of applications.

Topics explored will include awareness, real time sensing and communication, embedded intelligence, and designing experiences for the internet of things. We will also spend some time on understanding the strengths and weaknesses of human decision-making and learning, specifically in combination with AI systems that would be resident in product applications. Students will be introduced to technologies and AI algorithms through a series of hands-on exercises, collaborative projects, in depth discussions, and instructor led tutorials. Students will also complete a final project that takes a project from start to finish that incorporates elements of connected products and smart systems. The course is designed such that students can complete this course with only a basic familiarity with statistics, without any knowledge of programming, electronics or systems.

49-604, **Innovation Processes and Tools**, 10 units

This course covers early stages of a product innovation process: identifying, understanding, and then conceptualizing a product opportunity. The course presents fundamental tools to assess trends, identify opportunities, identify and uncover the value proposition of key stakeholders, articulate the value proposition, define product requirements and conceptualize solutions. Because innovation insights and ideas are new and can be abstract without additional effort, it is important that students learn how to make ideas more concrete via visual communication techniques. As such, communication of work and findings are core to this course.

We will cover the following: 1. Industrial Design Sketching, 2. Information visualization & dashboards, 3. Graphic User interface design, 4. Executive Summary and Pitch Decks, 5. Visual Brand Language, Templates and Styling 6. Visual Explanations, and 7. Storyboarding and making simple videos. Weekly visual communication assignments will allow students to develop their communication skills throughout the course. The course will revolve around opportunities for product innovation. Students will implement the innovation process that they learn in projects, leading to a final deliverable of a product concept that they communicate with both text and visual techniques.

49-605, **User Experience Research for Digital and Physical Products**, 10 units

This course will teach the basic methods of user research, including one-on-one interviewing and ethnographic techniques. To allow students to master certain skills, the students will dive deeper into one method. Students apply the basic principles of ethnography in a project as a participant observer in both digital settings and in traditional settings.

Students will plan the research, collect data, analyze and synthesize what was learned and present a research report that identifies not only what was observed but also interpret its meaning and make indications about opportunities to innovate with new offerings. Although the course will focus on qualitative and primary research, the benefits of quantitative and secondary research will also be addressed. The course includes lectures and discussions, along with readings and research assignments.

49-606, **Understanding Markets, Products and Services**, 10 units

This course focuses on the strategies and methods for building, leveraging, defending, and sustaining inspired new products and brands. A successful new product has many similarities to a successful new business, so this class will also cover a broad set of business management concepts from the various functional business areas, motivating them in context of successful product development and launch. The course also emphasizes pricing strategies and tactics, recognizing both the importance of pricing but also the recognizing the close link of pricing to fundamental business principles. We will discuss the actions required to bring a product to market, including understanding your target audiences' needs, values and lifestyles and the key elements of a launch plan. We will apply concepts and discuss the span of products: consumer and B2B, products and services, digital and physical.

49-607, **Product Strategy and Planning**, 10 units

This course explores the concepts, roles and responsibilities associated with both product management and brand management, also covering how strategy and business models intertwine to shape the nature and success of a product and business. Tools and methods will be introduced that allow a business to better understand and define itself and recognize its position in the market environment. The course will also cover planning, development and marketing tools that product and brand managers use to make decisions on how to deliver the expected value to customers and stakeholders and differentiate itself from competition. These tools will help you address common strategic, as well as tactical, challenges across the product lifecycle to make a product or service successful. In addition to covering theory and applications, the course will use a business simulation to help students to understand how the functional areas tie together. The course will cover a variety of contexts: corporate and entrepreneurial, for-profit and not-for-profit, products and services, business to business and consumer products, digital and physical products. Further, the course will build on your knowledge of marketing, engineering, accounting, and manufacturing, showing how product managers and brand managers work cross-functionally and play critical leadership functions to make products and services successful.

49-608, **Professional Practice of Product Innovation**, 22 units

This course focuses on team-based product development that integrates engineering, business, and design disciplines, focusing not solely on the tasks but also the professionalism that is important for working on future projects in which there would be a client. The course consists of four modules including identifying, understanding, conceptualizing and introducing a product opportunity. Students learn methods to research the needs, wants and desires of a market opportunity, define product specifications, conceptualize products to meet the users' needs and desires and refine the most promising concept. Students will hone their skills of formulating a hypothesis, supporting it with evidence, and logically presenting their conclusions. The project will result in a resolved form, functional design, and marketing plan. That said, the goal is not only to "build gears" or "write code" or "develop a business plan" but rather for students to develop a deeper understanding how those methods can impact the success of innovation projects, developing their ability to critically assess how theoretical methods and principles impact a

practical innovation challenge. The course also emphasizes communication of the project, through multiple presentations and reports.

