

# INI Pittsburgh - Silicon Valley School Catalog

Academic Year 2022 (August 29, 2021 to May 16, 2023) as defined by the Official Academic Calendar at <https://www.cmu.edu/hub/calendar/docs/2223-academic-calendar-list-view.pdf>

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# Campus Information

## Standard Disclosure

Carnegie Mellon University (CMU) is a private, non-profit institution, approved to operate in California by the California Bureau for Private Postsecondary Education. Approval to operate means compliance with state standards as set forth in the California Private Postsecondary Education Act of 2009. CMU is accredited through a voluntary, peer-review process coordinated by the Middle States Commission on Higher Education (MSCHE or Middle States). MSCHE is one of six regional accrediting agencies in the United States, each accrediting institutions of higher education within a specific geographic region. Middle States is recognized by the U.S. Department of Education. This recognition enables MSCHE's member institutions to establish eligibility to participate in federal financial aid programs (e.g., federal loans, grants, and work-study) administered by the U.S. Department of Education. CMU has been accredited by Middle States since 1921. More information regarding accreditation standards and processes and to view the University's re-accreditation reports on the Middle States Accreditation website at: <http://www.cmu.edu/middlestates/>.

Any questions a student may have regarding this catalog that have not been satisfactorily answered by the institution may be directed to the Bureau for Private Postsecondary Education at 1747 N. Market Boulevard, Suite 225, Sacramento, CA 95834, P.O. Box 980818, West Sacramento, CA 95798-0818, [www.bppe.ca.gov](http://www.bppe.ca.gov), toll-free telephone number (888) 370-7589 or by fax (916) 263-1897.

As a prospective student, you are encouraged to review this catalog prior to signing an enrollment agreement. You are also encouraged to review the School Performance Fact Sheet, which must be provided to you prior to signing an enrollment agreement.

A student or any member of the public may file a complaint about this institution with the Bureau for Private Postsecondary Education by calling (888) 370-7589 toll-free or by completing a complaint form, which can be obtained on the bureau's internet website at [www.bppe.ca.gov](http://www.bppe.ca.gov).

## Carnegie Mellon University – Information Networking Institute

4616 Henry Street  
Pittsburgh, PA 15213  
Phone:(412) 268-7195; Fax: (412) 268-7196  
<https://www.cmu.edu/ini/>

## Branch Campus: Carnegie Mellon University – Silicon Valley

NASA AMES RESEARCH PARK, MS 23-11  
Moffett Field, CA 94035  
Phone: (650) 335-2886; Fax (650) 603-7032  
[www.cmu.edu/silicon-valley/](http://www.cmu.edu/silicon-valley/)

## **Class Location**

Classes offered for the INI Pittsburgh - Silicon Valley MSIT-IS/MOB and MSMITE programs in California are held at:

Branch Campus: Carnegie Mellon University - Silicon Valley

NASA AMES RESEARCH PARK, MS 23-11

Moffett Field, CA 94035

Phone: (650) 335-2886; Fax (650) 603-7032

[www.cmu.edu/silicon-valley/](http://www.cmu.edu/silicon-valley/)

## **INI Website California Private Postsecondary Education Act Section**

The INI Pittsburgh-Silicon Valley School Catalog along with all other relevant documents and information is available under the California Private Postsecondary Education Act section on the INI website at <https://www.cmu.edu/ini/academics/bicoastal/bppeact.html>.

## **Office of Student Assistance and Relief**

The Office of Student Assistance and Relief is available to support prospective students, current students, or past students of private postsecondary educational institutions in making informed decisions, understanding their rights, and navigating available services and relief options. The office may be reached by calling (888) 370-7589, option #5, or by visiting [osar.bppe.gov](http://osar.bppe.gov)

# Welcome to the INI

The Information Networking Institute (INI) at Carnegie Mellon University (CMU) educates and develops engineers through technical, interdisciplinary master's degree programs in information networking, security and mobile and Internet of Things (IoT) engineering that incorporate business and policy perspectives.

With extraordinary agility, the INI has navigated the changing landscape of technology from wired communications in the 1980s to wireless, mobile and IoT in today's world. We were established in 1989 in response to a demand from industry for professionals skilled in both computing and communications. Looking at first principles in each of those domains, we designed a program that would prepare students for the world we saw coming in which distributed computing and communications would be indistinguishable.

What began as a small fledgling program has evolved over the past three decades to become an integral part of Carnegie Mellon's College of Engineering and home to nearly 300 students each year from around the world. Our students are provided with a distinctly interdisciplinary learning experience through an advanced, specialized curriculum in information networking and computer systems, complemented by coursework in business, management, and policy.

## The INI Mission

- Educate and develop engineers through technical, interdisciplinary master's degree programs in information networking, security, and mobile and IoT engineering that incorporate business and policy perspectives. Our graduates contribute to technological advancements, pioneer engineering solutions, and lead enterprises in the global economy.
- Provide a teaching and learning environment that is welcoming, supportive, and inspiring for our students, faculty, staff, and alumni, regardless of their location in the world.
- Nurture a community of alumni, dedicated to the highest standards of ethics, who provide mentorship and encourage the proliferation of diverse opportunities for the global INI community.
- Pioneer collaborative and innovative educational initiatives that embody the entrepreneurial spirit of Carnegie Mellon University.

## The INI Vision

- We will be the internationally recognized leader of technical, interdisciplinary graduate education in information networking, information security, and mobile and IoT engineering.

- We will attract the top-performing, most technical, curious and hardworking individuals to our programs and prepare them for leadership in their field and the larger societal context.
- We will attract, retain, nurture, and promote a diverse student population.
- Our graduates will be the most sought after by industry, academia and government in their respective fields.
- We will connect, engage, strengthen and serve our global community of alumni.

## **The INI Values**

**Excellence:** We strive for the utmost quality in everything we do.

**Integrity:** We require the highest moral and ethical standards in our research, education and practice.

**Diversity:** We cultivate an inclusive culture that celebrates and values a diversity of opinion and intellectual perspective from all individuals, regardless of ethnic origin, race, religion, gender, age, disability, sexual orientation and self-identity.

**Interdisciplinarity:** We advance the future of information networking, mobility, and security through interdisciplinarity and believe that different intellectual perspectives spur innovation and problem solving.

**Innovation:** We demonstrate agility and create novel solutions in response to the demands of the global market.

**Engagement:** We encourage involvement in campus life, industry, government and professional organizations, and public outreach activities in order to provide important links to the broader community.

## **The CMU Mission**

To create a transformative educational experience for students focused on deep interdisciplinary 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.

## Programs Offered

Through bicoastal delivery in collaboration with the Silicon Valley campus, the INI offers the following programs:

M.S. in Information Technology-Information Security (MSIT-IS)

M.S. in Information Technology-Information Security – Applied Study (MSIT-IS Applied Study)

M.S. in Information Technology-Information Security – Advanced Study (MSIT-IS Advanced Study)

M.S. in Information Technology-Information Security – Applied Advanced Study (MSIT-IS Applied Advanced Study)

M.S. in Mobile and IoT Engineering (MSMITE)

M.S. in Mobile and IoT Engineering – Applied Study (MSMITE Applied Study)

M.S. in Mobile and IoT Engineering – Advanced Study (MSMITE Advanced Study)

M.S. in Mobile and IoT Engineering – Applied Advanced Study (MSMITE Applied Advanced Study)

These technical, interdisciplinary graduate degree programs provide students with an advanced, specialized curriculum combining computer science, electrical and computer engineering, software engineering, and information systems. It also exposes students to topics in business, management, and policy. The unique combination of rigorous technical topics, practical industry-oriented topics, and real-world project experience empowers students to be the movers and shakers of the tech industry, whether launching a tech start-up, joining an enterprise R&D team, or fighting cyber-crime.

### **Classification of Instructional Programs (CIP) and Standard Occupational Classification (SOC) Codes**

The CIP code for the MIST-IS, MSIT-IS Applied, MSIT-IS Advanced and MSIT-IS Applied Advanced programs is:

11.1003 - Computer and Information Systems Security/Auditing/Information Assurance.

The SOC codes for the MIST-IS, MSIT-IS Applied, MSIT-IS Advanced and MSIT-IS Applied Advanced programs are:

11-3021: Computer and Information Systems Managers

15-1212: Information Security Analyst

15-1231: Computer Network Support Specialist  
15-1241: Computer Network Architects  
15-1242: Database Administrators  
15-1243: Database Architects  
15-1244: Network and Computer Systems Administrators

The CIP code for the MSMITE, MSMITE Applied, MSMITE Advanced and MSMITE Applied Advanced programs is:

11.0901 - Computer Systems Networking and Telecommunications

The SOC codes for the MSMITE, MSMITE Applied, MSMITE Advanced and MSMITE Applied Advanced programs are:

11-3021: Computer and Information Systems Managers  
15-1211: Computer Systems Analysts  
15-1212: Information Security Analysts  
15-1231: Computer Network Support Specialists  
15-1241: Computer Network Architects  
25-1021: Computer Science Teachers, Postsecondary

## **MSIT-IS**

The MSIT-IS program prepares students to become industry leaders in information security by blending education in information security technology with other topics essential for the effective development and management of secure information systems.

### **Program Learning Outcomes**

*Students who graduate from the MSIT-IS program gain an ability to:*

- Demonstrate knowledge and skills related to security and privacy principles and state-of-the-art techniques for security and privacy in information systems including devices, networks, software, and services
- Evaluate trade-offs between technical security and privacy solutions and potential business and economic impacts
- Design and implement secure systems and services by applying knowledge and skills in information security and privacy
- Demonstrate the ability to scope, formalize, and execute practical team projects

Detailed outline of the requirements for completion of the INI Pittsburgh - Silicon Valley MSIT - IS program, including required courses, required internships, and the total number of units required for completion is provided below.

### **MSIT-IS Curriculum and Requirements**



The curriculum consists of the following main components: core courses, program electives, practicum and study option requirements (if applicable).

The core courses establish the necessary background and a common competency level. The program elective units build upon the core, providing flexibility and breadth in coursework.

The capstone experience is the practicum, which requires students to apply their knowledge and skills to solve a real-world problem.

All students starting an INI degree program in Spring 2021 and beyond will select one of four new study options: Standard option (123 units total), Applied option (129 units), Advanced Studies option (159 units), and Applied Advanced Studies option (165 units). Curricular requirements and program duration will depend on which study option they choose (see chart below).

### MSIT-IS Study Option Program Curriculum

MSIT-IS STUDY OPTIONS			BREAKDOWN OF UNITS
Standard [123 Units]	3 Semesters	No Internship	<ul style="list-style-type: none"> <li>○ Core [72 Units]</li> <li>○ Electives [24 Units]</li> <li>○ Practicum [24 Units]</li> <li>○ APD 1 [3 Units]</li> </ul>
Applied [129 Units]	3 Semesters	Required Internship	<ul style="list-style-type: none"> <li>○ Core [72 Units]</li> <li>○ Electives [24 Units]</li> <li>○ Practicum [24 Units]</li> <li>○ Internship [3 Units]</li> <li>○ APD 1 [3 Units]</li> <li>○ APD 2 [3 Units]</li> </ul>
Advanced Studies [159 Units]	4 Semesters	No Internship	<ul style="list-style-type: none"> <li>○ Core [72 Units]</li> <li>○ Electives [24 Units]</li> <li>○ Practicum [24 Units]</li> <li>○ Advanced Studies [36 Units] - Research Thesis or Area of Concentration</li> <li>○ APD 1 [3 Units]</li> </ul>
Applied Advanced Studies [165 Units]	4 Semesters	Required Internship	<ul style="list-style-type: none"> <li>○ Core [72 Units]</li> <li>○ Electives [24 Units]</li> <li>○ Practicum [24 Units]</li> </ul>

			<ul style="list-style-type: none"> <li>○ Advanced Studies [36 Units] - Research Thesis or Area of Concentration</li> <li>○ Internship [3 Units]</li> <li>○ APD 1 [3 Units]</li> <li>○ APD 2 [3 Units]</li> </ul>
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Core Courses [72 units]

NETWORKING CORE (12 UNITS):

- Choose One:
  - 14-740: Fundamentals of Telecommunications and Computer Networks
  - 14-760: Advanced Real-World Data Networks
  - 18-756: Packet Switching and Computer Networks

SECURITY CORE (12 UNITS):

- 14-741: Introduction to Information Security

BUSINESS & MANAGEMENT CORE (12 UNITS):

Choose one:

- 14-817: Cyber Risk Modeling
- OR
- 14-782: Information Security Risk Management I (6 units) AND 14-788: Information Security Policy and Management (6 units)

MSIT-IS DEGREE-SPECIFIC CORE (36 UNITS):

- Please refer to the MSIT-IS Core Courses list on the [Course List page](#).

Practicum [24 units]:

- 14-798: [INI Practicum Project](#)

Program Electives [24 Units]

Fulfilled by courses in INI, Electrical and Computer Engineering (ECE), School of Computer Science (SCS), Engineering & Public Policy (EPP), Entertainment Technology Center (ETC) or Integrated Innovation Institute (III), and/or approved courses in the Heinz College or Tepper School. Some exceptions apply.

Academic & Professional Development 1 [3 Units]

Academic & Professional Development 2\* [3 units]

\*Applied and Applied Advanced Studies options only

Internship\* (3 Units)

\*Applied and Applied Advanced Studies options only

Residency Requirement (0 Units)

All students must fulfill a residency requirement for at least one semester at CMU Silicon Valley.

### **MSIT-IS Degree-Specific Core Courses (Last updated: July 1, 2022)**

Degree-specific courses allow students to create a custom core curriculum for their degree in information security. Please refer to the Course List below. While we created a list of possible courses, it is not exhaustive, and students are allowed to select other degree-specific courses as long as they are relevant to their track. If a student wants to pursue a degree-specific core course that is not included on the approved list, they should file a petition requesting permission to do so.

This list provides MSIT degree specific core courses that have been approved by the department. ***The INI cannot guarantee that courses will be offered each semester or in a specific semester as advertised below. Likewise, the location listed is not guaranteed as campus course offerings constantly change.*** Students must refer to the 'Schedule of Classes' to determine course availability. In addition, the INI cannot guarantee that a student will be offered a seat in a specific course. These apply to courses at the INI as well as other departments at Carnegie Mellon.

Note: Students should always register under the INI course number (14-XXX) if a course is cross-listed with other departments. The numbers for cross-listed courses are provided to the right of the course titles below.

***Please note: Course numbers and titles may change. If you notice such a change, please let the INI Academic and Student Services team know prior to enrolling in a course.***

05-836 Usable Security and Privacy (PIT, 12 units) (cross-listed 17-734)  
14-735 Secure Coding (PIT & Broadcast to SV, 12 units)  
14-742 Security in Networked Systems (SV & Broadcast to PIT, 12 units)  
14-761 Applied Information Assurance (PIT, 12 units)  
14-782 Information Security Risk Management I (PIT, 6 units)  
14-784 Information Security Risk Management II (PIT, 6 units) 1  
4-788 Information Security Policy and Management (PIT, 6 units)  
14-817 Cyber Risk Modeling (SV & Broadcast to PIT, 12 units)  
14-819 Introduction to Software Reverse Engineering (PIT & Broadcast to SV, 12 units)  
14-822 Host-Based Forensics (PIT & Broadcast to SV, 12 units)  
14-823 Network Forensics (PIT & Broadcast to SV, 12 units)  
14-828 Browser Security (PIT & Broadcast to SV, 12 units)  
14-829 Mobile and IoT Security (SV & Broadcast to PIT, 12 units)  
14-850 INSuRE Cybersecurity Research (SV & Broadcast to PIT, 12 units)  
15-856 Introduction to Cryptography (PIT, 12 units)  
17-735 Engineering Privacy in Software (PIT, 12 units) (cross-listed 19-605, 95-878)

18-632 Introduction to Hardware Security (PIT & Broadcast to SV, 12 units)  
18-731 Network Security (PIT & Broadcast to SV, 12 units)  
18-732 Secure Software Systems (PIT & Broadcast to SV, 12 units)  
18-733 Applied Cryptography (PIT & Broadcast to SV, 12 units)  
18-734 Foundations of Privacy (PIT & Broadcast to SV, 12 units) (cross-listed 17-731)  
19-608 Privacy, Policy, Law, and Technology (PIT, 12 units) (cross-listed 17-733 & 95-818)  
19-733 Cryptocurrencies, Blockchains and Applications (PIT, 12 units) (cross-listed 17-703)  
94-806 Privacy in the Digital Age (PIT, 6 units)  
95-883 Ethical Penetration Testing (PIT, 6 units)

PIT: CMU Campus in Pittsburgh, PA  
SV: CMU Campus in Silicon Valley, CA

When enrolled in courses that are broadcasted students at both locations attend the classes synchronously.

The MSIT-IS MS34 Curriculum is also available on the INI website at:  
[https://www.cmu.edu/ini/academics/bicoastal/curriculum\\_msit-is\\_ms34.html](https://www.cmu.edu/ini/academics/bicoastal/curriculum_msit-is_ms34.html)

## **MSMITE**

The MSMITE program prepares students to be at the forefront of the mobile and IoT engineering field with a multidisciplinary curriculum spanning both technical and business topics in mobile applications, services and devices.

### **Program Learning Outcomes**

Students gain the ability to:

- Demonstrate knowledge and skills regarding processing on constrained hardware, designing software for embedded computing, application delivery, and user interactions
- Critically analyze historical and state-of-the-art mobile and IoT technologies relating to devices, networks, providers, data, and applications to identify trade-offs and develop design principles
- Apply mobile and embedded system skills and principles toward the design and development of products and services across a variety of vertical markets
- Evaluate trade-offs between technology solutions and potential business and economic impacts that influence or are influenced by mobile and IoT systems
- Demonstrate the ability to scope, formalize, and execute practical team projects

### **MSMITE Curriculum and Requirements**

The curriculum consists of the following main components: core courses, program electives, practicum and study option requirements (if applicable).

The core courses establish the necessary background and a common competency level. The program elective units build upon the core, providing flexibility and breadth in coursework.

The capstone experience is the practicum, which requires students to apply their knowledge and skills to solve a real-world problem.

All students starting an INI degree program in Spring 2021 and beyond will select one of four new study options: Standard option (123 units total), Applied option (129 units), Advanced Studies option (159 units), and Applied Advanced studies option (165 units). Curricular requirements and program duration will depend on which study option they choose (see chart below).

## MSMITE Study Option Program Curriculum

MSMITE STUDY OPTIONS			BREAKDOWN OF UNITS
Standard [123 Units]	3 Semesters	No Internship	<ul style="list-style-type: none"> <li>○ Core [72 Units]</li> <li>○ Electives [24 Units]</li> <li>○ Practicum [24 Units]</li> <li>○ APD 1 [3 Units]</li> </ul>
Applied [129 Units]	3 Semesters	Required Internship	<ul style="list-style-type: none"> <li>○ Core [72 Units]</li> <li>○ Electives [24 Units]</li> <li>○ Practicum [24 Units]</li> <li>○ Internship [3 Units]</li> <li>○ APD 1 [3 Units]</li> <li>○ APD 2 [3 Units]</li> </ul>
Advanced Studies [159 Units]	4 Semesters	No Internship	<ul style="list-style-type: none"> <li>○ Core [72 Units]</li> <li>○ Electives [24 Units]</li> <li>○ Practicum [24 Units]</li> <li>○ Advanced Studies [36 Units] - Research Thesis or Area of Concentration</li> <li>○ APD 1 [3 Units]</li> </ul>
Applied Advanced Studies [165 Units]	4 Semesters	Required Internship	<ul style="list-style-type: none"> <li>○ Core [72 Units]</li> <li>○ Electives [24 Units]</li> <li>○ Practicum [24 Units]</li> <li>○ Advanced Studies [36 Units] - Research Thesis or Area of Concentration</li> <li>○ Internship [3 Units]</li> <li>○ APD 1 [3 Units]</li> <li>○ APD 2 [3 Units]</li> </ul>

### Core Courses [72 units]

#### NETWORKING CORE (12 UNITS):

- Choose One:
  - 14-740: Fundamentals of Telecommunications and Computer Networks
  - 14-760: Advanced Real-World Data Networks
  - 18-756: Packet Switching and Computer Networks

#### SECURITY CORE (12 UNITS):

- 14-741: Introduction to Information Security

**BUSINESS & MANAGEMENT CORE (12 UNITS):**

- 14-776: Fundamentals of Business and Management

**MOBILE & IOT CORE CORE (12 UNITS):**

- Choose One:
  - 14-642: Introduction to Embedded Systems
  - 14-744: Mobile and Embedded Software Design

**MSMITE DEGREE-SPECIFIC CORE (24 UNITS):**

- Please refer to the MSMITE Core Courses list on the [Course List page](#).

**Practicum [24 units]:**

- 14-798: [INI Practicum Project](#)

**Program Electives [24 Units]**

Fulfilled by courses in INI, Electrical and Computer Engineering (ECE), School of Computer Science (SCS), Engineering & Public Policy (EPP), Entertainment Technology Center (ETC) or Integrated Innovation Institute (III), and/or approved courses in the Heinz College or Tepper School. Some exceptions apply.

**Academic & Professional Development 1 [3 Units]**

**Academic & Professional Development 2\* [3 units]**

\*Applied and Applied Advanced Studies options only

**Internship\* (3 Units)**

\*Applied and Applied Advanced Studies options only

**Residency Requirement (0 Units)**

All students must fulfill a residency requirement for at least one semester at CMU Silicon Valley in a student's second Fall semester.

**MSMITE Course List (Last updated July 1, 2022)**

This list provides MSMITE degree specific core courses that have been approved by the department.

***The INI cannot guarantee that courses will be offered each semester or in a specific semester as advertised below. Likewise, the location listed is not guaranteed as campus course offerings constantly change.*** Students must refer to the 'Schedule of Classes' to determine course availability. In addition, the INI cannot guarantee that a student will be offered a seat in a specific course. These apply to courses at the INI as well as other departments at Carnegie Mellon.

Note: Students should always register under the INI course number (14-XXX) if a course is cross-listed with other departments. The numbers for cross-listed courses are provided to the right of the course titles below.

***Please note: Course numbers and titles may change. If you notice such a change, please let the INI Academic and Student Services team know prior to enrolling in a course.***

05-670: Digital Service Innovation (PIT, 12 units)  
05-833: Gadgets, Sensors & Activity Recognition in HCI (PIT, 12 units)  
05-872: Rapid Prototyping of Computer Systems (PIT, 12 units, cross-listed 18-745, 39-648)  
11-777: Multimodal Machine Learning (PIT, 12 units)  
14-642: Fundamentals of Embedded Systems (SV & Broadcast to PIT, 12 units)  
14-736: Distributed Systems: Techniques, Infrastructure and Services (SV & Broadcast to PIT, 12 units)  
14-742: Security in Networked Systems (SV & Broadcast to PIT, 12 units)  
14-744: Mobile and Embedded Software Design (SV & Broadcast to PIT, 12 units)  
14-760: Advanced Real-World Data Networks (SV & Broadcast to PIT, 12 units)  
14-829: Mobile and IoT Security (SV & Broadcast to PIT, 12 units)  
14-848: Cloud Infrastructure and Services (PIT & Broadcast to SV, 12 units)  
15-619: Cloud Computing (PIT & SV Remote), 15 units)  
15-624: Logical Foundations of Cyber-Physical Systems (PIT, 12 units) (cross-listed 15-824)  
15-640: Distributed Systems (PIT, 12 units)  
15-719: Advanced Cloud Computing (PIT, 12 units) (cross-listed 18-709)  
15-821: Mobile and Pervasive Computing (PIT, 12 units) (cross-listed 18-843)  
16-720: Computer Vision (PIT, 12 units)  
16-722: Sensing and Sensors (PIT, 12 units)  
17-722: Building User-focused Sensing Systems (PIT, 12 units)  
17-728: Machine Learning and Sensing (PIT, 12 units)  
17-781: Mobile and IoT Computing Services (PIT, 12 units)  
18-651: Networked Cyber-Physical Systems (PIT, 12 units)  
18-748: Wireless Sensor Networks (PIT, 12 units)  
18-759: Wireless Networks (PIT, 12 units)  
49-788: Mobile Apps for the Internet of Things (SV, 12 units)

PIT: CMU Campus in Pittsburgh, PA

SV: CMU Campus in Silicon Valley, CA

When enrolled in courses that are broadcasted students at both locations attend the classes synchronously.

The MS34 Curriculum is also available on the INI website at:

[https://www.cmu.edu/ini/academics/bicoastal/curriculum\\_msmite\\_ms34.html](https://www.cmu.edu/ini/academics/bicoastal/curriculum_msmite_ms34.html)



## **INI Courses**

### **14-513: Introduction to Computer Systems (12 units)**

This course provides a programmer's view of how computer systems execute programs, store information, and communicate. It enables students to become more effective programmers, especially in dealing with issues of performance, portability and robustness. It also serves as a foundation for courses on compilers, networks, operating systems, and computer architecture, where a deeper understanding of systems-level issues is required. Topics covered include: machine-level code and its generation by optimizing compilers, performance evaluation and optimization, computer arithmetic, memory organization and management, networking technology and protocols, and supporting concurrent computation. NOTE: students must achieve a C or better in order to use this course to satisfy the pre-requisite for any subsequent Computer Science course.

