Contact

**Graduate Program Track Chairs**

**Studio Programs**
Jeremy Ficca (MAAD)
jficca@cmu.edu
Stefan Gruber (MUD)
smgruber@andrew.cmu.edu
Kai Gutschow (M.Arch)
gutschow@andrew.cmu.edu

**MS and PhD programs**
Daniel Cardoso Llach (MSCD)
dcardoso@cmu.edu
Erica Cochran | Joshua Lee (MS-PhD AECM)
ericac@andrew.cmu.edu | jdlee2@andrew.cmu.edu
Dana Cupkova (MSSD)
cupkova@cmu.edu
Ramesh Krishnamurti (PhD CD)
ramesh@cmu.edu
Vivian Loftness (MS-PhD BPD)
vloftness@andrew.cmu.edu

**Program Coordinators**

Erica Oman (Studio)
eoman@cmu.edu

Darlene Covington–Davis (MS and PhD)
dc1e@andrew.cmu.edu

**Admissions and Enrollment Coordinator**

Alexis McCune Secosky
amccune@cmu.edu

Revised: August 31, 2020
Welcome to CMU and the SoA

On behalf of the faculty and staff, I welcome you to the School of Architecture. The last several months have been a frank and constant reminder of our shared global fragility with the COVID-19 pandemic, tumultuous economies, wide-spread political turmoil, and a widening awareness of our stark societal inequalities.

As we transition back to campus, I want to remind you once again that every member of the Carnegie Mellon community has a shared responsibility to uphold a culture of safety that balances health considerations with our desire to fulfill the university’s core mission. Be sure to check CMU’s COVID-19 webpage https://www.cmu.edu/coronavirus/ for the latest information and thoroughly review A Tartan’s Responsibility, which outlines the expectations for all CMU students. I also encourage you to find creative ways of distanced socializing, check in with others often, take care of yourself, and seek out professional help if you need it. The university has many physical and emotional supports including the University Health Services https://www.cmu.edu/health-services/uhs-services-during-covid-19.html and Counseling and Psychological Services (CaPS) https://www.cmu.edu/counseling/virtual-offerings/index.html.

I also want to underscore our sincere commitment to diversity and inclusion. You can find a wealth of resources at https://www.cmu.edu/diversity/. This past summer SoA faculty, staff, and students worked diligently to address a variety of issues in our school and are creating a detailed plan for moving forward together.

Rest assured that the faculty and staff of the SoA are committed to providing you with an excellent foundation for tackling these and many other complex ecological, social, economic and technical challenges you are sure to face upon graduation. We know you will make the world a better place!

We are pleased to help you in any way possible. This handbook is intended to supplement University information found in the Carnegie Mellon Student Handbook, The Word at https://www.cmu.edu/student-affairs/theword/. Please review both handbooks as soon as you have the opportunity to become familiar with departmental and university policies. There are also other resources and offices that graduate students are encouraged to consult during their tenure at Carnegie Mellon University, including the Office of the Assistant Vice Provost for Graduate Education and the Office of the Dean of Student Affairs. Please refer to Appendix A of this handbook.

Naturally, if you have any questions, the SoA administration, faculty and staff are here to answer them. Welcome to CMU and best wishes with your studies here.

Omar Khan, Head of the School of Architecture
This handbook includes information about the graduate school’s policies, expectations, and guidelines, the specific requirements of your program. It also points you to other faculty, staff, and online resources for questions not addressed fully here. You will also find useful examples in the appendices. This handbook replaces all previous versions. The rules and guidelines set forth in this handbook apply to all doctoral students in the School of Architecture; however, for each individual student specific curricular requirements that were in effect at the time of matriculation apply. In accordance with university policy, students who began their doctoral studies prior to the date of this revision of the handbook may follow time-to-degree requirements from the previous policy (https://www.cmu.edu/policies/student-and-student-life/doctoral-student-status.html).