Appendix B: 2023-2024 Highlighted University Resources for Graduate Students and The WORD, Student Handbook

Among the resources that have been developed for the broader graduate student population. The items below are most relevant to students in online programs.

Key Resources for Graduate Student Support

Office of Graduate and Postdoc Affairs
Office of the Dean of Students
Center for Student Diversity and Inclusion
Assistance for Individuals with Disabilities
Eberly Center for Teaching Excellence & Educational Innovation
Graduate Student Assembly
Office of International Education
Veterans and Military Community
Ethics Reporting Hotline
Policy Against Retaliation

Key Resources for Academic and Research Support

Computing and Information Resources
Student Academic Success Center
University Libraries

Key Resources for Health, Wellness & Safety

Counseling and Psychological Services
University Police

The WORD

Office of Graduate and Postdoc Affairs

www.cmu.edu/graduate; grad-ed@cmu.edu

The Office of Graduate and Postdoc Affairs provides central support for all master's and doctoral students, as well as academic programs, with a focus on supporting graduate student success at Carnegie Mellon.

The Office of Graduate and Postdoc Affairs also works with the colleges and departments by informing and assisting in developing policy and procedures relevant to graduate students and working with departments on issues related to graduate students. Additionally, we partner with many other offices and organizations, such as the Graduate Student Assembly, to support the holistic graduate student educational experience.

Office of the Dean of Students

www.cmu.edu/student-affairs/dean

The Office of the Dean of Students provides central leadership of the metacurricular experience at Carnegie Mellon including the coordination of student support. Vice President of Student Affairs and Dean of Students Gina Casalegno leads the Division of Student Affairs which includes the offices and departments listed below (not an exhaustive list).

Graduate students will find the enrollment information for [Domestic Partner Registration and Maternity Accommodations](#) in the Office of the Dean of Students or on their [website](#). Additional resources for graduate students include [College Liaisons](#) and the [Student Support Resources](#) team. [College Liaisons](#) are senior members of the Division of Student Affairs who work with departments and colleges addressing student concerns across a wide range of issues. College Liaisons are identified on the student SIO page in the Important Contacts list. The Student Support Resources team offers an additional level of support for students who are navigating any of a wide range of life events. [Student Support Resources](#) staff members work in partnership with campus and community resources to provide coordination of care and support appropriate to each student's situation.

The Division of Student Affairs includes (not an exhaustive list):

- Career and Professional Development Center (CPDC)
- Center for Student Diversity and Inclusion
- Cohon University Center
- Counseling & Psychological Services (CaPS)
- Dining Services
- Office of Community Standards and Integrity (OCSI)
- Office of Student Leadership, Involvement, and Civic Engagement (SLICE)
- University Health Services (UHS)
- Wellness Initiatives

Center for Student Diversity & Inclusion

<https://www.cmu.edu/student-diversity/>

Diversity and inclusion have a singular place among the values of Carnegie Mellon University. The Center for Student Diversity & Inclusion actively cultivates a strong, diverse and inclusive community capable of living out these values and advancing research, creativity, learning and development that changes the world.

The Center offers resources to enhance an inclusive and transformative student experience in dimensions such as access, success, campus climate and intergroup dialogue. Additionally, the Center supports and connects historically underrepresented students and those who are first in their family to attend college in a setting where students' differences and talents are appreciated and reinforced, both at the graduate and undergraduate level. Initiatives coordinated by the Center include, but are not limited to:

- First generation/first in family to attend college programs
- LGBTQ+ Initiatives
- Race and ethnically-focused programs, including Inter-University Graduate Students of Color Series (SOC) and PhD SOC Network
- Women's empowerment programs, including Graduate Women's Gatherings (GWGs)
- Transgender and non-binary student programs

Assistance for Individuals with Disabilities

<http://www.cmu.edu/disability-resources/>

The Office of Disability Resources at Carnegie Mellon University has a continued mission to provide physical, digital, and programmatic access to ensure that students with disabilities have equal access to their educational experience. We work to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973. Students who would like to receive accommodations can begin the process through Disability Resources' secure online portal or email access@andrew.cmu.edu to begin the interactive accommodation process.