PREREQUISITES: None

### **14-642: Introduction to Embedded Systems (12 units)**

This practical, hands-on course introduces students to the basic building-blocks and the underlying scientific principles of embedded systems. The course covers both the hardware and software aspects of embedded processor architectures, along with operating system fundamentals, such as virtual memory, concurrency, task scheduling and synchronization. Through a series of laboratory projects involving state-of-the-art processors, students will learn to understand implementation details and to write assembly-language and C programs that implement core embedded OS functionality, and that control/debug features such as timers, interrupts, serial communications, flash memory, device drivers and other components used in typical embedded applications. Relevant topics, such as optimization, profiling, digital signal processing, feedback control, real-time operating systems and embedded middleware, will also be discussed. Prerequisites: 18-240.

PREREQUISITES: 18-240 and 15-513 and 18-213

### **14-699: Silicon Valley Residency (0 units)**

This course is for INI bicoastal students who are fulfilling a semester of residency as part of degree requirements. Residency is defined as being physically present on the SV campus and physically attending class(es) for one full semester (16-month students; Fall 2) or for two full semesters (20-month students; Fall 2 Spring 2). Courses taken remotely will not fulfill the residency requirement.

PREREQUISITES: None

### **14-728: Independent Study (0-12 units)**

If there is a special topic that interests a student and is relevant to their degree program, the student may negotiate an Independent Study mentored by a Carnegie Mellon faculty member. Through an Independent Study, students can either focus on learning a topic area that is not

otherwise available at Carnegie Mellon, or they can assist the faculty advisor and relevant partners in exploring research and/or development opportunities in new areas. The student must provide compelling justification as to (1) why an Independent Study on this topic or project is relevant to their degree program and should be allowed, (2) why the chosen faculty member is an appropriate Independent Study advisor, and (3) the learning objectives and expected deliverables of the Independent Study. Specific proposal requirements and processes are detailed in the INI Student Handbook. This course is open to INI students only, and special permission is required to enroll. Eligible students should contact the INI Academic Affairs Office regarding Independent Study proposal submission.

PREREQUISITES: None

### **14-735: Secure Coding (12 units)**

This course will enable students to understand how software coding defects lead to software vulnerabilities, develop secure software, and manage teams that develop secure software. This course provides a detailed explanation of common programming errors in C and C++ and describes how these errors can lead to code that is vulnerable to exploitation. The course covers secure software development tools and processes while focusing on low-level technical security issues intrinsic to the C and C++ programming languages and associated libraries. Proficiency in C and C++ are required. Prerequisites: None.

PREREQUISITES: None

### **14-736: Distributed Systems: Techniques, Infrastructure, and Services (12 units)**

This course explores both foundational and contemporary topics in distributed systems, such as communication, coordinating time, synchronization, consensus, impossibility of agreement, replica management, file systems, distributed SQL and noSQL databases, CAP, ACID, BASE, distributed hashing, anonymous communication, models of computation, and higher-level tools. The course project work focuses on the implementation of scalable, fault-tolerant distributed systems.

PREREQUISITES: 14-513, 15-513, 18-613

### **14-740: Fundamentals of Telecommunications & Computer Networks (12 units)**

14-740 is a graduate-level, first-course in computer and telecommunication networks. There is no pre-requisite of an undergraduate equivalent, but basic computer, programming and probability theory background is required. The primary objective of this course is for you to learn the fundamental principles underlying computer and telecommunication networks. Using a top-down approach, we will cover topics in the application, transport, network and link layers of the protocol stack. We will also go over advanced topics, including network management, traffic engineering, and router internals. Besides learning about the nuts and bolts, you will gain an understanding as well in engineering tradeoffs made and design principles used in computer and telecommunication networks. Another objective is for you to apply some of this knowledge in

the context of systems projects. We will follow an aggressive pace in this course. Prerequisites: Graduate standing.

PREREQUISITES: None

### **14-741: Introduction to Information Security (12 units)**

The growing importance of information systems, and their use to support safety-critical applications, has made information security a central issue for modern systems. The course introduces the technical and policy foundations of information security. The main objective of the course is to enable students to reason about information systems from a security engineering perspective. Topics covered in the course include elementary cryptography; access control; common software vulnerabilities; common network vulnerabilities; digital rights management; policy and export control law; privacy; management and assurance; and special topics in information security. Prerequisites: The course assumes a basic working knowledge of computers, networks, C and UNIX programming, as well as an elementary mathematics background, but does not assume any prior exposure to topics in computer or communications security.

PREREQUISITES: None

### **14-744: Mobile and Embedded Software Design (12 units)**

Designing software for embedded devices is rather different from traditional software design, due to close dependence of software on hardware and device architecture, strict energy restrictions, and wireless connectivity to edge and cloud systems. This course enables students to analyze the implications of embedded hardware capabilities and restrictions and consider them as first-order concerns in software design. Students will work with embedded devices and a variety of sensors to design and analyze software for sensing systems and to understand the potential value and limitations of sensor data. Unlike a conventional hardware course, this course focus on the design of application and service software, rather than low-level details of the processor architecture, embedded operating system, and firmware. Programming proficiency in Java is required and C is beneficial.

PREREQUISITES: None

### **14-760: Advanced Real World Data Networks (12 units)**

Students should already have an understanding of networking principles. This course examines how those principles are employed in a variety of real-world scenarios to solve problems that face modern network engineers. This course explores the design, implementation, and application of the network technologies that compose modern and emerging infrastructure and the delivery of the ubiquitous services users expect. Topics may include, for example, 4G and 5G network infrastructures, IPv6, SDN and VFN, data centers, mesh and embedded networks.

PREREQUISITES: 15-641 or 18-441 or 18-741 or 14-740

### **14-761: Applied Information Assurance (12 units)**

This course focuses on practical applications of Information Assurance (IA) policies and technologies in enterprise network environments. The course will include lecture and demonstrations but is designed around a virtual lab environment and scenario that provides for robust and realistic hands-on experiences in dealing with a range of information assurance topic areas. Students will be provided numerous practical opportunities to apply information security practices and technologies to solve real-world IA problems.

PREREQUISITES: None

### **14-776: Fundamentals of Business and Management (12 units)**

This class will combine both economic and business topics. The class will contain applied microeconomics topics focused on resource allocation and efficiency in different market structures. We will explore perfect competition, monopoly and monopolistic competition and oligopic market structures. We will also explore macro-economic ideas so as to understand the context within which businesses operate. It is anticipated that these topics will occupy 1/3 of the class. The other 2/3 of the class will focus on business management from an applied, integrated view. The majority of the business topics will involve team-based work. We will cover 7 basic areas of management: Financial and Managerial Accounting Corporate Finance Marketing Operations Management Corporate Strategy Organizations Business Communications

PREREQUISITES: None

### **14-782: Information Security Risk Management I (6 units)**

This course and its follow-on Information Security Risk Management II (14-784) examine information security as a risk management problem where the organization identifies information security risks, evaluates those risks, and makes risk mitigation and acceptance decisions given its resource constraints. In part one of this class students will learn foundational concepts in risk management and economic valuation and will be introduced standard risk management approaches for identifying, analyzing, and responding to risk, as well as the analytical tools for calculating the costs and benefits of investment security decisions. Learning Objectives: understand and use security risk management terminology; understand and apply tools for evaluating decisions under uncertainty; develop critical thinking and evaluation; demonstrate basic proficiency in qualitative and quantitative risk analysis methods (OCTAVE, FAIR); and understand and explain risk responses, including risk transfer and insurance

PREREQUISITES: None

### **14-788: Information Security Policy and Management (6 units)**

The goal of this course is to provide an overview of security marketplace, an understanding of decision making when multiple parties are involved and the role of policy making in the context of information security. Policy is treated broadly and need not be necessarily government laws and regulations. Policy can be intra-organization. For example, it is an organization policy to disconnect an unpatched computer from its network. We will discuss the role of market and

competition on security provision and then some of the key causes of market failure, namely externalities. We will then analyze how various policy tools can be applied to mitigate market failure. We will also discuss some key laws and regulation on product liability, and security standards. The course also aims to provide an overview of security industry (that is key trends, technologies and various strategies by vendors and users) as well. By the end of the course, the students are expected to know key managerial and policy issues surrounding information security provision and when and how policy intervention is needed. There is no textbook and all the reading material is provided on the first day of class. Some understanding of economics is expected. Students are expected to have read the relevant reading material before class and come prepared for discussion. All reading material can be downloaded from blackboard. Case material will be distributed in class.

PREREQUISITES: None

### **14-798: INI MSIT Project Practicum (24 units)**

Fall: 24 units. This course provides the opportunity to consolidate and apply the skills and knowledge developed in previous coursework in a team-based approach to a real problem. A team of students works with a real-world client on a real-world problem of value to the client. Most important, this is an opportunity to apply the teams advanced engineering and management skills, including the specialized knowledge and skills needed to solve a real problem. In particular, team members must learn to work effectively with clients, quickly understand their problem, negotiate deliverables, and then select, adapt, and apply just the right amount of process and documentation to meet client's needs and effectively manage the project. Prerequisites: Graduate standing and instructor's permission.

PREREQUISITES: None

### **14-790: Special Topics: Engineering Human Values and Principles into Software**

This is a project course where you and your team will architect a system with hardware and software. This class is about deciding \*what\* to build - not how to build it or actually building it. You will discover how human values and principles are embedded into the design of a software system. The entire class will work on the same concept, but your team will develop its own, unique software architecture. As the semester progresses, we will consider how regulatory, ethics, and business constraints impact your system definition. This course will cover some of the salient issues, including examples of how others have handled (or mishandled) them in industry. You will evaluate and refine your system definition throughout the semester. At the end, you will have a foundation to create software systems that incorporate human principles.

PREREQUISITES: None

### **14-809: Introduction to Cyber Intelligence**

Cyber intelligence; a phrase often used, but interpreted by government agencies, private companies, and the general public in many different ways. For the purpose of this course, cyber intelligence is the acquisition and analysis of information to identify, track, and predict cyber

capabilities, intentions, and activities to offer courses of action that enhance decision making. Students will explore a different aspect of the definition each week to develop an analytic framework capable of discerning the interdependencies of and external influences on cyber intelligence, as it relates to an organization's environment, data gathering, functional analysis, strategic analysis, and decision maker. The framework will demonstrate how traditional intelligence practices and emerging technologies influence cyber intelligence; empowering students to assess the likelihood of cyber threat actors executing attacks, the impact attacks have on an organization's business, and the risk threats pose because of an organization's known vulnerabilities.

PREREQUISITES: None

### **14-810 Special Topics: Network Security Engineering Analysis and Automation**

In this course, students will learn the theory and practice of network defense including designing and optimizing network security architecture, network security configuration verification and automation (such as Firewalls, IPSec gateways, IDS, and NAT), adversary modeling and analysis using attack tactics, techniques and procedures (TTP), automated cyber threat hunting and mitigation, quantitative cyber risk assessment and mitigation, anomaly detection and adaptive intrusion response. The goal of the course is to enable students to develop the network security engineering analytical and programming skills by learning how to use the formal reasoning and data-driven analytics techniques and tools to systematically address key network security challenges including automated network security hardening, detecting security misconfigurations, measuring attack surface and risk, creating dynamic playbook for courses of actions, models for adaptive and active cyber defense. In addition, students will learn the about advanced solutions for emergent network defense such as cyber deception and cyber deterrence.

PREREQUISITES: None

### **14-811: Special Topics: Applied Adversarial Machine Learning**

Machine learning (ML) algorithms are increasingly embedded in cybersecurity systems, like spam/malware filters and network intrusion detectors, and safety-critical applications, like autonomous vehicles. These ML systems are vulnerable to attack. For example, a spammer may try to evade a spam filter with a carefully crafted email, or alternatively may try to poison the filter's training data with bogus examples rendering the filter useless. In this course, students will learn how to implement ML algorithms, build practical ML systems, perform evasion and poisoning attacks, and defend against such attacks. The course will cover the following ML problems and tools: classification, dimensionality reduction, clustering, regression, and deep neural networks. Grading will be based on biweekly Python programming assignments with written reports.

PREREQUISITES: Undergraduate Probability and Linear Algebra

### **14-812: Special Topics: Research Seminar in Privacy and Security (12 units)**

This course is a graduate level research seminar that educates students about the latest breakthroughs and research challenges in security and privacy. The course helps to familiarize students with research terminology as well as the current topics in security and privacy. Students are expected to read recent and cutting-edge research papers in security and privacy, write critiques analyzing the research in the papers, present in class a summary of the research, and lead a class discussion. In addition, students will be working on a semester-long group research project where they are expected to conduct research on a project of their choice, present their research in class, and write a research paper. This course will enhance the research skills and critical thinking of students as they will learn how to criticize current research and how to handle open-ended problems. Students will also learn how to communicate and present technical challenges and participate in thought-provocative discussions.

PREREQUISITES: None

### **14-812: Special Topics: Visual Design for Engineers**

This mini introduces non-designers to visual design. Visual design mixes the aesthetic focus in graphic design with the usability requirements of user interface design. In this course, students will exercise their creative side by designing the look & feel for a software application. Students will also learn some design theory so that they can better communicate with design professionals in the future. This course assumes that students have no background in visual design. We will cover topics ranging from color theory to icons and logos. Compared to other courses for non-designers, this course is more focused on the practical nuts and bolts of visual design. Students with prior experience in design or those seeking a course on the end-to-end design process should consider other options.

PREREQUISITES: None

### **14-813: Special Topics: Security and Privacy Enhancing Technologies (12 units)**

Technologies threaten security and privacy, giving rise to opposing technologies specifically crafted to protect security and privacy, known as PETs. In this course we will learn how PETs fit into the larger computing landscape, including particular challenges faced by developers and users with PETs. We will evaluate consumer-facing tools as a class: what is their audience, how well do they work in practice, what usability issues do they present, and how well do they work technically? You will then work individually or in small teams of your choice to complete a project. You will select existing tools to perform an analysis of audience, usability, and technical reliability. After identifying deficiencies, you will suggest improvements, implement a subset of those improvements, then perform human subjects or other technical research to validate that your proposed changes actually do improve upon the existing tools. This course is a mix of readings, participatory discussions, and hands-on projects.

PREREQUISITES: None

### **14-814: Wireless Security (12 units)**

With the surge of mobile device use, embedded system deployment, and development of always-connected devices, the underlying wireless communication and network systems are becoming more critical for everyday use. Even though security and privacy have emerged as important focus areas for modern technology, the wireless links that connect our pervasive devices are still less understood from the perspectives of security and privacy than other system aspects. This course will focus on the challenges in providing secure communication and network services in a variety of wireless systems and current and past approaches to manage these challenges. Topic coverage will include vulnerabilities, attacks, security mechanisms, and trade-offs at various layers of the network protocol stack, from aspects of physical communication to application and service security issues; examples include jamming, MAC-layer misbehavior, selective packet dropping, decentralized trust and reputation, and cross-layer holistic attacks. Systems of interest include (but are not limited to) personal devices, connected vehicles, embedded and IoT systems, wireless infrastructure, and ad hoc networks. Class material will be largely based on recent and current research. In addition to individual homework assignments, students will participate in an intensive group project involving significant research, development, and experimentation. Graduate standing is required to register for this course.

**PREREQUISITES:**

(18-631 or 18-730 or 14-741 or 15-330 or 18-330) and (14-740 or 14-760 or 18-841 or 18-741 or 18-756 or 15-641)

**14-817: Cyber Risk Modeling**

There are too many cybersecurity risks to manage them all informally. You need a plan! Risk management and threat analysis are structured to craft better organizational security decisions. This course helps you learn how to prioritize risks, secure data assets, and to communicate your security knowledge. This is not a programming class but requires basic statistics (e.g. Monte Carlo analysis, which you will learn or review.) Major topics include: legal compliance, threat modeling, Mitre ATT&CK, the Common Vulnerabilities and Exposures database, and popular risk frameworks (STRIDE, PASTA, NIST, etc.) Those seeking roles where they will work with or become a CSCO, risk officer, or risk analyst will most benefit from this course.

PREREQUISITES: None

**14-818: Special Topics: Interaction Design for Engineers**

This mini introduces non-designers to interaction design. Interaction design focuses on the interface between users and products. In this course, students will learn how people process information and how that affects the user interface for a product. Each week, we will cover a topic in cognitive science or design theory, followed by hands-on exercises related to interaction design. Topics range from human error to design affordances. This course assumes that students have no background in interaction design; the content is tailored to software engineers or engineering managers through examples and exercises. Students with prior experience in design or those seeking a course on the end-to-end design process should consider other options.

PREREQUISITES: None



### **14-819: Introduction to Software Reverse- Engineering (12 units)**

The course is intended to provide an insight into the art and science of software and firmware reverse-engineering. It covers a variety of topics on how to approach complex problems of analyzing malicious code for the purpose of understanding its internals. By steadily advancing into the science of reverse-engineering, students will observe how a seemingly insurmountable problem of malware binary analysis gradually breaks down into tractable components that can be easily studied, interpreted and documented. The anatomy, behavior and manifestation of malware will be discussed. Students will receive hands-on experience with techniques analyzing, disassembling, debugging and monitoring malware in a controlled environment.

PREREQUISITES: (18-240) and (14-513 or 18-613)

### **14-820: Special Topics: Security and Fairness of Deep Learning**

This course will provide an introduction to deep learning methods with emphasis on understanding and improving their security, privacy, and fairness properties. The course will cover basics of machine learning and introduce popular deep learning methods. It will delve into applications of deep learning methods in security, their susceptibility to adversarial manipulation, and techniques for making deep learning robust to adversarial manipulation. It will cover state-of-the-art methods for explaining black-box deep learning models to enhance their transparency. It will also examine methods for deep learning that are designed to respect individual privacy and fairness. Students will do homework assignments, critique weekly readings, and complete a course project on a topic of their choice. Prior knowledge of machine learning, deep learning, and security concepts are useful but not required.

PREREQUISITES: None

### **14-821: Special Topics: Legal and Ethical Background for Those Working in Cyber Ops (12 units)**

In this online course, students learn about US and international laws they must comply with while working as cyber operations professionals. Learn how to stay on the right side of the law Starting with international law, we cover the formation of the United Nations, plus the Hague and Geneva Conventions. We study sources of US law including the three branches of government, the Constitution, and relevant case law in privacy. We address statutory laws that apply generally to computer professionals like the Computer Fraud and Abuse act and other Title 18 crimes, as well as laws specific to military applications like Titles 10 and 50. Woven throughout, we consider ethics and social responsibility, then conclude with specific issues around ethical hacking. This is a text-based online course with online evaluation via quizzes, which you may take at your own pace. There are no projects or final exam, but please expect to invest substantial time into reading both legal and technical texts.

PREREQUISITES: None

### **14-822: Host Based Forensics (12 units)**

Host Based Forensics provides a systematic introduction to the field of digital forensics. The course aims to familiarize students with the forensic process and to apply forensic principles with many tools of the trade. Upon completion of the course, a student should feel confident in participating in a digital forensic investigation. This course focuses on the forensic process (planning, acquisition, analysis, reporting) as it relates to host system forensics. Class periods will consist of lecture and exercise.

PREREQUISITES: 14-761

### **14-823: Network Forensics (12 units)**

This course introduces concepts and techniques essential for studying network-based evidence applicable to legal investigations. Students will become familiar with a wide range of networking devices, techniques for capturing and analyzing network data, and with the practice of solid forensic methodologies to prepare and protect network based digital evidence. Students will be required to bring their laptops to each class, as they will need to access exercise materials online, use virtual machines in a hypervisor, and answer online quizzes.

PREREQUISITES: 14-761

### **14-828: Browser Security (12 units)**

The Web continues to grow in popularity as platform for retail transactions, financial services, and rapidly evolving forms of communication. It is becoming an increasingly attractive target for attackers who wish to compromise user systems or steal data from other sites. Browser vendors must stay ahead of these attacks by providing features that support secure web applications. This course will study vulnerabilities in existing web browsers and the applications they render, as well as new technologies that enable web applications that were never before possible. The material will be largely based on current research problems, and students will be expected to criticize and improve existing defenses. Topics of study include (but are not limited to) browser encryption, JavaScript security, plug-in security, sandboxing, web mashups, and authentication. The course will involve an intensive group research project focusing on protocols/algorithms, vulnerabilities, and attacks as well as several individual homework and programming tasks. Groups will perform a sequence of cumulative tasks (literature review, analysis, simulation, design, implementation) to address aspects of their chosen topic, occasionally reporting their results to the class through brief presentations, leading to a final report.

PREREQUISITES: None

### **14-829: Mobile and IoT Security (12 units)**

For many people, mobile and embedded devices have become an essential part of life and work. As such devices represent many and varied combinations of technologies, they have unique security and privacy issues that potentially impact users, developers, service providers, manufacturers, and regulators. This course will focus on various aspects of security and privacy that are faced by mobile and Internet of Things devices, including aspects of wireless communication and networking, mobile computing, data analytics, security, and privacy. The course will include studies of security and privacy aspects of networking (including telecom,

enterprise, personal, etc.), applications, and data analytics as relevant to mobile and embedded/IoT devices. One of the main goals of the course is to improve knowledge and awareness of security issues faced by mobile application developers, embedded system builders, and smart system designers. Material will cover standards, best practices, and research challenges in both deployed and emerging systems. Topics of study include (but are not limited to) telecom protocols and vulnerabilities; mobile/IoT network security; security and privacy in edge computing; mobile application security; and location and activity privacy. In addition to individual homework assignments, students will participate in an intensive group project involving significant research, development, and experimentation. Graduate standing is required to register for this course.

PREREQUISITES: (18-631 or 18-730 or 14-741) and (14-740 or 18-756 or 15-641)

### **14-832: Cyber Forensics Capstone (12 units)**

Spring: 12 units. The CyFIR concentration capstone course challenges students by placing them in a series of hands-on exercises based on real world scenarios. Students will work together in groups to respond to and investigate large-scale corporate and government intrusions. Instructors will teach advanced event correlation and reconstruction techniques as well as emerging data collection and analysis approaches. Using both host-based and network-based forensics techniques, students will learn to effectively synthesize data, utilize problem solving skills to draw investigative conclusions, and document their analysis. Additionally, students will be required to follow sound forensic methodologies to protect and prepare digital evidence throughout their mock investigations. Furthermore, students will learn to effectively summarize and communicate their forensic analysis through technical report writing and communication best practices. Upon completion of this course, students will be prepared to participate in and guide enterprise cyber security security incident response and forensic operations for large organizations. Prerequisites: 14761, 14822 and 14823.

PREREQUISITES: 14-761 and 14-822 and 14-823

### **14-840: Mobile Hardware for Software Engineers (12 units)**

This course enables students to analyze the implications of mobile hardware capabilities and restrictions in order to plan and develop mobile applications. Students will be able to devise and interface simple hardware additions to mobile platforms such as cellphones, internet tablets and wireless sensors. The course covers the elements of embedded systems development, such as hardware fundamentals, real-time operating systems, interrupts, and cross-development, as well mobile topics such as power management, machine-to-machine communication, radio/RF subsystems and wireless protocols. Topics typically include: USB, GPIO, blue-tooth, cellular networks, 802.11, Zigbee, RFID, NFC, cameras, audio, etc. Student teams will undertake small HW/SW interfacing projects to sharpen their experience. Unlike a conventional hardware course, the course would instead focus on the software implications, rather than the CPU and radio. Prerequisites: Some understanding of basic electrical terminology and Java programming required; C programming desired.

PREREQUISITES: None

### **14-841: Mobile and Pervasive Computing (12 units)**

This is a course exploring research issues in the newly emerging field of mobile computing. Many traditional areas of computer science and computer engineering are impacted by the constraints and demands of mobility. Examples include network protocols, power management, user interfaces, file access, ergonomics, and security. This will be an advanced course in the truest sense --- most, if not all, the topics discussed will be ones where there is little consensus in the research community on the best approaches. The course will also offer significant hand-on experience in this area. Each student will have to present and lead the discussion on a number of papers. Students will work in groups of three under the guidance of a mentor on a hands-on project. Each student will also be required to write one of two documents: (a) a research proposal (similar in spirit to an NSF proposal) on an idea in mobile computing or (b) a short business plan for a commercial opportunity in mobile computing. Grading will be based on the quality of the presentations, the project, and the proposal or business plan. Prerequisites: 15-410 and senior or graduate standing.