August 31, 2020
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A  GRADUATE STUDENT RESOURCES

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1 UNIVERSITY POLICIES & EXPECTATIONS

1.1 UNIVERSITY-WIDE POLICIES AND GUIDELINES

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

- Academic Integrity Website: https://www.cmu.edu/student-affairs/ocsi/
- University Policies Website: https://www.cmu.edu/policies/
- Graduate Education Policies Website: https://www.cmu.edu/graduate/policies/
- Graduate Student Registration Website: https://www.cmu.edu/hub/registrar/registration/index.html
- Academic Calendar: https://www.cmu.edu/hub/calendar/

Please see Appendix A for additional information about The Word and University resources.

1.2 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 can also be found on-line at: https://www.cmu.edu/policies/administrative-and-governance/statement-of-assurance.html

1.3 THE CARNEGIE MELLON CODE

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

The discovery, advancement and communication of knowledge are not possible without a commitment to these standards. Creativity cannot exist without acknowledgment of the creativity of others. New knowledge cannot be developed without credit for prior knowledge. Without the ability to trust that these principles will be observed, an academic community cannot exist. The commitment of its faculty, staff and students to these standards contributes to the high respect in which the Carnegie Mellon degree is held. Students must not destroy that respect by their failure to meet these standards. Students who cannot meet them should voluntarily withdraw from the University.

The Carnegie Mellon Code can also be found on-line at: https://www.cmu.edu/student-affairs/theword/
2 SoA MISSION AND PHILOSOPHY

2.1 SCHOOL OF ARCHITECTURE MISSION

CMU has been a birthplace of innovation throughout its 111–year history. Today, it is a global leader bringing groundbreaking ideas to market and creating successful start-up businesses. The faculty members are renowned for working closely with students to solve major scientific, technological, and societal challenges. The University puts a strong emphasis on creating things—from art to robots, and architecture.

CMU is the only school founded in the United States by industrialist and philanthropist Andrew Carnegie, who wrote the time–honored words, "My heart is in the work," when he donated the funds to create Carnegie Technical Schools in 1900 in Pittsburgh, Pennsylvania. In 1912, the schools, including the SoA, became the Carnegie Institute of Technology, highly regarded for both the arts and technology. A merger with the Mellon Institute—the nation’s first major research institute—created CMU in 1967. Today, CMU is a national research University of about 11,500 students and 5,000 faculty, research, and administrative staff.

CMU is a diverse blend of academic disciplines. The University consists of seven colleges and schools: the College of Fine Arts (which includes the SoA), the Carnegie Institute of Technology (engineering), the Dietrich College of Humanities and Social Sciences, the Mellon College of Science, the Tepper School of Business, the School of Computer Science, and the H. John Heinz III College (Public Policy & Information Systems). It has become an international leader in technological fields such as computer science, robotics, and engineering. From its inception it has had a strong emphasis on the applied and practical arts and trades, as well as the fine arts. Its position of leadership in both the arts and in technology is unusual in higher education today.

The SoA is one of five schools within CMU’s CFA, alongside the schools of Art, Design, Drama, and Music. Founded in 1905, the CFA was the first comprehensive arts learning institution in the United States. Today it is a unique constellation of internationally top–ranked conservatory schools in the arts embedded within a tier–one research university. The five schools are committed to community engagement, supportive of creative risk–taking, and actively embracing diversity. The pedagogy across the college is built on the principles of “thinking through doing” and “learning through doing” in studio and conservatory–based environments, and respect for tradition while encouraging innovation.