Students with physical, sensory, cognitive, or emotional disabilities are encouraged to self- identify with the Office of Disability Resources and request needed accommodations. Any questions about the process can be directed to access@andrew.cmu.edu, or call (412) 268- 6121.

Eberly Center for Teaching Excellence & Educational Innovation

<https://www.cmu.edu/teaching/>

The Eberly Center offers a wide variety of confidential, consultation services and professional development programs to support graduate students as teaching assistants or instructors of record during their time at Carnegie Mellon University and as future faculty members at other institutions. Regardless of one's current or future teaching context and duties, Eberly's goal is to disseminate evidence-based teaching strategies in ways that are accessible and actionable. Programs and services include campus-wide Graduate Student Instructor Orientation events and our Future Faculty Program, both of which are designed to help participants be effective and efficient in their teaching roles. The Eberly Center also assists departments in creating and conducting customized programs to meet the specific needs of their graduate student instructors. Specific information about Eberly Center support for graduate students is found at:

<https://www.cmu.edu/teaching/graduatestudentsupport/>

Graduate Student Assembly

<https://www.cmu.edu/stugov/gsa/>

The Graduate Student Assembly (GSA) is the branch of Carnegie Mellon Student Government that represents and advocates for the diverse interests of all graduate students at CMU. GSA is composed of representatives from the different graduate programs and departments who want to improve the graduate student experience at the different levels of the university. GSA is funded by the Student Activities Fee from all graduate students. GSA passes legislation, allocates student activities funding, advocates for legislative action locally and in Washington D.C. on behalf of graduate student issues and needs, and otherwise acts on behalf of all graduate student interests. GSA's recent accomplishments are a testament to their making a difference, and steps to implementing the vision laid out by the strategic plan.

<https://www.cmu.edu/stugov/gsa/about-the-gsa/strategic-plan.html>

GSA offers an expanding suite of social programming on and off-campus to bring graduate students from different departments together and build a sense of community. GSA also maintains a website of graduate student resources on and off-campus. GSA continues to rely on student feedback to improve the graduate student experience at CMU. Feel free to contact them at gsa@cmu.edu to get involved, or become a representative for your department.

Office of International Education

<http://www.cmu.edu/oie/>

Carnegie Mellon hosts international graduate and undergraduate students who come from more than 90 countries. The Office of International Education (OIE) is the liaison to the University for all non-immigrant students and scholars, as well the repository for study abroad opportunities and advisement. OIE provides many services including: advising on personal, immigration, study abroad, academic, and social and acculturation issues; presenting programs of interest such as international career workshops, tax workshops, and cross-cultural and immigration workshops; international education and statistics on international students in the United States; posting pertinent information to students through email and the OIE website and conducting orientation

and pre-departure programs.

Veterans and Military Community

www.cmu.edu/veterans/

Military veterans are a vital part of the Carnegie Mellon University community. Graduate students can find information on applying for veteran education benefits, campus services, veteran's groups at CMU, and non-educational resources through the Veterans and Military Community website. There are also links and connections to veteran resource in the Pittsburgh community. The ROTC and Veteran Affairs Coordinator can be reached at uro-vaedbenefits@andrew.cmu.edu or 412-268-8747.

Carnegie Mellon Ethics Hotline

<https://www.cmu.edu/hr/resources/ethics-hotline.html>

The health, safety and well-being of the university community are top priorities at Carnegie Mellon University. CMU provides a hotline that all members of the university community should use to confidentially report suspected unethical activity relating to areas below:

- Academic and Student Life
- Bias Reporting
- Environmental Health and Safety
- Financial Matters
- High-Risk Incident
- Human Resource Related
- Information Systems
- Research
- Threat of Business Interruption
- Threat of Violence or Physical Harm
- Title IX

Students, faculty and staff can anonymously file a report by calling 877-700-7050 or visiting www.reportit.net(user name: tartans; password: plaid). All submissions are reported to appropriate university personnel.

The hotline is NOT an emergency service. For emergencies, call University Police at 412-268- 2323.