PREREQUISITES: 15-605 or 15-410

### **14-848: Cloud Infrastructure: Design, Analysis and Implementation (12 units)**

Cloud Computing can loosely be defined as the delivery of services via often on-demand and fluidly scalable shared resources. This course explores the design and implementation of the full-stack of hardware and software necessary to implement the infrastructure for elastic, global-scale computing and storage clouds. Upon completion of the course students are expected to be able to design, implement, and analyze the infrastructure underlying cloud-based services. Topics include Data Center Networking; Distributed File Storage; Distributed Key-Value storage, including NoSQL Databases; Virtualization, and the management thereof; Resource Scheduling and Elasticity; Map-Reduce engines, and higher-level Frameworks. The course involves discussion based upon recent and landmark papers, as well as existing tools and software systems. It has a very substantial programming project component in which students design, implement, and analyze various aspects of cloud infrastructure.

PREREQUISITES: None

### **14-850: INSuRE Cybersecurity Research (12 units)**

This course engages students in real-world cybersecurity and information systems security problems of interest to government organizations and industry partners. Students will learn how to apply research techniques, think clearly about problems and constraints, formulate and analyze potential solutions, evaluate solutions through simulation and experimentation, and communicate their results effectively. Working in small groups under the mentorship of technical clients from government and industry, teams of students will formulate, carry out, and present original research on current cybersecurity/information assurance problems of interest. Project topics come from lists supplied by government and industry partners. The course will be synchronized with similar offerings at several partner schools via videoconference, using resources provided through the INSuRE program. The course will be open to graduate students in computer science and engineering (e.g., INI, CS, ECE, Information Systems, etc.) who have background in

information security / information assurance and have significant expertise in at least one relevant technical area. All students will be initially waitlisted for the course until instructors have the chance to verify student qualifications beyond the basic prerequisites.

PREREQUISITES: 18-730 or 14-741

Due to the interdisciplinary nature of our programs, INI students can take classes from various departments across CMU's campus while in SV. The list of these courses including descriptions is available on each individual department's website:

- Electrical & Computer Engineering (ECE): <https://courses.ece.cmu.edu/>
- School of Computer Science (SCS): <http://www.cs.cmu.edu/course-listings-department>
- H. John Heinz III College of Information Systems and Public Policy (Heinz): [https://api.heinz.cmu.edu/courses\\_api/course\\_list/](https://api.heinz.cmu.edu/courses_api/course_list/)
- Integrated Innovation Institute (III): <https://www.cmu.edu/iii/degrees/mssm/curriculum.html>

# Faculty

Due to the interdisciplinary nature of our programs, INI students can take classes and work with faculty members from various departments across CMU's campus while in SV. Faculty directories for each of these departments are available at:

- ECE: <http://www.ece.cmu.edu/directory/index.html>
- SCS: <http://www.cs.cmu.edu/directory>
- Heinz: <http://www.heinz.cmu.edu/faculty-and-research/faculty-profiles/index.aspx>
- III: <https://www.cmu.edu/iii/innovators/faculty-staff/index.html>

Below is the list of INI faculty members and their qualifications:

## **Dena Haritos Tsamitis**

Barbara Lazarus Professor in Information Networking

Ph.D. of Education, Higher Education Management, University of Pennsylvania  
B.S., Information Science, University of Pittsburgh

## **Pedro Bustamante**

Assistant Teaching Professor, INI

Ph.D. in Information Sciences with concentration in Telecommunications, 2021, University of Pittsburgh

M.S. in Telecommunications, 2016, University of Pittsburgh

B.A. in Electronics Engineering, 2010, Universidad del Azuay

## **Mohamed Farag**

Assistant Teaching Professor, INI

Doctor of Engineering, Engineering Management, 2019, George Washington University

M.S. in Computer Science, 2014, Maharishi International University

B.S. in Information Technology, 2011, Minoufiya University

## **Hanan Hibshi**

Assistant Teaching Professor, INI

Ph.D. in Societal Computing, 2018, Carnegie Mellon University

M.S. in Information Security Technology and Management, 2011, Carnegie Mellon University

B.S. in Computer Science, 2003, King Abdul-Aziz University

## **Cynthia Kuo**

Associate Professor of the Practice, INI

Ph.D. Engineering & Public Policy, 2008, Carnegie Mellon University

M.S. Engineering & Public Policy, 2006, Carnegie Mellon University

B.S. Symbolic Systems, 2000, Stanford University

**Joanne Peca**

Associate Professor of the Practice, INI  
Associate Director, INI

Ed.D. in Organizational Leadership, Northeastern University  
M.S. in Information Systems, Drexel University  
MBA Rider University  
B.A. in Liberal Studies, Rider University

**Patrick Tague**

Associate Teaching Professor, INI

Ph.D., Electrical Engineering, 2009, University of Washington  
B.S. degrees in Mathematics and Computer Engineering, 2003, University of Minnesota

**Sujata Telang**

Associate Teaching Professor, INI

MBA (Master of Business Administration), 2010, Carnegie Mellon University  
MSE (Master of Software Engineering), 2000, Carnegie Mellon University  
M.S. in Advanced Education Studies, 2019, University of Glasgow  
B.S. in Electronics and Power, 1982, University of Nagpur

**David Varodayan**

Associate Teaching Professor, INI

Ph.D. Electrical Engineering, 2010, Stanford University  
M.S. Electrical Engineering, 2005, Stanford University  
B.A.Sc. Engineering Science, 2003, University of Toronto

*For more information on the INI faculty please refer to the INI website at INI:*

<https://www.cmu.edu/ini/about/team/>

The INI also has a number of adjunct instructors who are leading experts in their fields:

**David Belasco**

Adjunct Instructor, INI, Carnegie Mellon University  
Threat Analyst, Threat and Vulnerability Analysis, Software Engineering Institute, Carnegie Mellon University

B.S. in Computer Engineering, 2006, Pennsylvania State University

**Jeffrey Gennari**

Adjunct Instructor, INI, Carnegie Mellon University

Senior Member Technical Staff, CERT, Software Engineering Institute, Carnegie Mellon University

M.S. in Software Engineering, 2012, Carnegie Mellon University

M.S. in Information Science, 2004, University of Pittsburgh

B.S. in Information Science, University of Pittsburgh.

### **Rotem Guttman**

Adjunct Instructor, INI, Carnegie Mellon University

Security Researcher, CERT, Software Engineering Institute, Carnegie Mellon University

M.S. in Information Security Technology and Management, 2012, Carnegie Mellon University

B.S. in Computer Science & Applied Physics, 2010, State University of New York at Albany

### **Christopher Herr**

Adjunct Instructor, INI, Carnegie Mellon University

Senior Cyber Security Exercise Developer & Trainer, CERT, Software Engineering Institute, Carnegie Mellon University

M.S. Information Science and Security, 2010, University of Pittsburgh

M.S. Criminal Justice, 2008, University of Cincinnati

B.S./B.A. Economics, Physics and Astronomy, 2004, University of Pittsburgh

### **Matt Kaar**

Adjunct Instructor, INI, Carnegie Mellon University

Cyber Security Exercise Developer & Trainer, CERT, Software Engineering Institute, Carnegie Mellon University

M.S. Information Security Technology and Management, 2006, Carnegie Mellon University

B.S. Computer Science, 2002, Georgia Institute of Technology

### **Catherine Liao**

Adjunct Instructor, INI, Carnegie Mellon University

M.S. in Health Economics, Outcomes and Management in Cardiovascular Sciences, 2021, The London School of Economics and Political Science

M.B.A., 2012, Imperial College London

B.S. in Management Information Systems, 2005, Excelsior University

### **William Nichols**

Adjunct Instructor, INI, Carnegie Mellon University

Infrastructure Engineer, Software Engineering Institute, Carnegie Mellon University

Ph.D. in Physics, Carnegie Mellon University



**William Reed**

Adjunct Instructor, INI, Carnegie Mellon University  
Cyber Security Engineer - Exercise Developer, CERT, Software Engineering Institute, Carnegie Mellon University

M.S. Information Security and Assurance, 2015, Carnegie Mellon University  
B.S. Computer and Information Sciences, General, 2004, Franciscan University of Steubenville

**Gabriel Somlo**

Adjunct Instructor, INI, Carnegie Mellon University  
Cyber Security Engineer - Exercise Developer, CERT, Software Engineering Institute, Carnegie Mellon University

Ph.D. Computer Science, 2005, Colorado State University  
M.S. in Computer Science, 1997, Colorado State University  
B.S. in Computer Science, 1995, Tech. Univ. of Timisoara, Romania

**Adam Welle**

Adjunct Instructor, INI, Carnegie Mellon University  
Senior Cyber Security Engineer, Software Engineering Institute, Carnegie Mellon University

M.S. in Computer Science, Johns Hopkins University  
M.S. in Information Assurance, Johns Hopkins University  
B.S. in Computer Science, Hawaii Pacific University

# CMU University Policies

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

- The Word/Student Handbook: [www.cmu.edu/student-affairs/theword//index.html](http://www.cmu.edu/student-affairs/theword//index.html)
- Academic Integrity Website: [www.cmu.edu/academic-integrity](http://www.cmu.edu/academic-integrity)
- Graduate Education Website: <http://www.cmu.edu/graduate/policies/index.html>

The complete index of CMU university policies is available at: <https://www.cmu.edu/policies/>.

Some of the university policies most relevant to the INI students are also highlighted in this section.

## 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 is also available online at: <https://www.cmu.edu/student-affairs/theword/code/index.html>.

## **CMU 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.

The Statement of Assurance is also available online at: <https://www.cmu.edu/student-affairs/theword/statement/index.html>.

## **CMU Consumer Information**

Please refer to Appendix A for the CMU Consumer Information.

# Admissions & Enrollment Policies

## Deferral Policy

The INI's deferral policy is determined on a case-by-case basis.

**Applicant's Responsibility:** Follow the Application Instructions: In order to successfully complete your application, please follow the instructions and adhere to the deadlines. All requested/required application documents including unofficial transcripts, recommendations, essay/area of interest questions, etc., must be submitted online. An application may be "Incomplete" if the required documents are not provided by the posted deadlines or in the manner requested in the instructions.

**Check Your Application Status:** Applicants are able to check the status of their application online on the application status page. INI staff and faculty are not able to provide status updates.

The application submission package (<https://www.cmu.edu/ini/admissions/guidetoapply.html>) must include the material listed below.

To be considered for admission, you must submit the following documents:

- A completed Online Application Form (<https://engineering.cmu.edu/education/graduate-programs/apply.html>)
- Unofficial Transcripts from all schools attended. Students will be provided instructions about submitting official documents upon admission (see <https://www.cmu.edu/ini/admissions/guidetoapply.html> for more details).
  - Please note: Admitted applicants who accept enrollment must be prepared to show Proof of Graduation from their undergraduate program. Proof includes final official transcripts and degree certificate and/or diploma submitted no later than the end of July in the manner requested by the INI. Proof of graduation is a condition of enrollment. Submission of an application serves as an agreement to meet this requirement. Failure to submit proof of graduation can result in termination of enrollment.
- Three letters of recommendation (online only): The letters should be from faculty and/or recent employers who know you well and can speak to your technical abilities and quality of work. Letters may be submitted by your recommender(s) following the submission of your online application.
- Official GRE General Test scores (Note: Due to the impact of COVID-19 and the lack of available testing, the INI is *not* accepting GRE General Test scores for the Spring 2020, Fall 2021, or Spring 2022 application cycles.)
- Proof of English Language Proficiency is required for applicants whose native language/mother tongue is not English. Students may submit one of the following: TOEFL, IELTS or Duolingo English Test that is no more than two years old.
- Area of interest and short essay questions.

## International Students

The INI admits students from other countries. All foreign students must obtain an F-1 or J-1 visa in order to attend CMU. Required documents are processed through the Office of International Education (OIE) which acts as sponsor of foreign students entering CMU. Incoming students are instructed to pay for delivery of their I-20 certificate or DS-2019 certificate if applicable.

All foreign students originating in countries where English is not the native language/mother tongue must demonstrate English language proficiency in one of the following ways:

1. Results from the internet-based Test of English as a Foreign Language (TOEFL), minimum acceptable score is 99;
2. Results from the International English Language Testing System (IELTS), minimum acceptable score is 7;
3. Results from a Duolingo English Test (select "CMU – College of Engineering")
4. Attendance at a U.S. University in a four-year undergraduate program. In this situation, students may submit expired test scores to fulfill the requirement; we encourage students to submit testing that is most reflective of current level of English proficiency.

Students may request a waiver of the test requirement; decisions are made on a case-by-case basis. For students who have had the English Proficiency testing waived or have not met our minimum scores as listed above, the INI submits to OIE a Verification of English Language Proficiency for Graduate Admissions form, signed by the INI Director and the Dean of the College of Engineering (CIT).

Failure to submit an approved English Proficiency test or to formally obtain a test waiver from the INI may result in the application being marked “Incomplete” and not reviewed for admission consideration.

## Domestic Student Qualification

**Admission to Carnegie Mellon University graduate programs requires demonstration of successful completion of an undergraduate degree program as specified by the graduate department. Successful completion must be demonstrated by submission of official academic records issued by the degree-granting institution during the matriculation process, in the manner requested by the department.**

## Language of Instruction

All instruction occurs in English.

## Confidentiality of Communications

All information provided to students as a result of their application including subsequent correspondence is considered confidential and should not be communicated to other applicants. Please note that applicants are expected to comply with the confidentiality requirement as a condition of admission.

## Transfer of Credit Policy

Up to 24 units of courses taken at another university, whether taken before or after entering the INI graduate program, may be transferred and count as electives, providing:

1. They fulfill an INI graduate program requirement;
2. They are graduate-level courses at the university where they were taken; and
3. They have not been used to fulfill requirements for any previously earned degree.

A grade of 'B' or better must be earned for the courses transferred. All transfer credits must be approved by the INI and the CIT Dean's Office, and the INI will determine how the transferred credits will be reflected in the student's degree requirements. The transfer credits will appear on the student's transcript as an INI elective and are not factored into the core or cumulative GPAs.

Transfer credit is not granted prior to admission to the graduate program and must be approved by the INI and the CIT Dean's Office after the student has satisfactorily completed at least 36 units of graduate courses at Carnegie Mellon. After matriculating to Carnegie Mellon, INI students should consult with their academic advisor before taking a course at another university.

Students should submit an INI petition, along with an official transcript and the course syllabus from the semester in which the course was completed to the INI AAO. Information regarding petitions can be found on our website. Students may be required to show proof that the course(s) they want to transfer were not used to fulfill requirements for any previously earned degree. In addition, the student must complete the Graduate Transfer Credit Request Form, located with the CIT graduate student policies at: <https://engineering.cmu.edu/education/academic-policies/undergraduate-policies/transfer-credit.html>. The INI, not the student, will forward the appropriate information to the Dean's Office for approval.

The university's policy on Transfer Credit Evaluation and Assignment is available at the following link: <http://www.cmu.edu/policies/>

INI has not entered into an articulation or transfer agreement with any other college or university for that provides for the transfer of credits in the bicoastal MSIT-IS, MSIT-IS- Applied, MSIT-IS Advanced, MSIT-IS Applied Advanced, MSMITE, MSMITE- Applied, MSMITE-Advanced and MSMITE-Applied Advanced programs.

The INI does not award credit for prior experiential learning to student enrolled in the bicoastal MSIT-IS, MSIT-IS- Applied, MSIT-IS Advanced, MSIT-IS Applied Advanced, MSMITE, MSMITE- Applied, MSMITE-Advanced and MSMITE-Applied Advanced programs.

## **Cancellation, Withdrawal, Leave of Absence, and Refund Policies**

### **Student's right to cancel (withdrawal/leave of absence)**

A student has the right to cancel the student's Enrollment Agreement by either taking a leave of absence from the Program (leaving Carnegie Mellon University temporarily with the firm and stated intention of returning) or by withdrawing from the Program (leaving Carnegie Mellon University with no intention of returning). If the student withdraws or take a leave of absence from Carnegie Mellon University, the student may be eligible for a tuition adjustment or a refund of certain fees (excluding any Application Fee, Registration Fee and Enrollment Deposit).

To cancel the student's Enrollment Agreement and take a leave of absence or withdraw, the student must complete Carnegie Mellon University's Leave of Absence or Withdrawal form, as applicable, and return it to Carnegie Mellon University's Registrar's Office, at 5000 Forbes Ave., Warner Hall A12, Pittsburgh, PA 15213. The Leave of Absence and Withdrawal forms, and additional information about leaves of absence and withdrawal, can be found on Carnegie Mellon University's website at <https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/>.

If the student notifies Carnegie Mellon University of the student's intent to withdraw or take a leave of absence, the student's official date of withdrawal or leave of absence is the earliest of:

- The date the student began the student's withdrawal or leave of absence process at Carnegie Mellon University;
- The date the student notified the student's home department at Carnegie Mellon University;
- The date the student notified the associate dean of the student's College at Carnegie Mellon University; or
- The date the student notified the Carnegie Mellon University Dean of Student Affairs.

If the student does not notify Carnegie Mellon University of the student's intent to withdraw or take a leave of absence, the student's official date of withdrawal or leave of absence is:

- The midpoint of the relevant semester in which the student withdraws or takes a leave of absence;
- The last date the student attended an academically related activity such as an exam, tutorial or study group, or the last day the student turned in a class assignment.

## **Refund Policy**

### **Refunds in General**

Students who withdraw from the Program or take a leave of absence after having paid the current semester's tuition and fees or receiving financial aid are subject to the following refund and repayment policies. No other charges are refundable.

## **Exit Counseling**

All borrowers of Federal student loans must complete a Federally mandated exit counseling session when graduating or dropping to less than half-time enrollment status, including by withdrawing or taking a leave of absence. Exit counseling prepares students for repayment. Students must complete an exit counseling session in its entirety, with complete and correct information; otherwise, the student's degree, diploma and official transcripts may be withheld. Information about exit counseling sessions can be found on Carnegie Mellon University's website at <https://www.cmu.edu/sfs/financial-aid/exit-counseling.html>.

## **Withdrawals/Leaves on or before 10th Class Day (during the Cancellation Period)**

Students who withdraw or take a leave of absence on or before the 10th class day of the relevant semester will receive a refund of 100% of tuition and fees (excluding any Application Fee or Registration Fee and Enrollment Deposit).

## **Withdrawals/Leaves after 10th Class Day (after the Cancellation Period)**

Students who withdraw or take a leave of absence after the 10th class day of the relevant semester but before completing 60% of the semester will be assessed tuition based on the number of days completed within the semester. This includes calendar days, class and non-class days, from the first day of classes to the last day of final exams. Breaks which last five days or longer, including the preceding and subsequent weekends, are not counted. Thanksgiving and Spring Break are not counted. STRF will be adjusted accordingly with any adjustment of tuition. There is no tuition adjustment after 60% of the semester is completed. There is no refund of University fees after the 10th class day of the relevant semester.

## **Tuition Adjustment Appeals**

Students may appeal to have tuition adjustments for their leave of absence or withdrawal if they feel that they have extenuating circumstances. These appeals will be reviewed in the context of Carnegie Mellon University's tuition adjustment policy, as stated above. These appeals must be made in writing to Carnegie Mellon University's Registrar using Carnegie Mellon University's Tuition Appeal Adjustment form. Information about Carnegie Mellon University's tuition adjustment policy and tuition adjustment appeals can be found on Carnegie Mellon University's website at <https://www.cmu.edu/sfs/tuition/adjustment>.

## **Repayment to Lenders/Third Parties**

If any portion of refundable tuition and/or fees was paid from the proceeds of a loan or third party, the refund may be sent to the lender, third party or, if appropriate, to the Federal or state agency that guaranteed or reinsured the loan, as required by law and/or Carnegie Mellon University policy. Any amount of the refund in excess of the unpaid balance of the loan shall be first used to repay any student financial aid programs from which the student received benefits, in proportion to the amount of the benefits received, and any remaining amount shall be paid to the student.



**Responsibility for Loan:** If the student obtains a loan to pay for an educational program, the student will have the responsibility to repay the full amount of the loan plus interest, less the amount of any refund. If the student has received Federal student financial aid funds, the student is entitled to a refund of moneys not paid from Federal student financial aid program funds. If the student is eligible for a loan guaranteed by the Federal or state government and the student defaults on the loan, both of the following may occur: 1) The Federal or state government or a loan guarantee agency may take action against the student, including applying any income tax refund to which the person is entitled to reduce the balance owed on the loan. 2) The student may not be eligible for any other Federal student financial aid at another institution or other government assistance until the loan is repaid.

## **Academic Standards**

### **Grades**

Below are the policies surrounding grades for students in the INI.

#### **University Policy on Grades**

The university policy on grading offers details concerning university grading principles for students taking courses and covers the specifics of assigning and changing grades, grading options, drop/withdrawals and course repeats. It also defines the undergraduate and graduate grading standards.

The CMU Grading Policy is available at: <https://www.cmu.edu/policies/student-and-student-life/grading.html>.

#### **CIT Grading Policy**

INI follows the CIT letter grade scale. The letter grade scale is 'A' (highest for CIT students), 'A-', 'B+', 'B', 'B-', 'C+', 'C', 'C-', 'D+', 'D', and 'R' (lowest). CIT students cannot receive an 'A+' grade on their transcript, even if a course is taken from another college where 'A+' is given. Grades lower than 'C', meaning C- or below, are considered failure in CIT and will not count toward degree requirements.

The CIT Registration, Grading and Credit Policies are available at: <https://engineering.cmu.edu/education/academic-policies/graduate-policies/registration-grading-credit.html>.

#### **Incomplete Grade**

Incomplete grades will be assigned at the discretion of the course instructor, per the university grading policy.

The CMU Grading Policy is available at: <https://www.cmu.edu/policies/student-and-student-life/grading.html>.

### **Withdrawal Grade/Withdrawing from Courses**

Students can withdraw from a course after the add/drop deadline. Students should adhere to the withdrawal deadlines outlined in the Official CMU Academic Calendar available at: <https://www.cmu.edu/hub/calendar/index.html>. This will result in a 'W' on the transcript, which is not factored into the grade point average (GPA). To withdraw, the course withdrawal request form must be completed and submitted to the academic advisor for approval. If approved, the academic advisor will send the form to the HUB for processing.

### **Grade Point Average**

In order to graduate, each student must have a GPA of at least 3.0 in both core GPA and cumulative GPA.

### **Academic Standing**

Good academic standing is defined by having a core GPA and cumulative GPA of at least 3.0 or above. A student will receive a warning letter for a GPA lower than 3.0 in the most recently completed semester but will remain in good academic standing if core and cumulative GPAs meet the minimum requirement. If a student is not in good academic standing, it is their responsibility to consult with their academic advisor in a timely manner.

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

### **Probation and Dismissal Policies**

#### **Academic Probation**

Students who do not meet minimum performance criteria may be placed on academic probation. The purpose of academic probation is to provide the additional support and assistance necessary for adequate progress towards degree requirements. For more details about the College of Engineering's academic standards policy, please visit: <http://coursecatalog.web.cmu.edu/schools-colleges/collegeofengineering/#academicstandardstextcontainer>.

Throughout the semester, the INI reviews each student's academic performance and progress, including at tenth day of classes, mid-semester and end of semester. If a student is not enrolled in 36 units towards degree requirements each semester (excluding summer), the INI may place that student on academic probation until their performance in the program adheres with our stated course load policy.

Additionally, at the end of each semester, the INI AAO completes a review of each student's performance. GPA for academic review is computed based on the guidelines for graduation

requirements. If a student has a core and/or cumulative GPA of less than 3.0, the student is immediately placed on academic probation.

Students who are notified that they are on academic probation are solely responsible for setting up a meeting with their academic advisor within 14 days. During the meeting, the student and their advisor must sign the letter and return it to the INI Director's Office within that timeframe.

Students on academic probation may be subject to the following penalties:

- May have any existing INI scholarships and/or financial awards awarded by the INI rescinded
- Cannot be selected to receive awards, fellowships or scholarships
- May not formally represent INI as an officer or other position in a student club or campus organization

A student on academic probation will be removed from probation during the next end-of-semester academic review if their core and cumulative GPAs are 3.0 or higher at that time. The student's scholarship or financial award will be reinstated for future semesters if they are removed from probation; however, the amount that was rescinded will not be reapplied to the student's account.

A student may be permanently dropped from the INI if their core or cumulative GPA remains lower than 3.0 at the end of two consecutive full semesters. They will have an opportunity to appeal if this occurs. The first appeal must go to the Dean of the College of Engineering's office. A detailed summary of the graduate student appeals process can be found here: <http://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html>.

Courses that negatively affect the core GPA cannot be moved from the core requirement unless another completed course can replace the course with the lower grade.

## **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.

The INI adheres to Carnegie Mellon University's policy on academic integrity. Please review the University Policy on Academic Integrity: <https://www.cmu.edu/policies/student-and-studentlife/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.

### **Academic Integrity Violations**

When the INI is notified that a student has committed a violation of the Carnegie Mellon University Policy on Academic Integrity, the student will be subject to course-level action imposed by the instructor.

Additionally, the INI will send the student a notice of eligibility outlining the following: the student will no longer be eligible for financial awards and/or scholarships awarded by the INI, Teaching Assistant positions and metacurricular opportunities and recognition.