2.2 SCHOOL OF ARCHITECTURE PHILOSOPHY

The SoA provides deep immersion in the discipline of architecture, intensified by the broader CMU culture of interdisciplinary innovation and creative inquiry. Our undergraduate and graduate degree programs prepare students to be excellent, discipline–defining design thinkers in diverse global contexts. This world–class architecture education is enhanced by our position within one of the world’s leading research and entrepreneurship institutions, and by the fundamental premise that architectural excellence demands both rigorous training in fundamentals and the development of unique specializations. Students may extend their
core knowledge through studios and coursework in architecture sub-disciplines like sustainable design or computational design or urban design, or through interdisciplinary interaction with CMU’s other renowned programs. Though every CMU architecture student graduates with intensive architecture knowledge, no two graduates leave with exactly the same focus. Graduates of SoA excel in the roles architects have performed for centuries – and in new roles catalyzed by the depth and breadth of their education – to create and execute innovative solutions to an ever expanding range of global challenges. The Graduate Programs of the SoA have a long, rich history of scholarship and research that shapes and pushes the envelope in our profession. Our wide range of specialized post–professional program offerings prepare architects and designers for fields as diverse as industry, government, academia and more. Our graduates succeed on the cutting edge in innovative design practices, research organizations, federal and municipal governments, the building and manufacturing industries, and leading universities both in the US and abroad.
3.1 MASTER'S PROGRAM OFFERINGS

The SoA offers the following master’s degree programs:

3.1.1 Studio-based Programs
- Master of Architecture (M.Arch)
- Master of Advanced Architectural Design (MAAD)
- Master of Urban Design (MUD)

3.1.2 MS Programs
- Master of Science in Architecture–Engineering–Construction Management (MSAECM) (jointly offered with Civil & Environmental Engineering)
- Master of Science in Building Performance & Diagnostics (MSBPD)
- Master of Science in Computational Design (MSCD)
- Master of Science in Sustainable Design (MSSD)

A Track Chair who is a full-time faculty in the SoA coordinates each master’s degree program. Track Chairs coordinate the program’s curriculum (and any changes thereof), admissions, certification of degree, and often serve as Academic Advisors to students in their program.

The SoA also offers a PhD degree in three concentrations and a Doctor of Design (DDes) degree. The rules governing the PhD programs are given in the SoA’s Doctor of Philosophy Degree Student Handbook. The rules governing the DDes programs are given in the SoA’s Doctor of Design Student Handbook.

For details on all of our program offerings please visit our website at: https://soa.cmu.edu/graduate/
3.2 **MASTER'S PROGRAM REQUIREMENTS**

The following requirements are common to the different master’s programs offered by the SoA. Specific details pertaining to each master’s degree program, including program description, duration, curriculum, residency requirement, degree requirements, and more, are available later in this section and online at: https://soa.cmu.edu/graduate/

3.2.1 **Residency Requirement and Limits**

The maximum candidature period for a master’s degree expires at the end of the seventh academic year following the September of the year admission is granted into the degree program. Any period of absentia (where granted) is counted towards this maximum candidature period. Once the time-to-degree limit has lapsed a person may resume work towards a master’s degree only if newly admitted to a currently offered master’s degree program under criteria determined by the SoA.

The University’s Master’s Students Statute of Limitations can be found online at:

International students are required to consult with the Office of International Education for visa extensions beyond the stipulated full-time residency period.

3.2.2 **Opting-out of Courses**

SoA strives to provide students with new knowledge and skills and, as a result, aims to avoid requiring any student to retake courses for their master’s program. If a student’s master’s program curriculum has a course requirement that they believe they have already met through a previously completed course, that student can petition the Track Chair to replace that course with an equivalent elective course.

3.2.3 **Program Transfers**

Students who wish to transfer to a different SoA program are advised to discuss the transfer with their Advisor and Track Chair of their current program, and then with the Track Chair of the program they seek to transfer into. Students requesting transfer must submit a new Statement of Purpose and Portfolio, where applicable, for the review by the Track Chair and the Graduate Program Working Committee of the program they wish to transfer to. Transfers must be completed prior to the university’s course add deadline, typically two weeks after the start of the semester (https://www.cmu.edu/hub/registrar/course-changes/).