Policy Against Retaliation

It is the policy of Carnegie Mellon University to protect from retaliation any individual who makes a good faith report of a suspected violation of any applicable law or regulation, university Policy or procedure, any contractual obligation of the university, and any report made pursuant to the Carnegie Mellon University Code of Business Ethics and Conduct.

Additional details regarding the Policy Against Retaliation are available at <https://www.cmu.edu/policies/administrative-and-governance/whistleblower.html>

Key Offices for Academic Support

Computing Services

www.cmu.edu/computing

Computing Services maintains and supports computing resources for the campus community, including the campus wired and wireless networks, printing, computer labs, file storage, email and software catalog. As members of this community, we are all responsible for the security of these shared resources. Be sure to review the Safe Computing (<https://www.cmu.edu/computing/safe/>) section and the University Computing Policy (<https://www.cmu.edu/policies/information-technology/computing.html>)

Visit the Computing Services website - <https://www.cmu.edu/computing/> to learn more. For assistance the Computing Services Help Center is available at 412-268-4357 (HELP) or it-help@cmu.edu.

Student Academic Success Center

<https://www.cmu.edu/student-success/>

SASC offers a variety of academic coaching, communications support, tutoring and workshops for all CMU students throughout the year.

As an online student, start with the following quick links to learn more:

- [Preparing to learn online](#) - tips and resources to help prepare you to learn in an online environment.
- [Student Tech Quick Start](#) - make sure your computing resources are in place for the start of class.

University Libraries

www.library.cmu.edu

The University Libraries offers a wide range of information resources and services supporting graduate students in course-work, research, teaching, and publishing. The library licenses and purchases books, journals, media and other needed materials in various formats. Library liaisons, consultants and information specialists provide in-depth and professional assistance and advice in all-things information - including locating and obtaining specific resources, providing specialized research support, advanced training in the use and management of data. Sign up for workshops and hands-on topic-specific sessions such as data visualization with Tableau, cleaning data with OpenRefine, and getting started with Zotero. Weekly drop-in hours for Digital Humanities and for Research Data Research Management are scheduled during the academic year. Start at the library home page to find the books, journals and databases you need; to identify and reach out to the library liaison in your field; to sign up for scheduled workshops; and to connect with consultants in scholarly publishing, research data management, and digital humanities.

Key Offices for Health, Wellness & Safety

Counseling & Psychological Services

www.cmu.edu/counseling/

Counseling & Psychological Services (CaPS) affords the opportunity for students to talk privately about academic and personal concerns in a safe, confidential setting. An initial consultation at CaPS can help clarify the nature of the concern, provide immediate support, and explore further options if needed. These may include a referral for counseling within CaPS, to another resource at Carnegie Mellon, or to another resource within the larger Pittsburgh community. CaPS also provides workshops and group sessions on mental health related topics specifically for graduate students on campus. CaPS services are provided at no cost. Appointments can be made in person, or by telephone at 412-268-2922.

University Police

<http://www.cmu.edu/police/>

412-268-2323 (emergency only)

412-268-6232 (non-emergency)

The University Police Department is located at 300 South Craig Street (entrance is on Filmore Street). The department's services include police patrols and call response, criminal investigations, fixed officer and foot officer patrols, event security, and crime prevention and education programming as well as bicycle and laptop registration. Visit the department's website for additional information about the staff, emergency phone locations, crime prevention, lost and found, fingerprint services, and annual statistic reports.

Carnegie Mellon University publishes an annual campus security and fire safety report describing the university's security, alcohol and drug, sexual assault, and fire safety policies and containing statistics about the number and type of crimes committed on the campus and the number and cause of fires in campus residence facilities during the preceding three years.

Graduate students can obtain a copy by contacting the University Police Department at 412-268-6232. The annual security and fire safety report is also available online at <https://www.cmu.edu/police/reporting-policy-training/security-firesafety-reports.html>

The WORD

<http://www.cmu.edu/student-affairs/theword/>

The WORD is Carnegie Mellon University's student handbook and serves as the foundation for the department (and sometimes college) handbook. The WORD contains university-wide academic policy information and resources, community policies and resources, and describes the university level procedures used to review possible violations of these standards. It is designed to provide all students with the tools, guidance, and insights to help you achieve your full potential as a member of the Carnegie Mellon community. Additional University policies can also be found in full text at: <http://www.cmu.edu/policies/>.

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