In accordance with university policy, a student who violates the academic integrity policy will not be permitted to drop the course in which the offense occurred in order to avoid penalty.

Details related to the academic integrity policy and the appeal process can be found here: <http://www.cmu.edu/academic-integrity/headernav/policies.html>.

The INI may recommend additional sanctions beyond course-level action.

If the student commits a second violation, the INI will recommend to the Academic Review Board that the student be permanently dropped from the INI and expelled from the university.

### **Attendance policies**

Students must be physically present and attend class at the start of the semester. If extenuating circumstances exist that prevent a student from arriving to campus at the start of the semester, the student must notify their academic advisor immediately. Not attending class from the start of the semester will have a detrimental effect on a student's progress in the program. The INI will make an effort to verify all students have arrived to begin their program and will consider a student as "withdrawn from the university" if he or she is not here by the tenth day of class.

### **Suspension/Required Withdrawal Policy**

University suspension is a forced, temporary leave from the university. A student may be suspended for academic, disciplinary and administrative reasons. The INI adheres to Carnegie Mellon's policy on student suspension/required withdrawal policy. The complete policy is available at the following link: <https://www.cmu.edu/policies/student-and-student-life/suspension-required-withdrawal-policy.html>.

### **Student Rights and Grievance Procedures**

The INI adheres to Carnegie Mellon's Students' Rights policy. The complete policy can be found at the following link: <https://www.cmu.edu/policies/student-and-student-life/students-rights.html>.

The INI adheres to Carnegie Mellon's Graduate Student Appeal and Grievance procedures. The summary of these procedures can be found at the following link: <https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html>.

### **Student Record Retention Policy**

The INI adheres to the CMU Student Record Retention Policy.

### **Student Record Retention Policy**

The policy of Carnegie Mellon University is to ensure the safety, accessibility, confidentiality, and good condition of the permanent record of every Carnegie Mellon student, past and present.

Carnegie Mellon University (CMU), established in 1900, holds all permanent records of our students (current and former) in the University Registrar's Office. We maintain original paper records in an offsite secure climate-controlled underground storage facility along with a microfilmed copy of each record. In addition, a copy of microfilmed records also resides in the University Registrar's Office in Pittsburgh, PA. This includes all students globally, include those students studying at our California teaching location and instructional sites. CMU has established the University Registrar's Office as the official data steward of all student records.

### **Historical Records 1906-1989**

For every student enrolled at Carnegie Mellon University as a new or continuing student prior to the fall semester, 1989, and dating back to 1906, the University Registrar's Office of Carnegie Mellon University maintains a complete permanent record, whether the student is degree-seeking or non-degree seeking, whether enrolled for credit or not within the student's official transcript. The official transcript provides brief personal information to identify the student as unique. It contains courses, units and grades; semester and cumulative grade point averages; all degrees earned; transfer credit or advanced placement and dean's list indications.

The University Registrar's Office has established and maintains within a microfiche copy of good, readable, and reproducible quality of the student's permanent record in a secured records unit. A secondary permanent microfilm copy of all records will be maintained in good condition in the climate-controlled, fire-proof, limited-access security at an offsite facility.

### **Modern Records 1989-Current**

For every student enrolling at Carnegie Mellon University as a new or continuing student beginning in fall semester, 1989, the University Registrar's Office of Carnegie Mellon University will establish and maintain within an electronic data file in the University Student Services Suite (S3, our student information system) a complete permanent record, whether the student is degree-seeking or non-degree seeking, whether enrolled for credit or not. The University Registrar's Office staff will, under the direction of the University Registrar, add to the electronic

record such new information as pertains to the student's demographic and academic record as it becomes available, semester-by-semester, and as the student progresses in his/her career at Carnegie Mellon University.

Daily, the Carnegie Mellon University Computing Services Division will perform a backup of all databases that have been altered during that day. Weekly, the Computing Services Division will perform a complete backup of all records within the student data file. The Computing Services Division staff will store the daily backups in the climate-controlled, fire-proof, limited-access security facility in the Computer Operations center in Cyert Hall on the Carnegie Mellon University campus. Upon successful completion of the monthly backup, the Computing Services Division staff will securely transfer the weekly and monthly backups from the preceding month to climate-controlled, fire-proof, secured vault at an offsite facility.

### **Cessation of Operations**

In the unlikely event that CMU (which has existed for more than 100 years) ceases to exist, it will make appropriate arrangements to comply with clauses (1) and (2) for all its students consistent with the Commonwealth of Pennsylvania statutes and law. I have an informal plan and agreement with the University of Pittsburgh's University Registrar's Office, that should either school cease, we would exchange student records.

The complete policy is available at <https://www.cmu.edu/es/docs/record-retention-policy.pdf>.

## Financial Information

### Fees and Charges for INI Pittsburgh - Silicon Valley MSIT – IS and MSMITE programs 2022-2023 (while on SV Campus)

**Standard Study Option for students who matriculated in Fall 2021 and Spring 2022.**

**Applied Study Option for students who matriculated in Fall 2021 and Spring 2022.**

**Advanced Study Option for students who matriculated in Spring 2021 remotely.**

**Applied Advanced Study Option for students who matriculated in Spring 2021 remotely.**

	Entire Program (SV Campus)	First Semester	
Program Tuition*	\$26,050	\$26,050	Prorated upon withdrawal/leave of absence. See Refund Policy provisions of this Enrollment Agreement. The amount quoted covers only the estimated tuition for the portion of the program provided in California.
Required University Fees	\$464	\$464	Non-Refundable after the 10th class day of the relevant semester. See Refund Policy provisions.
Books and Supplies (estimated)	\$1,106	\$1,106	Estimated cost for entire program. Used, digital and rented books and other factors may reduce/increase actual cost. The amount quoted covers only the estimated cost for the portion of the program provided in California.
Student Tuition Recovery Fund (STRF)	\$66	\$66	Non-Refundable (\$2.50 for every \$1,000 of net tuition** rounded to the nearest \$1,000). See information below about the STRF.
ESTIMATED TOTAL FEES/CHARGES FOR THE ENTIRE PROGRAM			\$27,686
ESTIMATED TOTAL FEES/CHARGES FOR FIRST SEMESTER			\$27,686
FEES/CHARGES DUE UPON ENROLLMENT			\$0

**Fees and Charges for INI Pittsburgh - Silicon Valley MSIT – IS and MSMITE programs 2022-20223 (while on SV Campus)**

**Advanced Study Option for students who matriculated in Fall 2021.**

**Applied Advanced Study Option for students who matriculated in Fall 2021.**

	Entire Program (SV Campus)	First Semester	
Program Tuition	\$52,100	\$26,050	Prorated upon withdrawal/leave of absence. See Refund Policy provisions of this Enrollment Agreement. The amount quoted covers only the estimated tuition for the portion of the program provided in California.
Required University Fees	\$928	\$464	Non-Refundable after the 10th class day of the relevant semester. See Refund Policy provisions.
Books and Supplies (estimated)	\$2,212	\$1,106	Estimated cost for entire program. Used, digital and rented books and other factors may reduce/increase actual cost. The amount quoted covers only the estimated cost for the portion of the program provided in California.
Student Tuition Recovery Fund (STRF)	\$133	\$66	Non-Refundable (\$2.50 for every \$1,000 of net tuition rounded to the nearest \$1,000). See information below about the STRF.
ESTIMATED TOTAL FEES/CHARGES FOR THE ENTIRE PROGRAM			\$55,373
ESTIMATED TOTAL FEES/CHARGES FOR FIRST SEMESTER			\$27,686
FEES/CHARGES DUE UPON ENROLLMENT			\$0



**Fees and Charges for INI Pittsburgh - Silicon Valley MSIT – IS and MSMITE programs 2022-2023 (while on SV Campus)**

**Advanced Study Option for students who matriculated in Spring 2022.**

**Applied Advanced Study Option for students who matriculated in Spring 2022.**

	Entire Program (SV Campus)	First Semester	
Program Tuition	\$53,403	\$26,050	Prorated upon withdrawal/leave of absence. See Refund Policy provisions of this Enrollment Agreement. The amount quoted covers only the estimated tuition for the portion of the program provided in California.
Required University Fees	\$951	\$464	Non-Refundable after the 10th class day of the relevant semester. See Refund Policy provisions.
Books and Supplies (estimated)	\$2,267	\$1,106	Estimated cost for entire program. Used, digital and rented books and other factors may reduce/increase actual cost. The amount quoted covers only the estimated cost for the portion of the program provided in California.
Student Tuition Recovery Fund (STRF)	\$136	\$66	Non-Refundable (\$2.50 for every \$1,000 of net tuition rounded to the nearest \$1,000). See information below about the STRF.
ESTIMATED TOTAL FEES/CHARGES FOR THE ENTIRE PROGRAM			\$56,757
ESTIMATED TOTAL FEES/CHARGES FOR FIRST SEMESTER			\$27,686
FEES/CHARGES DUE UPON ENROLLMENT			\$0

**Fees and Charges for INI Pittsburgh - Silicon Valley MSIT – IS and MSMITE programs 2022-2023 (while on SV Campus)**

**Advanced Study Option for students who matriculated in Spring 2021 in person.**

**Applied Advanced Study Option for students who matriculated in Spring 2021 in person.**

	Entire Program (SV Campus)	First Semester	
Program Tuition	\$51,100	\$25,050	Prorated upon withdrawal/leave of absence. See Refund Policy provisions of this Enrollment Agreement. The amount quoted covers only the estimated tuition for the portion of the program provided in California.
Required University Fees	\$917	\$453	Non-Refundable after the 10th class day of the relevant semester. See Refund Policy provisions.
Books and Supplies (estimated)	\$2,212	\$1,106	Estimated cost for entire program. Used, digital and rented books and other factors may reduce/increase actual cost. The amount quoted covers only the estimated cost for the portion of the program provided in California.
Student Tuition Recovery Fund (STRF)	\$79	\$13	Non-Refundable (\$2.50 for every \$1,000 of net tuition rounded to the nearest \$1,000). See information below about the STRF.
ESTIMATED TOTAL FEES/CHARGES FOR THE ENTIRE PROGRAM			\$54,308
ESTIMATED TOTAL FEES/CHARGES FOR FIRST SEMESTER			\$26,622
FEES/CHARGES DUE UPON ENROLLMENT			\$0

## Financial Aid

### Carnegie Mellon University Consumer Information

Below is a summary of consumer information made available to all Carnegie Mellon University prospective and current students as required by the Higher Education Act of 1965, as amended. Required Disclosures have been categorized into five topics. Each disclosure gives a brief description of information that is required to be disclosed and explains how it can be obtained. This information may be changed from time to time as required.

If you need assistance or would like a paper copy, contact the Student Financial Aid Office, 5000 Forbes Avenue, Warner Hall, Pittsburgh, PA. If you wish to speak with a representative about the information contained here, please utilize the contact information found here:

<https://www.cmu.edu/hub/consumer-information/>.

### Information about the Institution:

#### Accreditation Information

Carnegie Mellon University is accredited by the Middle States Commission on Higher Education (MSCHE), 3624 Market Street, 2nd Floor West, Philadelphia, PA 19104 ([www.msche.org](http://www.msche.org)). The Commission may be contacted by telephone at 267-284-5000 or via email at [info@msche.org](mailto:info@msche.org) or [espanolinfo@msche.org](mailto:espanolinfo@msche.org) (Spanish/Español). The university's current "Statement of Accreditation Status" can be found at, <https://www.msche.org/institution/>.

#### State Approvals

Carnegie Mellon University is licensed to operate in the states listed below. Individuals may contact the relevant agency for more information or information about how to file a complaint.

#### California

Bureau for Private Postsecondary Education  
P.O. Box 980818  
West Sacramento, CA 95798-0818  
Telephone: 888-370-7589  
Email: [bppe@dca.ca.gov](mailto:bppe@dca.ca.gov)  
Website: [www.bppe.ca.gov](http://www.bppe.ca.gov)

#### New York

New York State Education Department  
Office of Higher Education  
Room 977 Education Building Annex  
Albany, NY 12234  
Telephone: 518-486-3633  
Email: [hedepcom@nysed.gov](mailto:hedepcom@nysed.gov)  
Website: [www.highered.nysed.gov](http://www.highered.nysed.gov)

## Pennsylvania

Pennsylvania Department of Education  
Office of Postsecondary and Higher Education  
333 Market Street, 12th Floor  
Harrisburg, PA 17126-0333  
Telephone: 717-783-8228  
Email: [ra-collunivseminfo@pa.gov](mailto:ra-collunivseminfo@pa.gov)  
Website: [www.education.state.pa.us](http://www.education.state.pa.us)

## Washington, D.C.

Office of the State Superintendent of Education  
Government of the District of Columbia  
810 First Street NE 9th Floor  
Washington, DC 20002  
Telephone: 202-727-6436  
Email: [osse@dc.gov](mailto:osse@dc.gov)  
Website: [osse.dc.gov](http://osse.dc.gov)

Inquiries regarding the university's accreditation status or authorization to operate in any of the above states may be directed to: Associate Vice President / Director of Enrollment Services, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh PA 15213, telephone: 412-268-5399, email: [krieg@andrew.cmu.edu](mailto:krieg@andrew.cmu.edu).

## Distance Education, State Authorization and Reciprocity Agreement (SARA)

The State Authorization Reciprocity Agreement (SARA) is an agreement among member states, districts, and territories in the United States, which establishes national standards for interstate offering of postsecondary distance education courses and programs. It is intended to standardize the process of offering online courses and programs by postsecondary institutions located in states other than the state in which the enrolled student(s) are residing. SARA is overseen by a national council (NC-SARA) and administered by four regional education compacts.

Carnegie Mellon University has been approved by the Commonwealth of Pennsylvania to participate in NC-SARA and was accepted as a SARA institution on May 2, 2017; additionally, Carnegie Mellon secured approval through NC-SARA on May 18, 2017. Carnegie Mellon University is listed as an approved, participating institution on the NC-SARA website (<http://www.nc-sara.org/>). At this time, 49 of the 50 United States are SARA members. California is not a member of SARA; however, Carnegie Mellon is able to offer online education to California residents.

Except where prohibited by applicable law, students who reside outside of the United States generally are not restricted from enrolling in our online programs. Some online programs do require in-person attendance at one of Carnegie Mellon's teaching locations (e.g., Carnegie

Mellon's Pittsburgh, Pennsylvania campus) for short portions of the program. Students interested in enrolling in a specific online program are encouraged to contact the person designated by the online program for questions about the program's requirements or enrollment.

### Copyright Infringement Policies

Carnegie Mellon University takes copyright violation seriously. Besides raising awareness about copyright law, it takes appropriate action in support of enforcement as required by policy and law. United States copyright law (<http://www.copyright.gov/>) "protects the original works of authorship fixed in any tangible medium of expression, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device".

The University's Fair Use Policy (<http://www.cmu.edu/policies/administrative-and-governance/fair-use.html>) states that all members of the University must comply with US copyright law and it explains the fair use standards for using and duplicating copyrighted material. In addition, the policy prohibits the duplication of software for multiple uses, meeting the Digital Millennium Copyright Act (DMCA) (<http://www.copyright.gov/legislation/dmca.pdf>) requirements. The DMCA criminalizes the development or use of software that enables users to access material that is copyright protected. Furthermore, the Computing Policy (<http://www.cmu.edu/policies/information-technology/computing.html>) prohibits the distribution of copyright protected material via the University network or computer systems, unless the copyright owner grants permission.

The Higher Education Opportunity Act of 2008 (Public Law 110-315) Section 488, requires institutions of higher education to annually inform students that "unauthorized distribution of copyrighted material, including unauthorized peer-to-peer file sharing, may subject the students to civil and criminal liabilities". Carnegie Mellon does this by publication of a news article on Computing Services' website or via mass mail communication each semester. The law goes on to require institutions "to provide a summary of penalties for violation of Federal copyright laws, including disciplinary actions that are taken against students who engage in unauthorized distribution of copyrighted materials using the institution's information system." Copyright protected materials can include, but are not necessarily limited to:

- Music
- Movies or other videos
- Literary works
- Software
- Digital images or libraries

### **Cost of Attending the University**

Actual tuition and fee charges can be found on the Student Financial Services' website at <https://www.cmu.edu/sfs/tuition/index.html>.

For estimated books and supplies, room and board, and personal/miscellaneous expenses view the cost of attendance for,

Graduate program at <https://www.cmu.edu/sfs/tuition/graduate/index.html>.

## **Descriptions of Academic Programs**

Information on the university's graduate academic programs and degree offerings is available from the various schools/colleges and admitting offices. Links to those programs can be found at <https://www.cmu.edu/academics/index.html>.

## **Faculty**

Information on the university's faculty and instructional personnel is **available from individual schools/colleges. This information can be found on the university's academics website at** <https://www.cmu.edu/academics/index.html>.

## **Facilities & Services for Disabled Students**

The Office of Disability Resources provides responsive and reasonable accommodations to students who self-identify as having a disability, including physical, sensory, cognitive and emotional disabilities. If you would like to learn more about the services and accommodations provided by the Office of Disability Resources, visit their website at <https://www.cmu.edu/disability-resources/students/>. To discuss your accommodation needs, please email us at [access@andrew.cmu.edu](mailto:access@andrew.cmu.edu) or call us at 412-268-6121 to set up an appointment.

## **Student Privacy & FERPA**

One of the most significant changes a parent or guardian experiences in sending a student to college is the difference in privacy standards for educational records. Carnegie Mellon values the student's right to privacy. The university adheres to a federal law called the Family Educational Rights and Privacy Act (also called FERPA or the Buckley Amendment) that sets privacy standards for student educational records and requires institutions to publish a compliance statement, including a statement of related institutional policies. For more detailed information, view the university's brochure at <https://www.cmu.edu/hub/privacy/ferpa-brochure.pdf>.

## **Return to Title IV Funds Policy and Procedural Statement**

### **Policy Reason**

The U. S. Department of Education requires that the university determine the amount of Federal Title IV aid earned by a student who withdrawals or fails to complete the period of enrollment. The university must determine the earned and unearned portions of Title IV aid as of the date the student ceased attendance based on the amount of time the student spent in attendance. Up through the 60% point in the period of enrollment, a pro rata schedule is used to determine the amount of Title IV funds the student has earned at the time of withdrawal. After the 60% point in the period of enrollment, a student has earned 100% of the Title IV funds he or she was

scheduled to receive. For a student who withdraws after the 60% point-in-time, there are no unearned funds. Federal regulations can be found at:

Federal Student Aid Handbook, Volume 5

Chapter 1 Withdrawals and the Return of Title IV Funds 34 CFR 668.22

## **Policy and Procedural Statement**

At Carnegie Mellon Title IV funds are awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of Title IV funds that the student was originally scheduled to receive.

If a recipient of Title IV grant or loan funds withdraws from a school after beginning attendance, the amount of Title IV grant or loan assistance earned by the student must be determined. If the amount disbursed to the student is greater than the amount the student earned, the unearned funds must be returned. If the amount disbursed to the student is less than the amount the student earned, and for which the student is otherwise eligible, he or she is eligible to receive a Post-withdrawal disbursement of the earned aid that was not received.

Carnegie Mellon determines the Withdrawal Date and Date of Determination to complete the return calculation. A student's withdrawal date and date of determination varies depending on the type of withdrawal. When a student provides official notification to Carnegie Mellon through the Student Leave of Absence and Withdrawal Process, the withdrawal is defined as official withdrawal. When the student does not complete the Student Leave of Absence and Withdrawal Process and no official notification is provided by the student it is considered an unofficial withdrawal.

## **Leave of Absence/Withdrawal Process**

A student may leave Carnegie Mellon by either taking a leave of absence (leaving the university temporarily with the firm and stated intention of returning) or by withdrawing from the university (leaving the university with no intention of returning). Students choosing to take a leave of absence should first contact their academic advisor to discuss their plans while on leave and to work out any conditions that may be necessary for a smooth return to Carnegie Mellon. A student deciding to leave the university should take the following steps:

- Complete a Leave of Absence or Withdrawal Form.
- The form must include **all** necessary signatures or the process will not be completed.
- Return the completed form to the University Registrar's Office, 5000 Forbes Ave., Warner Hall A12, Pittsburgh, PA 15213.

## Determination of Withdrawal Date

### Official Withdrawals (Notification Provided by the Student)

Those withdrawals defined as official are processed in accordance with federal regulations. The Office of the Registrar provides information that identifies which students have processed a Student Leave of Absence and Withdrawal Form for each semester. This information includes the Date of Withdrawal, the Date of Determination, Withdrawal/Leave Status (LA, LS, & W2) and the semester of attendance. This information is maintained in the student's academic file and in the university's Student Information System.

For students who notify the university of their intent to withdraw or take a leave of absence, the official date of withdrawal or leave of absence is the earliest of:

- Date the student began the withdrawal or leave of absence process;
- Date the student notified his or her home department;
- Date the student notified the associate dean of his or her college; or
- Date the student notified the dean of students.

### Unofficial Withdrawal (No Official Notification Provided by the Student)

For a student who withdraws without providing notification to Carnegie Mellon, the institution determines the withdrawal date using defined criteria. This category of withdrawals includes students that drop out and students that do not earn a passing grade.

To identify the unofficial withdrawals the Registrar develops a preliminary list of students that did not complete the semester by reviewing the final student grade reports. The list includes all students with: a) semester units carried, b) 0 semester units passed, c) 0 quality points earned, and d) 0.0 QPA. The Registrar contacts the academic divisions about each student to determine if the student actually completed the semester and earned the grades (0.0) or failed to complete the semester and did not notify the university of their status.

For students who do not notify the university of their intent to withdraw or take a leave of absence, the official date of withdrawal or leave of absence is:

- The midpoint of the semester;
- The last date the student attended an academically related activity such as an exam, Tutorial or study group, or the last day a student turned in a class assignment.

### Date of Determination that the Student Withdrew

Carnegie Mellon is not required to take attendance and the Date of Determination that a student withdrew varies depending upon the type of withdrawal: Official or Unofficial.

1. For withdrawals where the student **provided Official Notification** the Date of Determination is: The student's withdrawal date, or the date of notification, whichever is



later.

2. For withdrawals where the student **did not provide *Official Notification*** the Date of Determination is: The date the institution becomes aware the student has ceased attendance.

For a student who withdraws without providing notification to the institution, the institution must determine the withdrawal date no later than 30 days after the end of the enrollment period.

### **Calculation of Earned Title IV Assistance**

The withdrawal date is used to determine the point in time that the student is considered to have withdrawn so the percentage of the period of enrollment completed by the student can be determined. The percentage of Title IV aid earned is equal to the percentage of the period of enrollment completed.

The amount of Title IV federal aid earned by the student is determined on a pro-rata basis up to the end of 60% of the semester. If the student completed 30% of a term, 30% of the aid originally scheduled to be received would have been earned. Once a student has completed more than 60% of a term, all awarded aid (100%) has been earned. The percentage of federal aid earned and the order in which the unearned aid is returned are defined by federal regulatory requirements.

The calculation of earned Title IV funds includes the following grant and loan funds if they were disbursed or could have been disbursed to the student for the period of enrollment for which the Return calculation is being performed:

- Pell Grant
- Iraq and Afghanistan Service Grant
- TEACH Grant (not available at Carnegie Mellon)
- FSEOG Grant
- Federal Direct Loan

### **Institutional Charges**

Institutional charges are used to determine the portion of unearned Title IV aid that the school is responsible for returning. Carnegie Mellon ensures that all charges for tuition, fees, room and board, as well as all other applicable institutional charges are included in the return calculation. Institutional charges do not affect the amount of Title IV aid that a student earns when he or she withdraws.

The institutional charges used in the calculation usually are the charges that were initially assessed the student for the period of enrollment. Initial charges are only adjusted by those changes the institution made prior to the student's withdrawal (for example, for a change in enrollment status unrelated to the withdrawal). If, after a student withdraws, the institution

changes the amount of institutional charges it is assessing a student, or decides to eliminate all institutional charges, those changes affect neither the charges nor aid earned in the calculation.

### **Return of Unearned Funds to Title IV**

If the total amount of Title IV grant and/or loan assistance that was earned as of the withdrawal date is less than the amount that was disbursed to the student, the difference between the two amounts will be returned to the Title IV program(s) and no further disbursements will be made.

If a student has received excess funds, the College must return a portion of the excess equal to the lesser of the student's institutional charges multiplied by the unearned percentage of funds, or the entire amount of the excess funds.

The funds will be returned in the order below as prescribed by federal regulations, within 45 days from the date of determination that a student withdrew.

- Unsubsidized Federal Stafford Loans
- Subsidized Federal Stafford Loans
- Federal PLUS loans
- Federal Pell Grants
- Federal Supplemental Educational Opportunity Grants (FSEOG)

### **Post-Withdrawal Disbursements**

If the total amounts of the Title IV grant and/or loan assistance earned as of the withdrawal date is more than the amount that was disbursed to the student, the difference between the two amounts will be treated as a post-withdrawal disbursement. In the event that there are outstanding charges on the student's account, Carnegie Mellon will credit the student's account for all or part of the amount of the post-withdrawal disbursement up to the amount of the allowable charges.