Once a decision is made, the student will be notified. If the student is offered admission, upon acceptance of this offer the Graduate Programs Coordinator officially documenting the transfer to the new program will submit a new form.

International students should note that they would need to contact OIE and complete additional forms to update their program name, any scholarship, and length of program.
3.2.4 Thesis Submission Requirement (MS-BPD, MS-CD, and MSSD Only)

The MS-BPD, MS-CD, and MSSD programs require a thesis and students in these programs can only be certified for their degree after their thesis has been approved by their Thesis Advisor and, if applicable, committee, and an approved final electronic copy of it has been received by the program’s coordinator for submission to the CMU Library’s system of record.

Note that additional degree requirements may vary from program to program. Consult your Track Chair for specific degree requirements. To submit your thesis, follow these simple steps:

- Download and fill this checklist for thesis submission.
- Name this checklist using the following convention: AndrewID_Checklist_Department_Year
- Name your approved thesis PDF using the following convention: AndrewID_Degree Type_Department_Year
- Send these two files electronically in PDF format to the graduate coordinator for MS and PhD programs (dc1e@andrew.cmu.edu) before the Final Grades deadline.

Note: your thesis PDF should include the signatures page with your Thesis Advisor and (if applicable) committee members’ signature. You can find a template of the signatures page in the Appendix, and at: https://soa.cmu.edu/ms-thesis-submission/

3.2.5 Student Reports & Records

A file is created and maintained by the Graduate Programs Coordinators when a student first enrolls in any graduate program. The following documents will be maintained in each file:

- **Application** and all supporting documentation, and admission review forms completed by relevant members of the Graduate Program Working Committee.
- Any academic action reporting by the Graduate Programs Working Committee and the PhD Program Committee – letters of commendation, warning, probation.
- Any formal report of academic progress and performance.
- Documentation pertaining to the enrollment status of the student.
- Documentation on financial support (e.g., award of scholarships, fellowships, etc.) where applicable.

Access and review of a student’s records by students and university personnel are governed by the Public Law 93–380 “The General Education Provisions Act” and other relevant policies of CMU, as stated in the university’s Graduate Education website.

See also Student Privacy Rights in the section below.
3.3 MASTER OF ARCHITECTURE

3.3.1 Program Description
The Master of Architecture (M.Arch) is a studio-based, first-professional degree program to educate tomorrow’s leaders in architecture-related careers. The M.Arch program is built on CMU’s 100-year tradition of training architects in the practice of design and technical fundamentals, with the opportunity to engage with SoA’s long-standing expertise in sustainable (MSSD), computational (MSCD), urban (MUD), or public interest design (UDBS), or construction management (MSAECM). Our M.Arch program’s strategically small size allows students to shape their individual educational agendas and career paths as they interact directly with leading-edge research projects in the school and community, and around the world.

This is a two-year program designed for individuals who hold a pre-professional baccalaureate degree in architecture or a professional architecture degree from an international university, or the equivalent in professional experience. The curriculum aims to provide flexibility and individualized courses of study for students with different backgrounds and with different ambitions. A careful evaluation of previous coursework and professional experience for each student determines the minimum course requirements for each student to achieve professional standards (including NAAB SPC’s) by graduation. Students may apply to “Opt Out” of coursework they have mastered previously.

The program is STEM-eligible for international students, and it is accredited by the National Architectural Accrediting Board (NAAB). For information on the M.Arch’s NAAB accreditation see the appropriate section of https://soa.cmu.edu/about.

3.3.2 Residency Requirements
The M.Arch is a two-year program. Students must complete a minimum residency of four (4) academic semesters with full-time status (minimum 36 units per semester).

3.3.3 Graduation Requirements
In addition to the standard requirements for all graduate students in the SoA, students in the M.Arch program must satisfy the following:

- Students must complete a minimum of 180 units of course work relevant to the professional degree and approved by the Track Chair.
- Coursework taken during the summer at CMU or at other institutions may be used to satisfy SPC, but do not reduce the residency requirement.
- All course substitutions must be approved by the program Track Chair.