Any amount of a post-withdrawal disbursement that is not credited to a student's account will be offered to the student within 30 days of the date that the institution determined that the student withdrew. Upon receipt of a timely response from the student, the College will disburse the funds within 90 days of the date of determination of the student's withdrawal date.

### **Return of Title IV Funds – Withdrawals for Programs Offered in Modules**

The return of Title IV funds for programs offered in modules is defined in a separate policy statement at Carnegie Mellon. This document is included as an addendum to the Carnegie Mellon University Return to Title IV Funds Policy and Procedural Statement (see below).

### **Policies and Procedures**

Federal Student Aid Handbook, Volume 5, Chapter 2 Withdrawals and the Return of Title IV Funds  
CFR 668.22 (a), (f) and (l)

## Dear Colleague Letter GEN-11-14 July 2011

For all programs offered in modules, a student is a withdrawal for Title IV purposes if the student ceases attendance at any point prior to completing the payment period or period of enrollment (unless the institution has written confirmation from the student that they will attend a module that begins later in the enrollment period).

The regulations require the institution to determine whether Title IV funds must be returned based on the number of days actually completed versus the number of days the student was scheduled to attend in the payment period. The regulations prevent students from enrolling in modules or compressed courses spanning the period, completing a portion of the period, and retaining all aid for the period.

A program is considered to be offered in modules if a course or courses in the program do not span the entire length of the payment period or period of enrollment. The rule impacts all programs offering courses shorter than an entire semester, including semester-based programs with a summer term consisting of two consecutive summer sessions.

The Student Financial Aid Office has established the following procedures associated with handling withdrawals from programs offered in modules. An Associate Director of Student Financial Aid has the primary responsibility for compliance and implementation of these regulatory requirements.

1. The institution will identify students enrolled for the summer session that are eligible for Title IV Aid.
  - Pell eligible students are identified
  - Students with summer loans are identified
  - The period of enrollment and enrollment status will be identified for each student
2. All Leave/ Withdrawal Forms processed by the University Registrar's Office will be reviewed for the summer sessions to record the Withdrawal Date and Date of Determination to identify any student receiving federal funding.
3. The Student Financial Aid Office will identify any students that drop courses in the summer sessions.
  - During Summer I this is standard procedure
  - During Summer II this is reviewed after 10th day reporting
  - Any additional dropped courses will be reviewed through the 60% enrollment period
4. Students who are identified as official withdrawals or that officially drop all courses in a session will be reviewed to determine the amount of federal financial aid earned. If a Return of Title IV aid is required, existing institutional procedures will be followed.
5. At the end of the enrollment period the institution will determine if any students are identified as 'unofficial withdrawals.' If a Return of Title IV aid is required, existing institutional procedures will be followed.
6. If a student does not begin courses in all sessions, a Return of Title IV aid may not be required, but other regulatory provisions concerning recalculation may apply.
  - If a student completes both courses in module one, but officially drops courses in module two while attending module one the student is not a withdrawal.

- Since the enrollment is less than half time, the student is no longer eligible for the loan and the funds must be returned.

The following information obtained from the Federal Student Aid Handbook, Chapter 2, Withdrawals and the Return of Title IV Funds, will be used to determine whether a student enrolled in a series of modules is a withdrawal.

### **How to determine whether a student in a program offered in modules has withdrawn**

Schools can determine whether a student enrolled in a series of modules is a withdrawal by asking the following questions.

1. *After beginning attendance in the payment period or period of enrollment, did the student cease to attend or fail to begin attendance in a course he or she was scheduled to attend?*
  - If the answer is no, this is not a withdrawal.
  - If the answer is yes, go to question 2.
2. *When the student ceased to attend or failed to begin attendance in a course he or she was scheduled to attend, was the student still attending any other courses?*
  - If the answer is yes, this is not a withdrawal; however other regulatory provisions concerning recalculation may apply.
  - If the answer is no, go to question 3.
3. *Did the student confirm attendance in a course in a module beginning later in the period (for non-term and nonstandard term programs, this must be no later than 45 calendar days after the end of the module the student ceased attending)?*
  - If the answer is yes, this is not a withdrawal, unless the student does not return.
  - If the answer is no, this is a withdrawal and the Return of Title IV Funds requirements apply.

Contact: Questions regarding this policy or its intent should be directed to the Student Financial Aid Office at 412-268-1353.

### **Satisfactory Academic Progress Policy and Procedural Statement**

To be eligible for federal, state, and institutional financial aid, all students are required to maintain Satisfactory Academic Progress toward the completion of a degree. Each university determines its own policy in accordance with federal regulations set forth by the U. S. Department of Education regarding satisfactory progress standards to ensure student success. To maintain Satisfactory Academic Progress at Carnegie Mellon University, students must meet the following minimum standards for both of the qualitative (QPA) and quantitative (completion rate) measures:

Student Type	QPA (Qualitative)	Completion Rate (Quantitative)*
First Year Undergraduate	1.75	80%
Undergraduate Upper-class	2.00	80%
Heinz Graduate	3.00	80%
Other Graduate (excluding Tepper)	2.00	80%

*\*To calculate the completion rate, the cumulative number of completed units is divided by the cumulative number of units attempted. Advance Placement credits are excluded from both figures.*

In addition to the above-mentioned Financial Aid Satisfactory Academic Progress standards, federal regulations require a student to complete their degree within a specified amount of time. The maximum timeframe cannot exceed 150 percent of the time published as needed for completion of the program.

Scope:

This policy applies to Federal aid including Federal Pell Grants, Federal Supplemental Educational Opportunity Grants, Federal Work-Study, Federal Direct Loans, and Federal Direct PLUS Loan programs; state grant aid; and Carnegie Mellon institutional aid including grants, loans, and scholarships.

Federal regulations can be found at,

Federal Student Aid Handbook, Volume 1  
 Chapter 1 School Determined Requirements  
 34 CFR 668.16(e)  
 34 CFR 668.32(f)  
 34 CFR 668.34

## **Evaluation**

Carnegie Mellon evaluates all students for Financial Aid Satisfactory Academic Progress annually, at the end of the spring semester. Students that are included in the review are undergraduates, graduates, both full-time and part-time.

Courses that do not count toward a student's degree cannot be used to determine enrollment status for financial aid purposes. Carnegie Mellon will count transfer credit hours that are accepted toward a student's educational program as both attempted hours and completed hours. Advanced Placement Non-Degree and Non-Credit courses are not counted as units passed or attempted. When a course is repeated, all grades will be recorded on the official academic transcript and will be calculated in the student's QPA. For financial aid eligibility, only one repeat per course is permitted in the determination of enrollment status for courses previously passed.

If the student withdraws and is not assigned a W grade, then it will not be counted in the number of units attempted or completed. If the W grade is assigned, the units will be counted in the number of units attempted and will be counted as zero in the number of units completed.

If the student has incomplete units, the units will be counted as attempted and will be counted as zero in the number of units completed.

The Financial Aid Satisfactory Academic Progress evaluation is a cumulative review of all semesters, regardless of whether or not the student received financial aid during the academic year.

If the minimum requirements are not achieved, the student is ineligible to receive financial aid. In such a case, the student is notified and given an option to appeal their financial aid status. More information about the appeal process can be found at <https://www.cmu.edu/sfs/financial-aid/policies/academic-progress.html>.

A financial aid package will not be completed unless an appeal is received, approved and processed accordingly. If by chance a financial aid package is processed and released to the student, it is conditional and subjected to financial aid removal until an appeal is received, approved and processed accordingly.

**Contact:** Accountable Department: Enrollment Services, Student Financial Aid. Questions regarding this policy or its intent should be directed to the Student Financial Aid Office, phone: 412-268-1353.

### **Student Body Diversity**

For Information about the diversity of the university student body, contact the Institutional Research and Analysis Office, <https://www.cmu.edu/ira/index.html>.

For information about the University's Diversity, Equity and Inclusion initiative, visit the Center for Student Diversity and Inclusion's website at <https://www.cmu.edu/student-diversity/>.

### **Written Arrangement Information**

A U.S. Department of Education regulation requires disclosure of specific information to prospective and current students regarding written arrangements between Carnegie Mellon University (CMU) and any institution(s) that provides a portion of an educational program to students enrolled at CMU. CMU enters into such arrangements to enrich the educational experiences offered to its students. In accordance with the regulation, CMU provides this information at <http://www.cmu.edu/hub/consumer-information/docs/written-arrangement.pdf>.

Student Complaints & Consumer Information by State

As required for compliance with U.S. Federal Program Integrity Regulations, state official/agency contact information for each U.S. state/territory that could handle a student's complaint is provided at <https://www.cmu.edu/hub/consumer-information/docs/complaints.pdf>.

## **Gainful Employment Disclosures**

As required by U.S. Department of Education regulations Gainful Employment Disclosures (Disclosures about CMU certificate programs that prepare students for specific occupations) can be found at <https://www.cmu.edu/hub/consumer-information/>.

## **Information about Student Financial Aid:**

Meeting the cost of higher education is a significant investment. We are committed to providing a comprehensive financial aid program that makes it possible for admitted students to attend Carnegie Mellon.

### Application Process & Timeline:

**Graduate Students: To apply for financial aid for the 2022-2023 academic year, follow the steps below:**

1. Free Application for Federal Student Aid (FAFSA)

The FAFSA is required if applying for federal financial aid programs. There are now two ways to complete the *Free Application for Federal Student Aid (FAFSA)* form: a redesigned <https://studentaid.ed.gov/sa/fafsa> website or a mobile app (available through Google Play, <https://play.google.com/store/apps/details?id=com.fsa.mystudentaid> or the Apple App Store, <https://itunes.apple.com/us/app/mystudentaid/id1414539145>).

We recommend using the IRS Data Retrieval Tool (DRT) (<https://studentaid.ed.gov/sa/resources/irs-drt-text>) to complete the FAFSA. The DRT transfer process has been improved to include stronger security and privacy protections; therefore, tax information transferred will not display on the form or Student Aid Report. Instead, the phrase "Transferred from the IRS" will appear in the fields.

Those selected for federal verification after FAFSA completion or those unable to use the IRS DRT will need to request an IRS Tax Return Transcript (<https://www.irs.gov/individuals/get-transcript>).

Additional information:

- Apply as soon as possible after October 1.
- Carnegie Mellon's federal code is 003242.
- Use 2017 tax information to complete the FAFSA.
- A Department of Education Federal Student Aid (FSA) ID is required. View FSA ID

instructions at <https://fsaid.ed.gov/npas/index.htm>.

- Students must complete the FAFSA's electronic signature requirement.

## 2. MPN & Entrance Counseling

All first-time Federal Direct Loan borrowers are required to complete entrance counseling. The entrance counseling session provides information about borrower rights and responsibilities. CMU will be notified when a student has completed online entrance counseling. Funds will not be disbursed until the entrance counseling session has been completed. Students who completed a federal entrance counseling session while at CMU, do not have to complete another session.

Additional information:

- View entrance counseling instructions (<https://www.cmu.edu/sfs/financial-aid/types/federal-loans/direct/mpn-entrance-counseling.html>).
- Complete entrance counseling session at <https://studentloans.gov>.

## 3. Grad PLUS Loan

If you plan on borrowing a Federal Direct Graduate PLUS Loan, this is a two-part process and both parts must be completed in order for your loan to be originated. If you borrowed a Grad PLUS Loan last academic year, you are only required to complete the application portion of the process. The application portion of the process cannot be completed before June 1, 2018.

Additional information:

- View detailed Grad PLUS Loan instructions at <https://www.cmu.edu/sfs/financial-aid/types/federal-loans/plus/instructions.html>.
- The two-part process may be completed at <https://studentloans.gov>.

## Financial Aid Eligibility Notification

Once a student completes all of the steps above, a financial aid package will be determined. The Student Financial Aid Office will notify the student by email that a financial aid award letter has been posted to SIO (<https://s3.andrew.cmu.edu/sio/index.html#finances-home>). The letter contains information and further instructions regarding the student's eligibility and awards. If a student's circumstances change, then financial aid eligibility will be re-evaluated and the student will receive notification that a revised award letter is available in SIO.

## Missing Documents

If we are unable to process a student's financial aid package due to missing documents, a Financial Aid Alert email will be sent to the student requesting the required documents by a specified date. Until the entire application process is completed and all required documents are submitted, our office may be unable to complete a student's financial aid package. Students may log in to SIO (<https://s3.andrew.cmu.edu/sio/index.html#finances-home>) to view documents that have been received by our office. [View instructions](#) for submitting missing documents at <https://www.cmu.edu/sfs/financial-aid/missing-documents/index.html>.



### Teacher Certification

Teacher certification students at the graduate level should be aware that federal regulations classify them as a grade level 5 undergraduate student for Federal Direct Student Loan purposes. Teacher certification students are, however, considered a graduate student by Carnegie Mellon for academic purposes.

## **Available Financial Aid**

### **Scholarships & Grants**

Graduate students interested in scholarships and grants may contact their program of interest or department. View more information on the Graduate Education Office website, <http://www.cmu.edu/graduate/prospective-students/index.html>. In addition, the Fellowships & Scholarships Office (<http://www.cmu.edu/fso/>) provides support to graduate students interesting in pursuing certain external scholarships, like Fullbright and UK Awards.

### **Federal Work-Study**

Federal Work-Study (FWS) is a need-based self-help award. If a student has been awarded FWS, the FWS award is the total that can be earned during the academic year as a work-study student.

### **Federal Loans**

For many students and families, educational loans are a necessary part of the process of paying for college. Student Financial Aid certifies loans for students, as well as Federal Direct Parent PLUS Loans for parents of undergraduates and Federal Direct Grad PLUS Loans for graduate students.

### **Federal Direct Student Loan**

The Federal Direct Student Loan is the most widely-used loan for college students and is available to both undergraduate and graduate students. There are two types of Federal Direct Student Loans, subsidized and unsubsidized, and eligibility for both is determined by completing the FAFSA.

### **Grad PLUS Loan**

Eligible graduate students may borrow a Federal Direct Grad PLUS Loan to assist with educational expenses. Students may borrow any amount up to their calculated cost of attendance minus any other aid received.

## **Private Loans**

Private loan programs offer competitive interest rates and borrower benefits. To increase chances of approval and possibly improve the rate you receive, students are strongly recommended to apply with a creditworthy co-signer.

## **Student Outcomes**

### **Retention and Graduation Rates**

Institutional Research and Analysis Office offers up-to-date data on degrees conferred, enrollment reports, freshmen retention rates and race and ethnicity reports for annual degrees. Retention and Graduation rates can be found at <https://www.cmu.edu/ira/retentiongradrates.html>.

Intercollegiate Athletic Program Participation Rates and Financial Support Data (Equity in Athletics Disclosure Act)

Please visit the U.S. Department of Education's site, The Equity in Athletics Data Analysis (<http://ope.ed.gov/athletics/#/>) and select the "Get data for one schools" option. Enter "Carnegie Mellon University" in the "Name" field and select the "Continue" button at the bottom of the page.

A printed copy of the report can be requested by calling the Department of Athletics, Physical Education, and Recreation at 412-268-8054 or by sending an email to Josh Centor, Associate Vice President for Student Affairs and Director of Athletics, Physical Education & Recreation, at [jcentor@andrew.cmu.edu](mailto:jcentor@andrew.cmu.edu).

## **Health and Safety**

### **Drug and Alcohol Abuse Prevention Program**

Under the Drug Free Workplace Act of 1988 and the Drug Free Schools and Campuses Act of 1989, the Carnegie Mellon University is required to have an alcohol and other drug policy outlining prevention, education and intervention efforts and consequences for policy violations. The policy can be found at <https://www.cmu.edu/policies/administrative-and-governance/alcohol-and-drug-policy.html>.

### **CMU Annual Security and Fire Safety Report**

A printed copy of the report can be requested by contacting University Police at 412-268-6232 or [campuspd@andrew.cmu.edu](mailto:campuspd@andrew.cmu.edu).

The annual security and fire safety report (Carnegie Mellon University Police Department Annual Reports) is also available online at <https://www.cmu.edu/police/reporting-policy->

[training/security-firesafety-reports.html](http://www.cmu.edu/training/security-firesafety-reports.html).

## **Vaccination Policies**

CMU Prematriculation Immunization Policy can be found at <http://www.cmu.edu/policies/student-and-student-life/immunizations.html>.

CMU University Health Services Health Requirements for Incoming Students can be found at <https://www.cmu.edu/health-services/new-students/>.

## **Other Information**

### **Voter Registration**

Please visit <https://www.usa.gov/voter-registration>.

### **Carnegie Mellon Ethics Hotline**

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 financial matters, academic and student life, human relations, health and campus safety or research.

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

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

### **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 vice president for campus affairs, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-2056.

Obtain general information about Carnegie Mellon University by calling 412-268-2000.

## **Student Loan Repayment Obligation**

If you obtain a loan to pay for INI Pittsburgh-Silicon Valley MSIT-IS or MSMITE programs including any of the Study options (Applied, Advanced, Applied Advanced), you will have the responsibility to repay the full amount of the loan plus interest, less the amount of any refund. If you have received federal student financial aid funds, you are entitled to a refund of moneys not paid from federal student financial aid program funds.

## **Pending Bankruptcy Disclosure**

CMU does not have a pending petition in bankruptcy, is not operating as a debtor in possession, and has not filed a petition in bankruptcy within the preceding 5 years, nor has Carnegie Mellon had a petition in bankruptcy filed against it within the preceding 5 years that resulted in re-organization under Chapter 11 of the United States Bankruptcy Code.

## **Student Services**

### **Student Affairs**

Students on the Silicon Valley campus can meet with Lauren Schachar, Assistant Dean of Student Affairs, for on-site connection to various student services resources. These resources include questions regarding public transportation, health, personal concerns, student organizations, activities and general campus information. Lauren Schachar's office is located in B19 Room 1045, and she can be reached by phone at (650) 335-2844 or email at [lauren.schachar@sv.cmu.edu](mailto:lauren.schachar@sv.cmu.edu).

### **Public Transportation**

Students are given a VTA clipper card (Smart Pass) during orientation, which provides them with free access to the local VTA bus system and the local light rail. If students live near a Caltrain station or require Caltrain to get to school or work, they can apply for a Caltrain Go Pass at the Student Affairs office, located in Building 19, Room 1045.

### **Health/Personal Concerns**

The Assistant Dean of Student Affairs is the point person for any student who is in distress or experiencing a crisis. Student Affairs consults with CMU's Counseling and Psychological Services (CaPS) in Pittsburgh to support students in these circumstances. The assistant dean also works closely with CaPS to provide training for SV faculty on identifying and supporting students in distress.

To further promote student access to physical and mental health services, the campus contracts with One Medical to provide students with local, timely access to health care. All students, staff, and faculty are able to enroll in a free membership to One Medical, which provides same day and next day appointments at any of their locations. There are three main locations near the SV

campus. The company also provides 24/7 support via their mobile app, including video consultations with a physician. All full-time students are also required to have health insurance. CMU's student health insurance department helps students to enroll, waive (if they have insurance that meets the university requirements), navigate and use insurance. Questions regarding student insurance can be emailed to [shinsure@andrew.cmu.edu](mailto:shinsure@andrew.cmu.edu).

## **Student Organizations and Activities**

Students are encouraged to join student organizations during orientation and welcome week by requesting information (through an online form) and meeting the student organizations on campus. The online form is provided during Action Lab at new student orientation and can also be found on our website at <http://sv.cmu.edu/student-services/student-organizations.html>.

Student activities are promoted through a weekly CMU-SV Student Newsletter sent by the Assistant Dean of Student Affairs. Students can find out about opportunities, events and activities through the newsletter, the student events calendar (which they can access once they have set up their school Google account) and through the digital displays and posters on campus.

## **Career Services**

The INI Career Services Office strives to bring together the talents of our students with professional opportunities, including:

- Internships
- Full-time jobs
- Practicum projects
- Research sponsorships
- Fellowship and scholarship support

At the INI, the students learn and develop professionally as much beyond the walls of our classrooms as they do in lecture halls and laboratories. They may contribute to real-world research, fulfill valuable internships and complete team-based projects for clients.

To this end, the INI career services office facilitates partnerships with representatives in industry, government and academia. The office also specializes in providing career counseling to students.

The Career and Professional Development Services Center (CPDC) serves to provide students with guidance during their job and internship searches. The services available to students include resume reviews, mock interviewing, salary negotiation, career exploration consultation, internship and job consultation, workshops/events and employer relations. The CPDC is also heavily involved in organizing campus-wide job fairs and bringing employers to campus.

Handshake is Carnegie Mellon's online recruiting system. Through Handshake, employers can request accounts to post jobs, request interviews and information sessions, and review student resumes. Students and alumni can apply to positions, sign up for interviews and find contact information for thousands of recruiters. Handshake can be accessed through the CPDC website.

Students in Silicon Valley can meet with Associate Director of Career Services, Leigh Mason, or with one of the CMU Silicon Valley Peer Career Consultants. Appointments can be made through Handshake. Career Consultants hold open office hours, which are communicated at the beginning of each semester.

## **Job Search Guidelines**

Departments strive to play a supportive role in the career pursuits of students but maintains academics as a priority. It is not acceptable for students to skip classes or assignments in order to attend job interviews. Students should conduct their job search in a manner that does not impede the academic progress through their graduate program. It is also important for students to understand how to conduct a job search. When applying for jobs, students are expected to exhibit certain ethical behavior, such as arriving on time for interviews, being truthful about their qualifications, and to honor their agreements with recruiters. Further, students should not continue looking and interviewing for a position after they have accepted an offer. The CPDC reserves the right to limit access for any users that do not follow their ethical job/internship search policy. Students who do not follow such guidelines may forfeit their on campus interviewing and/or resume submission privileges.

## **Student Grievances**

Grievances can be brought directly to the Assistant Dean of Student Affairs. For students who wish to submit a concern online, they can do so at the online Student Suggestions Box at <http://goo.gl/forms/BySIZMoB6txYDKz02>.

A list of employment positions within the education field for the INI MSIT-IS and MSMITE programs graduates as of 2021 is available at: [https://www.cmu.edu/ini/academics/academics\\_docs/2021bicoastalprogramsemploymentpositions.pdf](https://www.cmu.edu/ini/academics/academics_docs/2021bicoastalprogramsemploymentpositions.pdf).

The INI Career Services disclosure statement is available online at: [https://www.cmu.edu/ini/academics/academics\\_docs/bppecareerservices\\_bicoastalprograms-2021.pdf](https://www.cmu.edu/ini/academics/academics_docs/bppecareerservices_bicoastalprograms-2021.pdf).

## **Services to International Students**

Carnegie Mellon University does admit students from other countries. The Carnegie Mellon Office of International Education (OIE) provides visa services for F-1 and J-1 international students as required by Department of Homeland Security regulations. These services, and related services such as advising and preparation of required documents, are provided to students at no additional charge.

OIE advises international students and scholars regarding immigration/visa and acculturation issues, issues visa documents with which international students and scholars may apply for US

visas. Visa documents are issued, per federal regulations, upon request from students who are admitted to full-time programs and who have sufficient, demonstrated financial resources. OIE complies with federal reporting requirements with respect to students/scholars on CMU visa documents and educates students with respect to their own responsibilities for maintaining legal status in the US.

All F and J students/scholars are required to attend a mandatory Orientation and Immigration Check-In upon arrival to their CMU campus or location. The OIE orientation provides legally required information regarding maintaining status. For those students who participate in Optional Practical Training (OPT) or Curricular Practical Training (CPT), mandatory information/application sessions are provided. These sessions are presented remotely, as needed, by a Carnegie Mellon OIE Designated School Official (DSO). Individual students who have immigration questions or concerns meet with designated OIE advisor during individual, scheduled advising appointments.

For more information, students may view the website or call OIE:

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

By phone: 1(412) 268-5231

## **Local Housing**

The CMU campus in Silicon Valley does not offer any on-campus housing or off-campus housing services. Students need to find their own housing. There are many apartment complexes and/or room rentals within a commutable distance from the campus. Housing costs vary and most students choose to have roommates. [View a range of housing prices in the Mountain View area.](#)

While our student affairs office cannot act as a real estate agency or rental broker for you, we are happy to offer our advice or suggestions on locations that may be of interest to you. For questions, please contact the Assistant Dean of Student Affairs at [student-services@sv.cmu.edu](mailto:student-services@sv.cmu.edu)

## **Facilities and Equipment**

The Silicon Valley campus is located in the historic Shenandoah Plaza on the NASA Ames Research Park. CMU-SV occupies building 19.

Building 19 is a multi-tenant building in which CMU occupies 16,225 sq. ft. of space. It houses student-facing staff offices, student study rooms, Ph.D. student space, research space and an assortment of other types of space: 7 staff offices, 18 student study rooms, 6 PhD rooms with individual workstations, and 9 research labs, as well as 8 conference rooms, 1 kitchen/break room, a quiet room, a student organizations room and a large student lounge.

Student Lounges: Students in Silicon Valley can use the Bay Room (B19 Room 1040.)

Masters Suites and PhD Wing: Building 19 has 10 Master's Suites which can accommodate 6-12 students per room. The PhD wing has 8 rooms which hold 8 cubicles. PhD students are assigned a cubicle and given a key to the room and the desk upon arrival.

Printers: Printers are available for use in Building 19 (B19) kitchen/lounge, and at the end of the 1030 wing in B19. Instructions for adding printers and policies are posted next to each printer.

Keys: The Silicon Valley Facilities department will provide each Master student with a key to the master's study suites in Building 19 at orientation. Each PhD student will be provided with a key to their cubicle and office in the PhD wing. To avoid any financial implications to you, your key must be returned prior to your final departure from CMU. To report a lost key or to request a replacement, please email [facilities@sv.cmu.edu](mailto:facilities@sv.cmu.edu).

More information about the rooms and spaces the CMU-SV campus is available at <http://sv.cmu.edu/information-center/campus-resources/rooms-and-spaces.html>.

The complete CMU-SV Facilities and Campus Policies can be found at <http://sv.cmu.edu/information-center/campus-resources/facilities-and-campus-policies.html>.

## **Library and Resources**

Library and Resources CMU-SV does not operate a library on campus, but we do have specialized library resources available for students, faculty, and staff. Resources include:

1. Interlibrary Loan
2. e-book developments
3. University Libraries Quick Links

Through the Interlibrary loan, students can request books, articles from journals and conferences, technical reports, or other materials to be sent to you. The materials may be from Carnegie Mellon libraries in the U.S. or other institutions worldwide. Electronic delivery for many articles is available. ILLiad is the system that our students use to request these items. What ILLiad can be used for:

- To request to borrow a book, a tech report, a thesis, copy of an article, etc.
- Check status of requests
- Edit requests
- Cancel requests
- Update your contact information or delivery preferences
- Request to renew an interlibrary loan

The ILLiad link can be found at <https://illiad.library.cmu.edu/illiad/illiad.dll>.

The first time you use the link you need to provide information about yourself. You only need to do this once. When completing the form, choose these options:

- For Mailing Address, state: Silicon Valley campus
- For Delivery Location, state: E&S Library



Ebook developments can be found on our website at <http://guides.library.cmu.edu/svc>. See below for an example of ebook developments:

- [AccessEngineering](#)
  - This is a "reference tool for professionals, academics, and students that provides seamless access to the world's best-known, most-used collection of authoritative, regularly updated engineering reference information. AccessEngineering also comprises dynamic online features, such as instructional, faculty made videos, [calculators](#), interactive tables and charts, as well as personalization tools allowing users to organize crucial project information as they work." AccessEngineering includes the well-known [Schaum's Outline](#) series of books.
- [Knovel](#)
  - A digital collection of science and engineering reference books. Carnegie Mellon Users Only (including Silicon Valley Campus). Our access to their new collection on Computer Hardware Engineering is now available! You'll also find the books listed in CAMEO - our online catalog.
- [Synthesis Digital Library of Engineering and Computer Science](#)
  - "The basic component of the library is a 50- to 100-page 'Lecture'; a self-contained electronic book that synthesizes an important research or development topic, authored by an expert contributor to the field." You'll also find the books listed in CAMEO - our online catalog.
- [Springer e-Books Collection for Computer Science](#)
- [Springer e-Book Collection for Engineering](#)
- [Springer e-Book Collection for Mathematics & Statistics](#)
- [Plus - General e-Book Collecting from Many Different Publishers](#)

University Quick Links can also be found on the website at <http://guides.library.cmu.edu/svc>.

- [Articles & Databases](#)
  - Alphabetical and subject listings of our available databases.
- [Cybersecurity](#)
- [e-Journals A to Z List](#)
  - Our automated (partially) method of finding e-Journals that we have access to - even if buried in a full-text database.
- [ECE Library Guide](#)
  - Library research guide for Electrical & Computer Engineering.
- [Off-Campus / Wireless Access](#)
  - EZ Proxy single sign on added as an option!
- [University Libraries Home Page](#)
  - Our home page has links to the simple and advanced search functions for CAMEO - our online catalog.

For additional questions regarding library resources, please contact Matt Marsteller, Head, CMU Science Libraries at [matthewm@andrew.cmu.edu](mailto:matthewm@andrew.cmu.edu) or by phone: 412-268-7212

Detailed description of the library resources is available at <http://sv.cmu.edu/student-services/library-resources.html>.

## **Student Tuition Recovery Fund**

The State of California established the Student Tuition Recovery Fund (STRF) to relieve or mitigate economic loss suffered by a student in an educational program at a qualifying institution, who is or was a California resident while enrolled, or was enrolled in a residency program, if the student enrolled in the institution, prepaid tuition, and suffered an economic loss. Unless relieved of the obligation to do so, you must pay the state-imposed assessment for the STRF, or it must be paid on your behalf, if you are a student in an educational program, who is a California resident, or are enrolled in a residency program, and prepay all or part of your tuition.

You are not eligible for protection from the STRF and you are not required to pay the STRF assessment, if you are not a California resident, or are not enrolled in a residency program.

It is important that you keep copies of your enrollment agreement, financial aid documents, receipts, or any other information that documents the amount paid to the school. Questions regarding the STRF may be directed to the Bureau for Private Postsecondary Education, 1747 N. Market Boulevard, Suite 225, Sacramento, CA 95834, (916) 574-8900 or (888) 370-7589.

To be eligible for STRF, you must be a California resident or are enrolled in a residency program, prepaid tuition, paid or deemed to have paid the STRF assessment, and suffered an economic loss as a result of any of the following:

1. The institution, a location of the institution, or an educational program offered by the institution was closed or discontinued, and you did not choose to participate in a teach-out plan approved by the Bureau or did not complete a chosen teach-out plan approved by the Bureau.
2. You were enrolled at an institution or a location of the institution within the 120 day period before the closure of the institution or location of the institution, or were enrolled in an educational program within the 120 day period before the program was discontinued.
3. You were enrolled at an institution or a location of the institution more than 120 days before the closure of the institution or location of the institution, in an educational program offered by the institution as to which the Bureau determined there was a significant decline in the quality or value of the program more than 120 days before closure.
4. The institution has been ordered to pay a refund by the Bureau but has failed to do so.
5. The institution has failed to pay or reimburse loan proceeds under a federal student loan program as required by law or has failed to pay or reimburse proceeds received by the institution in excess of tuition and other costs.
6. You have been awarded restitution, a refund, or other monetary award by an arbitrator or court, based on a violation of this chapter by an institution or representative of an institution, but have been unable to collect the award from the institution.

7. You sought legal counsel that resulted in the cancellation of one or more of your student loans and have an invoice for services rendered and evidence of the cancellation of the student loan or loans.

To qualify for STRF reimbursement, the application must be received within four (4) years from the date of the action or event that made the student eligible for recovery from STRF.

A student whose loan is revived by a loan holder or debt collector after a period of non-collection may, at any time, file a written application for recovery from STRF for the debt that would have otherwise been eligible for recovery. If it has been more than four (4) years since the action or event that made the student eligible, the student must have filed a written application for recovery within the original four (4) year period, unless the period has been extended by another act of law.

However, no claim can be paid to any student without a social security number or a taxpayer identification number.

## NOTICE CONCERNING TRANSFERABILITY OF CREDITS AND CREDENTIALS EARNED AT OUR INSTITUTION

The transferability of credits you earn at CMU is at the complete discretion of an institution to which you may seek to transfer. Acceptance of the degree and diploma you earn in the INI Pittsburgh - Silicon Valley MSIT-IS, MSIT-IS Applied, MSIT-IS Advanced, MSIT-IS Applied Advanced, MSMITE, MSMITE-Applied, MSMITE-Advanced, and MSMITE-Applied Advanced programs is also at the complete discretion of the institution to which you may seek to transfer. If the units or degree, or diploma that you earn at this institution are not accepted at the institution to which you seek to transfer, you may be required to repeat some or all of your coursework at that institution. For this reason, you should make certain that your attendance at this institution will meet your educational goals. This may include contacting an institution to which you may seek to transfer after attending CMU to determine if your units, or degree, or diploma will transfer.

# Carnegie Mellon University

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## Section 1: Consumer Information

The Higher Education Opportunity Act (HEOA) was enacted on August 14, 2008, and reauthorized the Higher Education Act of 1965, as amended (HEA). These federal regulations govern the federal Title IV



financial aid programs and include several student consumer information disclosure requirements as well as reporting requirements for institutions participating in the federal financial aid programs. This reporting ranges from general information about an institution, to its educational programs and services, to its policies, and student outcomes. Carnegie Mellon makes all required consumer information disclosures readily available, including through our website at <https://www.cmu.edu/hub/consumer-information/> and through individual notifications to students when required or upon request.

Additionally, parents and students are welcome to contact Lisa Krieg, Associate Vice President and Director of Enrollment Services, at [krieg@andrew.cmu.edu](mailto:krieg@andrew.cmu.edu), for questions regarding any reporting area or to request a paper copy of the Student Consumer Information document.

## Section 2: Accreditation and Licensing of the Institution

Carnegie Mellon University is accredited through a voluntary, peer-review process coordinated by the Middle States Commission on Higher Education (MSCHE or Middle States). The aim of the accreditation process is to ensure current and future students and the public that the university is providing a high-quality educational experience for students.

In the 2017-2018 academic year, a team of external reviewers from peer universities visited CMU to evaluate the university's educational and administrative activities. In preparation for that visit, CMU conducted a formal Self-Study (see <https://www.cmu.edu/middlestates/2018-self-study/index.html>) that engaged many faculty and staff from all over the university, in Pittsburgh and around the world. Faculty and staff composing Self-Study Groups (see <https://www.cmu.edu/middlestates/2018-self-study/working-groups.html>) and the peer evaluation team (see <https://www.cmu.edu/middlestates/2018-self-study/peer-evaluation-team.html>) often make suggestions or recommendations for improvement of CMU's activities and operations.

Please visit the pages within this site to learn more about accreditation standards and processes and to view the university's reaccreditation reports.

MSCHE is one of six regional accrediting agencies in the United States, each accrediting institutions of higher education within a specific geographic region. Middle States is recognized by the U.S. Department of Education. This recognition enables MSCHE's member institutions to establish eligibility to participate in federal financial aid programs (e.g., federal loans, grants, and work-study) administered by the U.S. Department of Education. Carnegie Mellon University has been accredited by Middle States since 1921.

The address and telephone number for the Middle States Commission on Higher Education is 3624 Market Street, 2nd Floor West, Philadelphia, PA 19104, (267) 284-5000. To contact MSCHE by email, please use [info@msche.org](mailto:info@msche.org) or Spanish/Español [espanolinfo@msche.org](mailto:espanolinfo@msche.org).

The university's current "Statement of Accreditation Status" can be found at, <https://www.msche.org/institution/0476/>.

Inquiries regarding the University's accreditation status or authorization to operate in any of the above states may be directed to: Associate Vice President/Director of Enrollment Services, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone: 412.268.5399, email: [krieg@andrew.cmu.edu](mailto:krieg@andrew.cmu.edu).

Carnegie Mellon University is licensed to operate in the states listed below. Individuals may contact the relevant agency for more information or information about how to file a complaint.

### **California**

Bureau for Private Postsecondary Education  
P.O. Box 980818  
West Sacramento, CA 95798-0818  
Telephone: 888-370-7589  
Email: [bppe@dca.ca.gov](mailto:bppe@dca.ca.gov)  
Website: [www.bppe.ca.gov](http://www.bppe.ca.gov)

### **New York**

New York State Education Department  
Office of Higher Education  
Room 977 Education Building Annex  
Albany, NY 12234  
Telephone: 518-486-3633  
Email: [hedepcom@nysed.gov](mailto:hedepcom@nysed.gov)  
Website: [www.highered.nysed.gov](http://www.highered.nysed.gov)

### **Pennsylvania**

Pennsylvania Department of Education  
Office of Postsecondary and Higher Education  
333 Market Street, 12th Floor  
Harrisburg, PA 17126-0333  
Telephone: 717-783-8228  
Email: [ra-collunivseminfo@pa.gov](mailto:ra-collunivseminfo@pa.gov)  
Website: [www.education.state.pa.us](http://www.education.state.pa.us)

### **Washington, D.C.**

Office of the State Superintendent of Education  
Government of the District of Columbia  
810 First Street NE 9th Floor  
Washington, DC 20002  
Telephone: 202-727-6436  
Email: [osse@dc.gov](mailto:osse@dc.gov)  
Website: [osse.dc.gov](http://osse.dc.gov)

### Section 3: Distance Education, State Authorization and Reciprocity Agreement (SARA)

The State Authorization Reciprocity Agreement (SARA) is an agreement among member states, districts, and territories in the United States, which establishes national standards for interstate offering of postsecondary distance education courses and programs. It is intended to standardize the process of offering online courses and programs by postsecondary institutions located in states other than the state in which the enrolled student(s) are residing. SARA is overseen by a national council (NC-SARA) and administered by four regional education compacts.

Carnegie Mellon University has been approved by the Commonwealth of Pennsylvania to participate in NC-SARA and was accepted as a SARA institution on May 2, 2017; additionally, Carnegie Mellon secured approval through NC-SARA on May 18, 2017. Carnegie Mellon University is listed as an approved, participating institution on the NC-SARA website (<http://www.nc-sara.org/>). At this time, 49 of the 50 United States are SARA members. California is not a member of SARA; however, Carnegie Mellon is able to offer online education to California residents.

Except where prohibited by applicable law, students who reside outside of the United States generally are not restricted from enrolling in our online programs. Some online programs do require in-person attendance at one of Carnegie Mellon's teaching locations (e.g., Carnegie Mellon's Pittsburgh, Pennsylvania campus) for short portions of the program. Students interested in enrolling in a specific online program are encouraged to contact the person designated by the online program for questions about the program's requirements or enrollment.

### Section 4: Student Complaints & Consumer Information by State

Students should first attempt to handle complaints in consultation with their academic department and the university's Vice Provost for Education at [vpe@andrew.cmu.edu](mailto:vpe@andrew.cmu.edu). Unresolved complaints may be directed to the official complaint agency in the state or U.S. territory in which your state (or U.S. territory) is located. Through the university's participation in the State Authorization Reciprocity Agreement (SARA), you may access contact information for your state agency and instructions for filing complaints in your state using the SARA State Authorization Guide at <https://nc-sara.org/guide/state-authorization-guide>. If your state's complaint process is inadequate, complaints may be directed to the official complaint agency in the state or U.S. territory in which your CMU campus, additional location or other instructional site is

### Section 5: Professional Licensure Disclosures at the State Level

In accordance with Title 34 Code of Federal Regulations Part 668.43(a)(5)(v) regarding information educational institutions must make readily available to enrolled and prospective students, Carnegie Mellon is providing the following professional licensure/certification disclosures:

## School of Architecture

The Bachelor of Architecture (B.Arch) and the Master of Architecture (M.Arch) degree programs are National Architecture Accrediting Board (NAAB)-accredited degree programs and meet the *educational requirements* for architectural licensure in all US States and the District of Columbia. Since each state has additional requirements for architectural licensure and those requirements vary among the states, students are advised to review the requirements for architectural licensure of the state in which they intend to obtain their license. The National Council of Architectural Registration Boards (NCARB) website at <https://www.ncarb.org/> and individual state architectural licensing board websites are good resources for researching additional architectural licensure requirements by state.

## School of Music, Teacher Education Certification

Carnegie Mellon has determined that the Carnegie Mellon K-12 Music Education Certification program meets the *educational requirements* for educator licensure for instrumental, vocal, and general music (K-12) in the public schools of Pennsylvania, but has not determined whether it meets the educational requirements for educator licensure in other states or the District of Columbia. Students should also be aware that each state also has additional educator licensure requirements and those requirements vary among the states. Students are advised to review the requirements for educator licensure of the state in which they intend to obtain their license prior to starting the academic program. Individual state educator licensing board websites are good resources for researching additional educator licensure requirements by state.

Pennsylvania also participates as a reciprocating state (see <https://www.ecs.org/teacher-license-reciprocity-state-profiles/>) which allows for educators holding an educator's license in one state to earn a license in another state, subject to meeting specific state specific requirements of the other state. Information about educator licensure in Pennsylvania may be found on the PA Department of Education Website at <https://www.education.pa.gov/Educators/Certification/Pages/default.aspx>.

## College of Engineering, Undergraduate Degree Programs

Carnegie Mellon's engineering programs (Mechanical Engineering, Civil and Environmental Engineering, Chemical Engineering, Materials Science and Engineering, and Electrical and Computer Engineering) are accredited by the Engineering Accreditation Commission of ABET (see <https://www.abet.org/>). In order to obtain professional engineer licensure in any state, students must graduate from an ABET-accredited program and meet testing and/or work experience requirements of the state in which they intend to obtain their license. Students are advised to review the requirements for professional engineer licensure of the state in which they intend to obtain their license. Information about professional engineer licensure in Pennsylvania may be found on the PA Department of State website at <https://www.dos.pa.gov/ProfessionalLicensing/BoardsCommissions/EngineersLandSurveyorsandGeologists/Pages/Engineer-Guide.aspx>.

The National Society of Professional Engineers website at <https://www.nspe.org/resources/licensure/licensing-boards> and individual state professional engineer licensing board websites are good resources for researching additional professional engineer licensure requirements by state.

## Section 6: Educational Programs

### [Undergraduate & Graduate Programs](#)

Carnegie Mellon offers dozens of programs including undergraduate and graduate offerings. A full list of our Schools and Colleges can be found here, <https://www.cmu.edu/academics/index.html>.

Carnegie Mellon offers a broad range of academic programs that are carefully designed, regularly assessed, and iteratively improved by the faculty in the responsible academic unit(s). Our students' educational experiences are aligned with the University's mission and goals and support our core values as well as our commitment to excellence. We strive to offer an inclusive educational environment where students are supported to grow and thrive while preparing for their professional and personal post-graduate pursuits. The Vice Provost for Education has the responsibility to coordinate efforts, in partnership with the academic deans and associate deans, to assure processes for the development, review, and continuous improvement of all academic programs are in place and regularly conducted at the department, college and university levels. The Vice Provost for Education may be contacted at: [vpe@andrew.cmu.edu](mailto:vpe@andrew.cmu.edu).

In addition to the link above, please visit our specific undergraduate and graduate websites:

Undergraduate Programs, <https://www.cmu.edu/admission/majors-programs>

Graduate Programs, <https://www.cmu.edu/graduate/academics/guide-to-graduate-degrees-and-programs/index.html>

## Section 7: Study Abroad

A student's enrollment in a program of study abroad approved for credit by Carnegie Mellon may be considered enrollment at CMU for purpose of applying for assistance under Title IV of the Higher Education Act (HEA) as amended. For more information about study abroad and Coronavirus FAQs, please visit our website, <https://www.cmu.edu/oie/news-and-events/archives/2020-2021/covid/sab-and-coronavirus-faq.html>.

## Section 8: CMU Faculty and Instructional Facilities

Information about faculty and instructional facilities may be found on individual college/school websites via our website, <https://www.cmu.edu/academics/>.

## Section 9: Articulation Agreements

Cross-College and University Registration PCHE (Pittsburgh Council on Higher Education) Guidelines: Full-time Carnegie Mellon students may take courses for credit through the [Pittsburgh Council on Higher Education \(PCHE\)](#). This county-wide consortium of ten accredited member institutions permits the flow of students between institutions based on established protocols and agreements. Questions about Carnegie Mellon University's participation in PCHE may be directed to the University Registrar's Office at [uro-pche@andrew.cmu.edu](mailto:uro-pche@andrew.cmu.edu).

## Section 10: Written Arrangements

The Written Arrangements document on <https://www.cmu.edu/hub/consumer-information/docs/written-arrangement.pdf> provides information regarding written arrangements between Carnegie Mellon University (CMU) and any institution(s) that provides a portion of a CMU degree program to students enrolled at CMU. CMU enters into such agreements to enrich the educational experiences offered to its students.

## Section 11: Student Location Determination

Under the code of federal regulations (CFR) 600.9(c)(2)(iii) regarding state authorization requirements, an educational institution must make a determination regarding the state in which a student is located at the time of the student's initial enrollment in an educational program and, if applicable, upon formal receipt of information from the student, in accordance with the institution's procedures, that the student's location has changed to another state. Students are expected to review and update their off-campus residence and their permanent address in Student Information Online (SIO) at the beginning of each academic year and when they change their local and/or permanent addresses. For purposes of state authorization requirements, student location will be determined based on information in the Carnegie Mellon Student Information System (S3) in the following order:

1. Student's academic program code and;
2. Student's campus address, or;
3. Student's off-campus residence (if #1 and #2 cannot ascertain location) or;
4. Student's permanent address (if #1, #2, and #3 cannot ascertain location).

## Section 12: Computing Services

Information about Computing Services provides technology services as part of the Division of Operations. The Computing Services central IT department provides services that have strategic impact on university goals and may be accessed on our website, <https://www.cmu.edu/computing/>.

### Carnegie Mellon Computing Policy

Carnegie Mellon computing and related policies are available on our website: <https://www.cmu.edu/policies/information-technology/computing.html>

## Section 13: Information Security Office (ISO)

The Information Security Office is responsible for coordinating compliance with state, federal and international laws and regulations dealing with the security of Carnegie Mellon's information resources. This includes partnering with the Office of General Counsel and impacted business units to implement appropriate policies, procedures and controls to maintain compliance with legal requirements. More information is available on the ISO website, <https://www.cmu.edu/iso/compliance/index.html>.

## Section 14: Copyright

### Digital Copyright and DMCA

Carnegie Mellon University takes copyright violation seriously. Besides raising awareness about copyright law, it takes appropriate action in support of enforcement as required by policy and law. United States [copyright law](https://www.copyright.gov/) (see <https://www.copyright.gov/>) "protects the original works of authorship fixed in any tangible medium of expression, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device".

### Fair Use Policy

The University's Fair Use Policy states that all members of the University must comply with US copyright law and it explains the fair use standards for using and duplicating copyrighted material. In addition, the policy prohibits the duplication of software for multiple uses, meeting the Digital Millennium Copyright Act (DMCA) (see <https://www.copyright.gov/legislation/dmca.pdf>) requirements. The DMCA criminalizes the development or use of software that enables users to access material that is copyright protected. Furthermore, the Carnegie Mellon University Computing Policy (see <https://www.cmu.edu/policies/information-technology/computing.html>) prohibits the distribution of copyright protected material via the University network or computer systems, unless the copyright owner grants permission.

### Peer to Peer File Sharing

The Higher Education Opportunity Act of 2008 (Public Law 110-315) Section 488, requires institutions of higher education to annually inform students that "unauthorized distribution of copyrighted material, including unauthorized peer-to-peer file sharing,

may subject the students to civil and criminal liabilities". Carnegie Mellon University does this by publication of a news article on Computing Services' website or via mass mail communication each semester. The law goes on to require institutions "to provide a summary of penalties for violation of Federal copyright laws, including disciplinary actions that are taken against students who engage in unauthorized distribution of copyrighted materials using the institution's information system." Copyright protected materials can include, but are not necessarily limited to:

- Music
- Movies or other videos
- Literary works
- Software
- Digital images or libraries

## Penalties and Legal Actions

A user in violation of copyright law may face the following penalties:

- Suspension from the university network as described under The University Processing of a DMCA Notice.
- Prosecution in criminal court or a civil lawsuit seeking damages. Civil liability for copyright infringement can be as high as \$150,000 per instance of infringement in addition to legal fees. Criminal penalties for a first offense may be as high as five years in jail and a fine of \$500,000.
- Disciplinary action taken by the Human Resources, the Office of General Counsel, or the Office of Community Standards and Integrity depending on the specific affiliation of the alleged infringer.

## Additional Information

Additional Information may be found on the following CMU web pages:

<https://library.cmu.edu/services/copyright>

<https://www.cmu.edu/c-cm/>

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

## Section 15: Student Activities

### Student Affairs

In depth information about CMU Student Affairs, including student activities and organizations, service and civic engagement, student government, diversity and inclusion, and how to get involved on campus is available on the CMU website, <https://www.cmu.edu/student-affairs/get-involved/index.html>.



## SLICE

The office of Student Leadership, Involvement and Civic Engagement (SLICE) website at <https://www.cmu.edu/student-affairs/slice/index.html> provides opportunities where undergraduate and graduate students can explore, connect and engage with one another to create a set of experiences that match their unique interests and talents.

## The Center for Diversity and Inclusion

Diversity and inclusion have a singular place among the values of Carnegie Mellon University.

The Center for Student Diversity and Inclusion (CSDI) 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.

More information is available on the CMU website at <https://www.cmu.edu/student-diversity/>.

## Section 16: Cost of Attending the University

Information about tuition and fees as well as estimated costs for books, course materials, supplies, and equipment; housing and food; transportation; and personal/miscellaneous expenses are available on the Student Financial Services' website at <https://www.cmu.edu/sfs/tuition/index.html>.

## Section 17: Net Price Calculator

The Net Price Calculator is a tool that is intended for U.S. citizens, eligible non-citizens and permanent residents who plan on pursuing a full-time undergraduate degree but haven't yet applied to the university. This tool is a great way to start a conversation with your family about affordability as you conduct your college search. Carnegie Mellon offers the Net Price Calculator in partnership with the College Board to enable prospective students and their families to estimate financial aid eligibility. Before using the calculator, watch our Net Price Calculator tutorial video below for helpful tips. The video as well as other helpful information, are available on our website, <https://www.cmu.edu/admission/aid-affordability/net-price-calculator>.

## Section 18: College Navigator

The College Navigator website is a free consumer information tool designed to help students, parents, and others get information about thousands of U.S. postsecondary institutions--including Carnegie Mellon University--in the Department of Education's National Center for Education Statistics (NCES). College Navigator includes information on graduation and retention rates, academic programs, costs, financial aid, student loan defaults, etc. The College Navigator website is <https://nces.ed.gov/collegenavigator/>.

## Section 19: Facilities & Services for Disabled Students

The Office of Disability Resources provides responsive and reasonable accommodations to students who self-identify as having a disability, including physical, sensory, cognitive and emotional disabilities. Students who want to learn more about the services and accommodations provided by the Office of Disability Resources, may visit <https://www.cmu.edu/disability-resources/students/>. Students may discuss accommodation needs by emailing [access@andrew.cmu.edu](mailto:access@andrew.cmu.edu) or calling 412-268-6121 to set up an appointment.

Students are also welcome to discuss concerns about support for disabilities with members of the admission staff, housing office and/or health/psychological services. Upon enrollment, students with disabilities should contact the Office of Disability Resources to discuss their needs and to develop a Student Individual Accommodation Plan. Accommodations are made with the intent to maintain the academic integrity of each course and the academic program as a whole, while also meeting assessed needs.

## Section 20: Student Privacy & FERPA

One of the most significant changes a parent or guardian experiences in sending a student to college is the difference in privacy standards for educational records. Carnegie Mellon values the student's right to privacy. The university adheres to a federal law called the Family Educational Rights and Privacy Act (also called FERPA or the Buckley Amendment) that sets privacy standards for student educational records and requires institutions to publish a compliance statement, including a statement of related institutional policies. For more detailed information, view the student privacy section of our website at <https://www.cmu.edu/hub/privacy/>

## Section 21: Student Information and Outcomes

### The Office of Institutional Analysis and Research (IRandA)

The Office of Institutional Analysis operates under the leadership of the Office of the Vice Provost for Institutional Effectiveness and Planning (see <https://www.cmu.edu/iep-office/index.html>) provides the CMU community with official information for use in external reporting and access to specific university datasets for internal analysis. More

information about IRandA is available on our website,  
<https://www.cmu.edu/ira/index.html>.

### Retention and Graduation Rates

Retention and graduation rates are available on the CMU website,  
[https://www.cmu.edu/ira/degrees-granted/graduation-and-retention-rates-by-cohort\\_11.4.2021.pdf](https://www.cmu.edu/ira/degrees-granted/graduation-and-retention-rates-by-cohort_11.4.2021.pdf) (scroll to bottom).

### Enrollment Counts

CMU Enrollment Counts are available on the CMU website,  
<https://www.cmu.edu/ira/Enrollment/index.html>.

### Integrated Postsecondary Education Data System (IPEDS)

IPEDS gathers information required under the Higher Education Act of 1965 as amended from colleges and institutions who participate in the federal student financial aid programs. This information includes

Information for Carnegie Mellon is available on the IPEDS website:

Category	Website
General Information	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#general">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#general</a>
Tuition, Fees & Estimated Student Expenses	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#expenses">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#expenses</a>
Financial Aid	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#finaid">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#finaid</a>
Net Price	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#netprc">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#netprc</a>
Enrollment	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#enrolmt">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#enrolmt</a>
Admissions	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#admsns">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#admsns</a>
Retention & Graduation Rates	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#retgrad">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#retgrad</a>

Outcome Measures	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#outcome">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#outcome</a>
Programs/Majors	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#programs">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#programs</a>
Service Members & Veterans	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#service">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#service</a>
Varsity Athletic Teams	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#sports">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#sports</a>
Accreditation	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#accred">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#accred</a>
Campus Security and Safety	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#crime">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#crime</a>
Cohort Default Rates	<a href="https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#fedloans">https://nces.ed.gov/collegenavigator/?q=Carnegie+Mellon&amp;s=all&amp;id=211440#fedloans</a>

### Common Data Set

The most recent information about Carnegie Mellon’s common data set is available through our website, [https://www.cmu.edu/ira/CDS/cds\\_2122.html](https://www.cmu.edu/ira/CDS/cds_2122.html). Common data set includes:

[General Information](#)

[Enrollment and Persistence \(.pdf\)](#)

[First-Time, First-Year \(Freshman\) Admission \(.pdf\)](#)

[Transfer Admission \(.pdf\)](#)

[Academic Offerings and Policies \(.pdf\)](#)

[Student Life \(.pdf\)](#)

[Annual Expenses \(.pdf\)](#)

[Financial Aid \(.pdf\)](#)

[Instructional Faculty and Class Size \(.pdf\)](#)

[Degrees Conferred \(.pdf\)](#)

## Section 22: Career & Job Placement

### Career & Job Placement Service

The Career and Professional Development Center (CPDC) is Carnegie Mellon University’s centralized career services center providing a comprehensive range of services, programs and materials focusing on career exploration and decision making, professional development, experiential learning and employment assistance to meet

today's evolving workplace and student goals of finding satisfying work! Information about the resources provided by CPDC is available on the CMU website, <https://www.cmu.edu/career/resource-library/index.html>.

### First Destination Career Outcomes

The Career and Professional Development Center (CPDC) surveys all students graduating from Carnegie Mellon University (excluding Heinz College and Tepper graduate students) in order to obtain information on their career plans after graduation, also known as **First Destination** Career Outcomes. Common points of data gathered from graduates include hiring companies, graduate and professional schools, starting salaries, and geographic locations. More information may be found on the CMU website, <https://www.cmu.edu/career/outcomes/post-grad-dashboard.html>.

## Section 23: Health and Safety

### Annual Security and Fire Safety Report

A copy of the most recent CMU Annual Security and Fire Safety Report is available on the CMU website at <https://www.cmu.edu/police/reporting-policy-training/2022asr.pdf>. Please see page 14 for Emergency Response and Evacuation Procedures. A printed copy of the report may be requested by contacting University Police at 412-268-6232 or [campuspd@andrew.cmu.edu](mailto:campuspd@andrew.cmu.edu).

Historical annual security and fire safety reports (Carnegie Mellon University Police Department Annual Reports) are also available online at <http://www.cmu.edu/police/annualreports/>.

### Alcohol and Drug Policy (Faculty, Staff, Students)

The University's Alcohol and Drug Policy, which includes information about health risks associated with drug and alcohol as well as resources for individuals who are experiencing substance use difficulties, is published on <https://www.cmu.edu/student-affairs/pdfs/2022-2023-alcohol-and-drug-guide-cmu.pdf>. The policy focuses on compliance with laws in the United States and the Commonwealth of Pennsylvania. However, as a global university with operations throughout the world, Carnegie Mellon is equally committed to compliance with all applicable alcohol and drug laws in all jurisdictions in which the university operates.

### Vaccination Policies

The university values personal and community health and recognizes the critical role that each individual plays in contributing to community health by participating in personal health care practices that prevent the spread of contagious diseases.

Participation in a vaccination program represents one such highly effective personal health practice. CMU Prematriculation Immunization Policy is published on <http://www.cmu.edu/policies/student-and-student-life/immunizations.html>.

COVID vaccine requirements change frequently. The most up-to-date information on COVID vaccination requirements is published on <https://www.cmu.edu/coronavirus/health-and-wellness/vaccines.html> and <https://www.cmu.edu/coronavirus/>. Immunization requirements for incoming students are published on <https://www.cmu.edu/health-services/new-students/>.

### Emergency Response Plan

The purpose of the Emergency Response Plan is to establish an organizational structure and procedures for response to major emergencies. It assigns the roles and responsibilities for the implementation of the plan during an emergency following the incident command system model. This plan has been prepared to address all types of emergencies affecting the Carnegie Mellon community in a coordinated and systematic manner. Carnegie Mellon University is committed to supporting the welfare of its students, faculty, staff and visitors. This plan is designed to maximize human safety and preservation of property, minimize danger, restore normal operations of the university, and assure responsive communication to all appropriate parties. See <https://www.cmu.edu/student-affairs/theword/community-policies/emergency-response-plan.html#scope> for more information.

## Section 24: Equity in Athletics

The Equity in Athletics Disclosure Act requires co-educational institutions of postsecondary education that participate in a Title IV, federal student financial assistance program, and have an intercollegiate athletic program, to prepare an annual report to the Department of Education on athletic participation, staffing, and revenues and expenses, by men's and women's teams.

### Statute and Regulations

The Higher Education Opportunity Act (Public Law 110-315) (HEOA) was enacted on August 14, 2008. This law reauthorizes and extends the Higher Education Act of 1965, as amended. The Higher Education Act (HEA) provides the statutory authority for most of the programs and activities administered or conducted by the Office of Postsecondary Education, including requirements related to equity in athletics disclosure.

### Annual Report

This information is available each November 1 at the U.S. Department of Education's website <https://ope.ed.gov/athletics/#>. To view the data, please select "Get data for one institution" (usually located on the right side of the page), enter "Carnegie Mellon University" in the "Name of Institution" field, and select the "Search" button at the bottom of the page. Select "Carnegie Mellon University" to view the institution's data.

A printed copy of the university's most recent report is available upon request by calling

the Department of Athletics, Physical Education and Recreation at 412-268-8054 or by sending an email to [jcentor@andrew.cmu.edu](mailto:jcentor@andrew.cmu.edu).

## Section 25: Textbook Information

### Bookstore

Required and recommended textbooks and supplemental course materials are available to purchase from the University Stores. Students can view and purchase their course materials by visiting the online bookstore at [https://bncvirtual.com/vb\\_home.php?FVCUSNO=37983&url=CarnegieMellon.htm](https://bncvirtual.com/vb_home.php?FVCUSNO=37983&url=CarnegieMellon.htm). To get started, students can visit the Textbooks FAQ at <https://bookstore.web.cmu.edu/SiteText?id=73594> for instructions on using the online bookstore site. The University Stores staff is happy to help with questions and can be reached by email at [books@andrew.cmu.edu](mailto:books@andrew.cmu.edu), by phone at 412-268-5591, or in-store.

### Textbook Provisions (Higher Education Opportunity Act 2008)

The Higher Education Opportunities Act (HEOA) of 2008 (see <https://www.congress.gov/bill/110th-congress/house-bill/4137>) outlines several provisions for publishers and higher education institutions related to textbooks and other course materials. According to the law, the language addressing textbooks is meant to “ensure that students have access to affordable course materials by decreasing costs to students and enhancing transparency and disclosure with respect to the selection, purchase, sale, and use of course materials (Sec. 133 a.)”

Textbook consumer information requirements are provided on <https://www.cmu.edu/es/course-and-classroom/textbooks.html>.

## Section 26: Voter Registration

### Pennsylvania

- **Pennsylvania Voter Registration** (see <https://www.pavoterservices.pa.gov/Pages/VoterRegistrationApplication.aspx>)
- **Find Your PA Polling Place** (see <https://www.pavoterservices.pa.gov/pages/pollingplaceinfo.aspx>)

### California

- **California Online Voter Registration** (see <https://registertovote.ca.gov/>)
- **Find Your CA Polling Place** (see <https://www.sos.ca.gov/elections/polling-place>)

### New York

- **New York Online Voter Registration** (see <https://www.elections.ny.gov/VotingRegister.html>)

- **Find Your NY Polling Place** (see <https://voterlookup.elections.ny.gov/>)

#### District of Columbia

- **Washington DC Voter Registration** (see <https://vote.gov/register/dc/>)
- **Find Your DC Polling Place** (see <https://www.dcboe.org/Voters/Where-to-Vote/Find-Out-Where-to-Vote> )

## Section 27: Tuition Adjustments/Withdrawals from the University

### Tuition Adjustments

If a student takes a leave of absence or withdraws within the first ten class days (fifteen calendar days) of a semester, tuition and fees are fully refundable, as indicated on the tuition adjustment schedule (see <https://www.cmu.edu/sfs/tuition/adjustment/index.html>). Students who take a leave of absence or withdraw from the university before completing 60% of the semester will be assessed tuition based on the number of days completed within the semester. This includes calendar days, class and non-class days, from the first day of classes to the last day of final exams. Breaks that last five days or longer, including the preceding and subsequent weekends, are not counted. Thanksgiving and Spring Break are not counted. There is no tuition adjustment after 60% of the semester is completed.

### Official Date of Leave of Absence/Withdrawal

For students who notify the university of their intent to take a leave of absence or withdraw, the official date is the earliest of the:

- Date the student began the withdrawal or leave of absence process;
- Date the student notified his or her home department;
- Date the student notified the associate dean of his or her college; or
- Date the student notified the dean of students.

For students who do not notify the University of their intent to take a leave of absence or withdraw, the official date is:

- The midpoint of the semester;
- The last date the student attended an academic-related activity, such as an exam, tutorial or study group, or the last day a student turned in a class assignment.

Other important Information about tuition adjustments & withdrawals from the University as well as tuition adjustment schedules may be found on the following website: <https://www.cmu.edu/sfs/tuition/adjustment/index.html>.



### Tepper Refund Policy Exception:

Tepper School graduate tuition is refunded 100% to students who withdraw by the course drop deadline. After the course drop deadline, tuition is non-refundable and remains charged at 100%. This tuition refund policy is separate from the calculation used to cancel and return federal loan funds when students withdraw.

## Section 28: Transfer of Credit Policy

The University's Transfer of Credit Policy is published on <https://www.cmu.edu/policies/student-and-student-life/transfer-credit-evaluation-and-assignment.html>.

Transfer credit is only accepted for courses taken at accredited institutions from which an official transcript is received. Transfer credits must meet the academic requirements of the program in which the student is enrolled and may not exceed the maximum number of transferrable units, per the program's academic requirements. Courses accepted for credit must have been taken for a letter grade and students must have earned a C (2.00) or above in the transferred course, however, transfer credits will only record the units/credits earned, **not** the grade, unless the course is taken at one of the [Cross-Registration \(PCHE\)](#) affiliates. Carnegie Mellon does not award course credit for prior experience such as service in the armed forces, paid or unpaid employment, or other "real world" learning experiences or demonstrated competency. See additional information, <https://www.cmu.edu/hub/registrar/registration/transfer-transcripts.html>

Departmental transfer credit processes may vary. Please review information on your college or school of interest websites through <https://www.cmu.edu/academics>.

## Section 29: Contact Information for Assistance in Obtaining Institutional or Financial Aid Information

### Current Undergraduate Students:

Student Financial Aid Office

*Mailing Address:* Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213

*Telephone:* 412-268-8186

*Fax:* 412-268-8084

*Email:* [thehub@andrew.cmu.edu](mailto:thehub@andrew.cmu.edu)

*Website:* <https://www.cmu.edu/sfs/financial-aid/undergraduate/index.html>

### Prospective Undergraduate Students:

Student Financial Aid Office

*Mailing Address:* Office of Undergraduate Admission, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213

*Telephone:* 412-268-2082

*Fax:* 412-268-7838

*Email:* [admission@andrew.cmu.edu](mailto:admission@andrew.cmu.edu)

Website: <https://www.cmu.edu/admission/aid-affordability>

### Current and Prospective Graduate Students:

Student Financial Aid Office

*Mailing Address:* Carnegie Mellon University, Student Financial Aid Office, 5000 Forbes Avenue, Pittsburgh, PA 15213

*Telephone:* 412-268-8186

*Fax:* 412-268-8084

*Email:* [thehub@andrew.cmu.edu](mailto:thehub@andrew.cmu.edu)

*Website:* <https://www.cmu.edu/sfs/financial-aid/graduate/index.html>

## Section 30: Types of Financial Aid

There are various types of financial aid available for Carnegie Mellon students, including federal, state, and institutional. Understanding financial aid eligibility and the financial aid award letter will help students and families navigate financing decisions that need to be made while attending Carnegie Mellon. Visit our website at <https://www.cmu.edu/sfs/financial-aid/your-award/index.html> for help in understanding your financial aid awards.

### Undergraduate Grants

Grant assistance is awarded on the basis of demonstrated financial need. Students do not need to work for or repay grants. Grants are commonly referred to as "gift aid."

More information may be found on our website, <https://www.cmu.edu/sfs/financial-aid/types/scholarships-and-grants/grants.html>.

### Federal Pell Grant

A **Federal Pell Grant** is awarded by the federal government to students with high financial need. Students who are eligible for a Federal Pell Grant after their aid package is determined, will notice a dollar-for-dollar reduction to their Carnegie Mellon need-based grant funds. More information can be found on the Department of Education website, <https://studentaid.gov/understand-aid/types/grants/pell>.

### Federal Supplemental Educational Opportunity Grant

A **Federal Supplemental Educational Opportunity Grant (FSEOG)** is for undergraduate students who have exceptional financial need. Carnegie Mellon usually awards these grants to students who receive a Federal Pell Grant. If there is a change in Federal SEOG eligibility, a dollar-for-dollar adjustment to the student's Carnegie Mellon need-based grant funds will occur. More information can be found on the Department of Education website, <https://studentaid.gov/understand-aid/types/grants/fseog>.

## State Grants

Some states, including the state of Pennsylvania, provide educational grants to their residents who demonstrate need. View a list of participating states on <https://www.cmu.edu/sfs/financial-aid/types/scholarships-and-grants/state-grants.pdf>.

Upon notification from any state agency of a student's eligibility, Carnegie Mellon will modify the student's financial aid package to reduce Carnegie Mellon need-based grant funds dollar-for-dollar.

See the National Association of Student Financial Aid Administrators (NASFAA) website, [https://www.nasfaa.org/State\\_Financial\\_Aid\\_Programs](https://www.nasfaa.org/State_Financial_Aid_Programs), for more information on state grants.

## Graduate Scholarships, Grants, Stipends, Assistantships, Fellowships

Funding for graduate students may include scholarships, grants, stipends, assistantships, and fellowships. For information about these awards, contact the academic department you plan to attend. The department will be able to discuss the amounts and requirements for each type of funding.

## Student Employment

There are three types of hourly student employment options available:

- Federal Work-Study (FWS): Funding = 40% Federal / 60% Employer
- Federal Community Service Work-Study (FCS): Funding = 70% Federal / 30% Employer
- **Non-Work-Study (NWS):** Funding = 100% Employer

Federal Work-Study (FWS) is a need-based self-help award. If a student has been awarded FWS, the FWS award is the total that can be earned during the academic year as a work-study student. It is important to note that funds earned in the Federal Work-Study Program (including the Federal Community Service Work Study Program) are not credited to the student's account.

Students who do not have financial need or who have not applied for financial aid may find non-work-study job opportunities on campus.

More information about student employment is available on the following website:

- *FAQs:* <https://www.cmu.edu/sfs/student-employment/faq.html>
- *On Campus Employment for Students:* <https://www.cmu.edu/career/students-and-alumni/on-campus-employment/index.html>
- *Student Hourly Positions:* <https://www.cmu.edu/sfs/student-employment/hourly-positions.html>

## Loans

Several types of loans are available to students who meet eligibility requirements. Information about federal, institutional, and private loans is available on <https://www.cmu.edu/sfs/financial-aid/types/index.html>. The site includes detailed information about loan terms and how to apply.

Note that the following disclosure is required for Carnegie Mellon students enrolled in California: If a student obtains a loan to pay for an educational program, the student will have the responsibility to repay the full amount of the loan plus interest, less the amount of any refund (amount returned to the loan program, if any). If the student has received federal student financial aid funds, the student is entitled to a refund of the moneys not paid from federal student financial aid program funds. Learn more about student account refunds on our website, <https://www.cmu.edu/sfs/billing/refunds.html>.

### Federal Direct Student Loans

Federal Direct Student Loans are the most widely-used loan for college students. Eligibility is determined by completing the FAFSA. Types of Federal Direct Loans include Federal Direct subsidized, unsubsidized, and Plus (for parents or graduate students). Detailed information about Federal Direct Student Loans is available on our website, <https://www.cmu.edu/sfs/financial-aid/types/federal-loans/direct/index.html>.

### Federal Loan Repayment

Federal student loans offer flexible repayment plans, loan consolidation, forgiveness programs, and more. View more information on [loan repayment options](https://studentaid.gov/) on <https://studentaid.gov/>, where you can find comprehensive information about your federal loans, including your loan amounts and balances, your loan servicer and contact information, your interest rates, your current loan status, guidance on loan repayment options, etc.

Repayment plans determine your monthly student loan payment amount, how many years it will take to pay back what you borrowed, and how much interest you will pay over the life of your loan. Keep in mind, the longer it takes to pay back your loan, the more interest will accrue and increase the overall cost of your loan. *Note that any private loans you have borrowed do not appear on studentaid.gov.*

### Federal Student Loan Entrance Counseling\*

All first-time Federal Direct Loan borrowers are required complete an online entrance counseling session after receipt of the financial aid award letter. The session provides information about borrower rights and responsibilities. CMU is notified when a student has completed entrance counseling. Students who have completed a federal entrance counseling session while at CMU, do not have to complete another one. You may view instructions on <https://www.cmu.edu/sfs/financial-aid/types/federal-loans/direct/mpn-entrance-counseling.html>.

## Student Rights and Responsibilities/Master Promissory Note (MPN)\*

All first-time Direct Loan borrowers are required to complete a Master Promissory Note (MPN). The MPN is a legal document in which you promise to repay your loan(s) and any accrued interest and fees to the U.S. Department of Education. It also explains the terms and conditions of your loan(s) and sample loan repayments. All student borrowers must read and understand their rights and responsibilities when choosing to borrow a federal loan. The MPN is available on the U.S. Department of Education website, <https://studentaid.gov/mpn/>.

\*Loan funds will not disburse until both Entrance Counseling and the MPN are completed.

## Federal Loan Exit Counseling

Upon ceasing enrollment and prior to beginning loan repayment federal loan borrowers are required to complete an online exit counseling session. Federal loan exit counseling provides important information you need to prepare to repay your federal student loans. Topics include understanding your loans, plans for repayment, avoiding default, and making finances a priority. Exit counseling may be completed on the U.S. Department of Education website, <https://studentaid.gov/exit-counseling/>. See also the *Direct Loan Exit Counseling Guide* on <https://studentaid.gov/sites/default/files/exit-counseling.pdf>.

## Yeknik Student Loan

The Yeknik Student Loan Fund is endowed by Wayne M. and Nancy Yeknik. It is an institutional loan awarded to students who are sophomores, juniors, and seniors, have a cumulative 3.0 QPA, and have financial need. More information is available on our website, <https://www.cmu.edu/sfs/financial-aid/types/yeknik.html>.

## Private Education Loans

Private loans are a borrowing option for some students. Carnegie Mellon recommends that you review your federal, state, and institutional grants and loan options to compare borrower benefits and loan terms before opting to borrow a private education loan because the terms and conditions of federal student loans may be more favorable than those of private education loans.

Carnegie Mellon University does not endorse any lender. Carnegie Mellon uses a loan comparison tool called FastChoice (see, <https://choice.fastproducts.org/FastChoice/home/324200>) that is offered free-of-charge to schools by the Great Lakes Higher Education Corporation. The lenders presented in FastChoice include lenders from whom our students have borrowed over the past two years and who have demonstrated a high level of service or other benefit to our students. This list is updated annually and is not-all inclusive. Students should understand that they may choose any lender they wish (even those not presented in Fast Choice) without penalty or unnecessary delays.

### Private Loan Self-Certification Form

Pursuant to Section 155 of the Higher Education Act of 1965, as amended, (HEA) and to satisfy the requirements of Section 128(e)(3) of the Truth in Lending Act, a lender must obtain a self-certification signed by the applicant before disbursing a private education loan. The school is required on request to provide this form or the required information only for students admitted or enrolled at the school. The Self Certification form is available through your lender and on our website at <https://www.cmu.edu/sfs/docs/private-loan-cert.pdf>. If the information needed to complete the form is not pre-filled on the form, you may access the information on your financial aid award letter from the school or by contacting the Student Financial Aid Office at [student-financial-aid@andrew.cmu.edu](mailto:student-financial-aid@andrew.cmu.edu).

### Lender Relationship Code of Conduct

Carnegie Mellon officials are prohibited from accepting any financial or other benefits in exchange for displaying lenders and loan options in FastChoice. Our lender relationship code of conduct is published on <https://www.cmu.edu/sfs/docs/loans-code-of-conduct.pdf>.

## Section 31: Financial Aid Disbursements

Financial aid (including student loans) is disbursed one semester at a time based on the student's enrollment at the time of each disbursement. The Student Financial Aid Office begins to disburse aid to student accounts approximately 10 days before classes begin for students who have completed the necessary requirements.

### Grants and Scholarships Disbursements

Grants and scholarships are determined by the Student Financial Aid Office and are applied directly to the student account on a semester basis to pay charges for tuition, fees and on-campus room and board (if applicable).

### Federal Loan Disbursements

First-time Federal Direct Loan borrowers are required to sign a Master Promissory Note and complete loan entrance counseling before loan funds are credited to the student account. After these loan requirements are completed (no sooner than 10 days prior to the start of the semester), federal loans are disbursed to the student account. Disbursements are made to the student account in two equal payments (unless the loan is for one semester) - one for each semester covered by the loan. It is very important to understand that before federal student loans disburse, loan proceeds are reduced by the federal origination fee (see, <https://studentaid.gov/understand-aid/types/loans/interest-rates#fees>) Upon disbursement, actual amounts may be viewed by logging into Student Information Online (SIO) on <https://www.cmu.edu/hub/sio/about.html> and selecting "Student Account Activity" from the "Finances" menu.

View loan disbursement dates here: <https://www.cmu.edu/sfs/financial-aid/index.html#disbursement>

### Private Loan Disbursements

Generally, private loan disbursements occur at the beginning of each semester covered by the loan. Students should review their loan disclosures from their lender in order to determine the actual anticipated disbursement dates for private loans. Actual disbursements amounts can be viewed after they occur by logging into Student Information Online (SIO) on <https://www.cmu.edu/hub/sio/about.html> and selecting “Student Account Activity” from the “Finances” menu.

### Federal Work-Study Disbursements

Students who are awarded Federal Work-Study may earn Federal Work-Study funds by working in positions with eligible employers. Wages are paid bi-weekly through the payroll system. **These funds are not disbursed directly to the student account.**

### Outside Scholarships Disbursements

Once the Student Financial Aid Office receives outside scholarship funds, they are credited to the student account and the student is notified if the outside scholarship reduces their eligibility for other financial aid. If the scholarship provider issues the funds by check, the student will be contacted to endorse the check prior to the funds being credited to their student account.

### Financial Aid/Student Account Refunds

When financial aid disburses, it is credited against the student account balance. If there is a credit balance remaining on the student account after all tuition and fees are paid, the student account is reviewed to determine if the student is eligible for a credit balance refund. If eligible, the refund is issued to the student either electronically (if you signed up for electronic refunding) or by paper check. View more information about refunds on our website, including electronic refund steps, on: <https://www.cmu.edu/sfs/billing/refunds.html>.

## Section 32: Satisfactory Academic Progress Policy & Procedural Statement

To be eligible for federal, state, and institutional financial aid, all students are required to maintain Satisfactory Academic Progress toward the completion of a degree. Each university determines its own policy in accordance with federal regulations set forth by the U. S. Department of Education regarding satisfactory progress standards to ensure student success. To maintain Satisfactory Academic Progress at Carnegie Mellon University, students must meet the following minimum standards for both of the qualitative (QPA) and quantitative (completion rate) measures:

<b>Student Type</b>	<b>QPA (Qualitative)</b>	<b>Completion Rate (Quantitative)*</b>
First Year Undergraduate	1.75	80%
Upperclass	2.00	80%
Graduate	3.00	80%

\*To calculate the completion rate, the cumulative number of completed units is divided by the cumulative number of units attempted. Advance Placement credits are excluded from both figures. In addition to the above-mentioned Financial Aid Satisfactory Academic Progress standards, federal regulations require a student to complete their degree within a specified amount of time. The maximum timeframe cannot exceed 150 percent of the time published as needed for completion of the program. Scope: This policy applies to Federal aid including Federal Pell Grants, Federal Supplemental Educational Opportunity Grants, Federal Work-Study, Federal Direct Loans, and Federal Direct PLUS Loan programs; state grant aid; and Carnegie Mellon institutional aid including grants, loans, and scholarships.

Federal regulations can be found at: Federal Student Aid Handbook, Volume 1 Chapter 1 School Determined Requirements 34 CFR 668.16(e) 34 CFR 668.32(f) 34 CFR 668.34

### Evaluation:

Carnegie Mellon evaluates all students for Financial Aid Satisfactory Academic Progress annually, at the end of the spring semester. Students that are included in the review are undergraduates, graduates, both full-time and part-time. Courses that do not count toward a student's degree cannot be used to determine enrollment status for financial aid purposes. Carnegie Mellon will count transfer credit hours that are accepted toward a student's educational program as both attempted hours and completed hours. Advanced Placement Non-Degree and Non-Credit courses are not counted as units passed or attempted. When a course is repeated, all grades will be recorded on the official academic transcript and will be calculated in the student's QPA.

For financial aid eligibility, only one repeat per course is permitted in the determination of enrollment status for courses previously passed. If the student withdraws and is not assigned a W grade, then it will not be counted in the number of units attempted or completed. If the W grade is assigned, the units will be counted in the number of units attempted and will be counted as zero in the number of units completed. If the student has incomplete units, the units will be counted as attempted and will be counted as zero in the number of units completed.

The Financial Aid Satisfactory Academic Progress evaluation is a cumulative review of all semesters, regardless of whether or not the student received financial aid during the academic year. If the minimum requirements are not achieved, the student is ineligible to receive financial aid. In such a case, the student is notified and given an option to appeal their financial aid status. More information about the appeal process can be



found at [www.cmu.edu/sfs/financial-aid/policies/academic-progress.html](http://www.cmu.edu/sfs/financial-aid/policies/academic-progress.html). A financial aid package will not be completed unless an appeal is received, approved and processed accordingly. If by chance a financial aid package is processed and released to the student, it is conditional and subjected to financial aid removal until an appeal is received, approved and processed accordingly. Contact: Questions regarding this policy or its intent should be directed to the Student Financial Aid Office at 412- 268-1353.

## Appeal Process

Carnegie Mellon realizes that extenuating circumstances may contribute to a student's inability to achieve Satisfactory Academic Progress. Once a student receives notification of their Financial Aid Satisfactory Academic Progress status and it is determined that they are not making progress, the student is encouraged to appeal the determination.

A letter of notification will be mailed to the student that will address the requirements for Satisfactory Academic Progress and define the student's specific academic progress to date. This letter will also address the appeal process and provide directions for filing the appeal.

A student may appeal a Financial Aid Satisfactory Academic Progress decision by writing a letter explaining the extenuating circumstances, defining information that prevented them from making academic progress and what has changed in their situation that would allow them to demonstrate satisfactory academic progress at the next evaluation. The next period of evaluation will be defined in the appeal notification and may be the next semester or combination of enrollment periods.

This letter should be attached to the Financial Aid Satisfactory Academic Progress Appeal Form and returned to The HUB, ATTN: Financial Aid Academic Progress. The student will be notified in writing of the appeal decision within two weeks of the receipt of the appeal.

### *Examples of Appeals:*

- Extended illness
- Changes in major
- Difficult transition to first-year in college (academically and socially)
- Recent diagnosis of learning disability
- Recent death of a close family member

If summer courses at Carnegie Mellon will enable the student to meet the minimum academic progress requirements, the student will regain financial aid eligibility. The student should submit an appeal or send an email to [thehub@andrew.cmu.edu](mailto:thehub@andrew.cmu.edu) indicating that they have now achieved Satisfactory Academic Progress due to summer course completion. If the student takes courses at another institution during the summer that will increase the number of units completed,

they will need to forward a copy of the official transcript to their HUB liaison with the copy clearly marked "ATTN: Financial Aid Academic Progress."

If there are missing grades for the spring semester, the student will need to have their instructor update the missing grades. Grades can be checked via Student Information Online (SIO) on our website, <https://www.cmu.edu/hub/sio/about.html>. When all missing grades have been updated, the student should email their HUB liaison to indicate that Satisfactory Academic Progress has been achieved due to the updating of missing grades.

If an appeal is approved for the fall semester only, then the fall semester is considered a probationary semester for financial aid eligibility. To be eligible for financial aid funds for the spring semester, the student is required to achieve a cumulative 2.0 QPA (3.0 for graduate students) and successfully pass a minimum of 80% of the accumulated units attempted/carried. Financial Aid Satisfactory Academic Progress evaluation and reinstatement of spring financial aid occurs shortly after the fall grade submission deadline.

Depending on the nature of the appeal, the appeals committee may require the student to develop an academic plan in consultation with their academic advisor, which may put the student on track to successful program completion. This will be determined on an individual student basis and depend on the length of the student's enrollment, class completion rate and earned grade point average. All subsequent or second appeals will require an academic plan.

If the student is required to develop an academic plan, their progress is reviewed at the end of each payment period according to the requirements specified in the plan. If the student is meeting the requirements of the academic plan, they are eligible to receive financial aid as long as they continue to meet those requirements.

If an appeal is denied, the student should make arrangements to meet with their HUB liaison and an Associate Director of Student Financial Aid to discuss funding options. If an appeal is not received, the student is not eligible to receive financial aid.

### Financial Aid Academic Progress Improvement Plan

Students who are unable to meet the minimum satisfactory academic requirements for Financial Aid Satisfactory Academic Progress may be required to design and submit a [Financial Aid Academic Progress Improvement Plan \(pdf\)](#) (see, <https://www.cmu.edu/sfs/docs/academic-plan.pdf>). The goal of the improvement plan is to ensure the student makes documented steady progress toward meeting our Financial Aid Satisfactory Academic Progress standards and graduates within the university's normal time frame to complete a degree. The need for the plan will be determined on an individual student basis and depend on the length of the student's enrollment, class completion rate and earned grade point average. All subsequent or second appeals will require an academic plan. View more details about the Financial Aid Academic Progress Improvement Plan on our website, <https://www.cmu.edu/sfs/financial-aid/policies/academic-plan.html>.

## Section 33: Federal Title IV Verification Policy and Procedural Statement

### Policy Reason

The U. S. Department of Education requires that Federal Title IV applicants provide documentation to verify the accuracy of the information submitted on the Free Application for Federal Student Aid (FAFSA) each year. Federal regulations include verification as part of the Federal Student Aid (FSA) program requirements, and it is required for applicants for most FSA programs with the exception of students receiving only a parent or graduate PLUS loan or an unsubsidized Stafford loan. Each university is required to have policies for verifying the reported information.

Federal regulations can be found at: Federal Student Aid Handbook Application & Verification Guide Chapter 4: Verification, Updates, and Corrections 34 CFR 668.51-61.

### Policy and Procedural Statement

Federal verification guidelines require that applicants are selected for verification by the Central Processing System (CPS) or by the school. At Carnegie Mellon, federal verification is performed on all applicants selected by the CPS and any application that the university has reason to believe is incorrect or has conflicting documentation.

Under certain circumstances a CPS selected application may be excluded from some or all of the federal verification requirements due to the following unusual circumstances including:

- death of the student,
- not an aid recipient,
- applicant is eligible to receive only unsubsidized student financial assistance,
- applicant verified by another school or post enrollment (the student was selected for verification after ceasing to be enrolled).

With the exception of the death of the student, however, none of these exemptions excuse the university from the requirement to resolve conflicting information.

Federal verification must typically be completed prior to the end of the academic year or before the student ceases enrollment, whichever occurs first. Students, who fail to comply with verification requirements, including submitting documentation within required timelines, will not have Federal Title IV funds disbursed and may have Federal Title IV funds cancelled. Carnegie Mellon considers the student to be the responsible party for providing information and completing the verification process.

Carnegie Mellon identifies the students selected for verification during the financial aid application process by viewing the FAFSA output document called the Institutional Student Information Record (ISIR). A review of the student's financial aid application occurs after ISIR data is received and data entry of required information is completed. The ISIR will provide information about the student and family including a calculated

Expected Family Contribution (EFC), document codes identifying specific information about the applicant data submitted, and written comments. The written messages provide additional information for the applicant to follow. The federal verification message for the student reads: "Your FAFSA has been selected for a review process called verification. Your school has the authority to request copies of certain financial documents from you and your parent(s)." The verification activity will initially compare applicant data for accuracy and completeness and continue to resolve conflicting information. In this process Carnegie Mellon requires verification of the following items:

For all applicants:

- Household size
- Number in college

For non-tax filers:

- Income earned from work

For tax filers:

- Adjusted Gross Income (AGI)
- U.S. income tax paid
- Income earned from work
- Education tax credits (American Opportunity Tax Credit and Lifetime Learning Tax Credit)
- Other untaxed income reported on tax return, for example: untaxed portions of Individual Retirement Account (IRA) distributions, untaxed portions of pensions, IRA deductions and payments, tax-exempt interest income

To complete the verification process acceptable documentation may include IRS Tax Transcripts, IRS Tax Forms (1040, 1040-SR, 1040-NR, and requested tax schedules), W-2's and the CSS/Financial Aid PROFILE. To resolve discrepancies in reported information students may be required to submit additional documentation.

Verification results that require changes to the applicant information and subsequent changes to the student's financial aid package will be made prior to final disbursement of federal funds. For all students eligible for subsidized Title IV aid the university will make appropriate changes to the student information electronically through the Department of Education's CPS to ensure each student has a correct valid ISIR. The student will be notified of this adjustment through a revised financial aid award letter.

If the verification results do not justify aid already disbursed, the student is responsible for repaying all aid for which they are not eligible. Failure to meet the repayment obligation will result in the student being referred by Carnegie Mellon to the U.S. Department of Education.

Verification results that reveal possible fraud or criminal misconduct in connection with the financial aid application or verification processes will result in the matter being referred by Carnegie Mellon to the Office of the Inspector General of the U.S. Department of Education for investigation. In the event that individual circumstances and unusual situations are not addressed or defined through standard verification procedures, additional review is necessary. These cases must be sufficiently documented and may be processed in accordance with regulations as defined in Professional Judgment and Dependency Overrides Statute: HEA Sec.479A(a)(7) and Sec. 480 (d)(7).

### Federal Title IV Funds Disbursements

Carnegie Mellon completes federal verification for selected applicants as a requirement of completing a student's financial aid application. Federal Title IV funds will not be disbursed until federal verification is completed. In some instances the institution can make an interim disbursement of funds if it has no reason to believe that the application information is inaccurate. If the institution makes an interim disbursement, the verification process must be completed prior to the disbursement of any additional funds. In all instances the institution is liable for an interim disbursement if verification identifies an overpayment or the student fails to complete verification.

### Contact

Questions regarding this policy or its intent should be directed to the Student Financial Aid Office at 412- 268-1353.

## Section 34: Return to Title IV Funds Policy and Procedural Statement (effective 7.1.2021)

### Policy Reason

The U. S. Department of Education requires that the university determine the amount of Federal Title IV aid earned by a student who withdraws or fails to complete the period of enrollment. The university *must determine the earned and unearned portions of Title IV aid as of the date the student ceased attendance* based on the amount of time the student has spent in attendance. Unless the student meets one of the exemptions below in items 1 – 4, up through the 60% point in the period of enrollment, a pro rata schedule is used to determine the amount of Title IV funds the student has earned at the time of withdrawal. After the 60% point in the period of enrollment a student has earned 100% of the Title IV funds they were scheduled to receive. For a student who withdraws after the 60% point-in time, there are no unearned funds.

Effective July 1, 2021, there are four ways in which a student enrolled in a program delivered in modules\*\* is exempt from the normal rules for return of Title IV funds (R2T4) mentioned above, and thus is not considered to be a withdrawal. Even though a student may meet one of the exemptions for R2T4, a student's cost of attendance and

financial aid may need to be reduced if the student does not attend all periods of enrollment for which Title IV aid has been determined. The 4 exemptions are:

1. If the student has completed all requirements for graduation within the payment period or period of enrollment;
2. If the student successfully completes Title IV-eligible coursework in one module or a combination of modules that equals 49% or more of the number of countable days\*\* in the payment period or period of enrollment; or
3. If the student successfully completes Title IV-eligible coursework equal to or greater than what the school considers to be half-time enrollment (18 units) for the payment period or period of enrollment.
4. If a student who has dropped all classes except for classes in a future module within the semester has provided written confirmation to the school of their intention to return within 45 days within the same semester. Pre-registration does not constitute written confirmation.

\*A student is considered to be enrolled in a program delivered in modules in any semester in which the student is enrolled in any class that does not span the entire semester.

\*\*Countable days for calculating the 49% exemption include the first day of classes up to and including the last day of classes in the student's individual enrollment period (semester or mini), including days between modules and excluding breaks of 5 or more days.

All courses for which the student is registered AND courses for which the student has begun attendance are considered when determining the 49% exemption, even those courses that have been dropped. Federal regulations can be found at: Federal Student Aid Handbook, Volume 5 Chapter 1 Withdrawals and the Return of Title IV Funds; 34 CFR 668.22

At Carnegie Mellon, Title IV funds are awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of Title IV funds that the student was originally scheduled to receive.

If a recipient of Title IV grant or loan funds withdraws from a school after beginning attendance, the amount of Title IV grant or loan assistance earned by the student must be determined. Additionally, if a recipient of Title IV grant or loan funds who is enrolled in a program delivered in modules does not attend all scheduled modules or withdraws from a module, the school must determine whether the student is considered to be a Title IV withdrawal and must determine the amount of Title IV grant or loan assistance earned by the student. If the amount disbursed to the student is greater than the amount the student earned, the unearned funds must be returned. If the amount disbursed to the student is less than the amount the student earned, and for which the

student is otherwise eligible, the student is eligible to receive a Post-withdrawal disbursement of the earned aid that was not received.

Carnegie Mellon determines the Withdrawal Date and Date of Determination to complete the return of funds calculation. A student's withdrawal date and date of determination varies depending on the type of withdrawal. When a student provides official notification to Carnegie Mellon through the Student Leave of Absence and Withdrawal Process, the withdrawal is defined as an official withdrawal. When the student does not complete the Student Leave of Absence and Withdrawal Process and no official notification is provided by the student, it is considered an unofficial withdrawal.

### Leave of Absence/Withdrawal Process

A student may leave Carnegie Mellon by either taking an academic leave of absence (leaving the university temporarily with the firm and stated intention of returning) or by withdrawing from the university (leaving the university with no intention of returning). In accordance with the provisions of CFR 668.22, regardless of the reason for taking an academic leave of absence, both academic leaves and withdrawals at Carnegie Mellon University are considered withdrawals for Title IV purposes. That is, the student begins any applicable grace period for loan repayment as of the date of the academic leave or withdrawal, regardless of the reason for leaving school or the intention to return. Students choosing to take an academic leave of absence should first contact their academic advisor to discuss their plans while on leave and to work out any conditions that may be necessary for a smooth return to Carnegie Mellon. A student deciding to leave the university should take the following steps:

- Complete a Leave of Absence or Withdrawal Form.
- The form must include all necessary signatures or the process will not be completed.
- Return the completed form to the University Registrar's Office, 5000 Forbes Ave., Warner Hall A12, Pittsburgh, PA 15213.

### Determination of Withdrawal Date

#### Official Withdrawals (Notification Provided by the Student)

Those withdrawals defined as official are processed in accordance with federal regulations. The Office of the Registrar provides information that identifies which students have processed a Student Leave of Absence and Withdrawal Form for each semester. This information includes the Date of Withdrawal, the Date of Determination, Withdrawal/Leave Status (LA, LS, & W2) and the semester of attendance. This information is maintained in the student's academic file and in the university's Student Information System. For students who notify the university of their intent to withdraw or take a leave of absence, the official date of withdrawal or leave of absence is the earliest of:

- Date the student began the withdrawal or leave of absence process;
- Date the student notified his or her home department;

- Date the student notified the associate dean of his or her college; or
- Date the student notified the dean of students.

#### Unofficial Withdrawal (No Official Notification Provided by the Student)

For a student who withdraws without providing notification to Carnegie Mellon, the institution determines the withdrawal date using defined criteria. This category of withdrawals includes students that drop out and students that do not earn a passing grade.

To identify the unofficial withdrawals the Registrar develops a preliminary list of students that did not complete the semester by reviewing the final student grade reports. The list includes all students with:

- a) semester units carried,
- b) 0 semester units passed,
- c) 0 quality points earned, and
- d) 0.0 QPA.

The Registrar contacts the academic divisions about each student to determine if the student actually completed the semester and earned the grades (0.0) or failed to complete the semester and did not notify the university of their status. For students who do not notify the university of their intent to withdraw or take a leave of absence, the official date of withdrawal or leave of absence is:

- The midpoint of the semester or;
- The last date the student attended an academically-related activity such as an exam, tutorial or study group, or the last day a student turned in a class assignment.

#### Date of Determination that the Student Withdrew

Carnegie Mellon is not required to take attendance and the Date of Determination that a student withdrew varies depending upon the type of withdrawal:

##### Official or Unofficial

1. For withdrawals where the student provided Official Notification the Date of Determination is:
  - a. The student's withdrawal date,
  - b. or the date of notification, whichever is later.
2. For withdrawals where the student did not provide Official Notification the Date of Determination is:
  - a. The date the institution becomes aware the student has ceased attendance.



b. For a student who withdraws without providing notification to the institution, the institution must determine the withdrawal date no later than 30 days after the end of the enrollment period.

### Calculation of Earned Title IV Assistance

The withdrawal date is used to determine the point in time that the student is considered to have withdrawn so the percentage of the period of enrollment completed by the student can be determined. The percentage of Title IV aid earned is equal to the percentage of the period of enrollment completed. Unless a student who is considered to have withdrawn meets one of the 4 exemptions listed above, the amount of Title IV federal aid earned by the student is determined on a pro-rata basis up to the end of 60% of the semester. For example, if the student completed 30% of a term, 30% of the aid originally scheduled to be received would have been earned. Once a student has completed more than 60% of a term, all awarded aid (100%) has been earned. The percentage of federal aid earned and the order in which the unearned aid is returned are defined by federal regulatory requirements.

The calculation of earned Title IV funds includes the following grant and loan funds if they were disbursed or could have been disbursed to the student for the period of enrollment for which the Return calculation is being performed:

- Pell Grant
- Iraq and Afghanistan Service Grant
- TEACH Grant (not available at Carnegie Mellon)
- FSEOG Grant
- Federal Direct Loan

### Institutional Charges

Institutional charges are used to determine the portion of unearned Title IV aid that the school is responsible for returning. Carnegie Mellon ensures that all charges for tuition, fees, living expenses, as well as all other applicable institutional charges are included in the return calculation. Institutional charges do not affect the amount of Title IV aid that a student earns when they withdraw. The institutional charges used in the calculation usually are the charges that were initially assessed the student for the period of enrollment. Initial charges are only adjusted by those changes the institution made prior to the student's withdrawal (for example, for a change in enrollment status unrelated to the withdrawal). If, after a student withdraws, the institution changes the amount of institutional charges it is assessing a student, or decides to eliminate all institutional charges, those changes affect neither the charges nor aid earned in the calculation.

### Return of Unearned Funds to Title IV

If the total amount of Title IV grant and/or loan assistance that was earned as of the withdrawal date is less than the amount that was disbursed to the student, the difference between the two amounts will be returned to the Title IV program(s) and no

further disbursements will be made. If a student has received excess funds, the College must return a portion of the excess equal to the lesser of the student's institutional charges multiplied by the unearned percentage of funds, or the entire amount of the excess funds. The funds will be returned in the order below as prescribed by federal regulations, within 45 days from the date of determination that a student withdrew.

- Unsubsidized Federal Stafford Loans
- Subsidized Federal Stafford Loans
- Federal PLUS loans
- Federal Pell Grants
- Federal Supplemental Educational Opportunity Grants (FSEOG)

### Post-Withdrawal Disbursements

If the total amounts of the Title IV grant and/or loan assistance earned as of the withdrawal date is more than the amount that was disbursed to the student, the difference between the two amounts will be treated as a post-withdrawal disbursement. In the event that there are outstanding charges on the student's account, Carnegie Mellon will credit the student's account for all or part of the amount of the post-withdrawal disbursement up to the amount of the allowable charges. Any amount of a post-withdrawal disbursement that is not credited to a student's account will be offered to the student within 30 days of the date that the institution determined that the student withdrew. Upon receipt of a timely response from the student, the College will disburse the funds within 90 days of the date of determination of the student's withdrawal date.

### Contact

Questions regarding this policy or its intent should be directed to the Student Financial Aid Office at 412-268-1353.

## Section 35: Carnegie Mellon Ethics Hotline

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 financial matters, academic and student life, human relations, health and campus safety or research. Students, faculty and staff can anonymously file a report by calling 877-700-7050 or visiting [www.reportit.net](http://www.reportit.net) (user name: tartans; password: plaid). All submissions will be reported to appropriate university personnel. The hotline is NOT an emergency service. For emergencies, call University Police at 412-268-2323.

## Section 36: 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 Office for Institutional Equity and Title IX, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-7125.

Obtain general information about Carnegie Mellon University by calling 412-268-2000.