3.3.4 Graduate Advanced Master’s Program (GAMP)
SoA graduate students can work towards a specialized concentration or second degree by strategically using electives to enroll in courses associated with other program. For example, M.Arch students are eligible for a
“Graduate Advanced Master's Program” (GAMP), which allows them to apply up to 48 units from their first SoA M.Arch curriculum to another SoA master’s degree. This allows M.Arch students to graduate with a special concentration or another degree, save a semester of time and tuition, and enter the job market with a unique skillset.
### Curriculum

#### M.ARCH

**Master of Architecture | Pre-Professional Degree + 180 CMU Units**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Year</th>
<th>Units</th>
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<tbody>
<tr>
<td>1</td>
<td>2nd</td>
<td>45</td>
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<tr>
<td><strong>Studio:</strong></td>
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<tr>
<td>Master’s Studio: Integration I: Environment, Form &amp; Feedback (18)</td>
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<td>Prof &amp; Tech Courses 1:</td>
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<tr>
<td>Architectural Theory (9)</td>
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<td>Materials &amp; Assembly (9)</td>
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<td>Environmental Science 1: Climate &amp; Energy (9)</td>
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<tr>
<td>Summer Online:</td>
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<td>(3 units)</td>
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<tr>
<td>Digital Skills Workshops (3)</td>
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<td><strong>Prof &amp; Tech Courses 1:</strong></td>
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<tr>
<td>Modern Architecture (9)</td>
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<tr>
<td>Statics/Structures (9)</td>
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<td>Elective Studies:</td>
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<td>Electives</td>
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<tr>
<td>M.Arch Pre-Thesis* (9)</td>
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<td><strong>Program Description:</strong></td>
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<td>The Master of Architecture (M.Arch) is a studio-based, 1st professional degree program to educate tomorrow’s leaders in architecture-related careers. It combines CMU’s long tradition of educating architects in the broad core competencies needed to become practicing professionals, with the opportunity to engage with the SoA’s cutting-edge expertise in sustainable, computational, and urban design. Students combine core and optional studies, do specialized research and speculate, and can even obtain another degree in these areas. Our M.Arch program’s strategically small size allows students to shape their individual agendas as they interact directly with leading-edge projects in the school, community and around the world.</td>
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<tr>
<td><strong>Studio:</strong></td>
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<tr>
<td>Master’s Studio: Integration II: Advanced Construction (14)</td>
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<td>Prof &amp; Tech Courses 1:</td>
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<td>Environmental Science 2: Building Systems Integration (9)</td>
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<td>Computational Design Selective $^2$ (9)</td>
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<td>Elective Studies:</td>
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<td>Electives</td>
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<td>Elective Studies:</td>
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<tr>
<td>M.Arch Thesis Seminar* (9)</td>
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<td><strong>Program Requirements:</strong></td>
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<tr>
<td>This is a two-year program designed for individuals who hold a pre-professional baccalaureate degree in architecture or a professional architecture degree from an international university, or the equivalent in professional experience. The curriculum aims to provide flexibility and individualized courses of study for students with different backgrounds and with different ambitions. A careful evaluation of previous coursework and professional experience for each student determines the minimum course requirements for each student to achieve professional standards (including NAAB SPCs) by graduation. Students may apply to “Opt Out” of coursework they have mastered previously.</td>
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<td>Prof &amp; Tech Courses 1:</td>
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<td>Ethics &amp; Practice (9)</td>
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<tr>
<th>Semester</th>
<th>Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3rd</td>
<td>45</td>
</tr>
<tr>
<td><strong>Studio:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Synthesis Option (ASO) Studio or M.Arch Thesis Studio* (18)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof &amp; Tech Courses 1:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective Studies:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective Studies:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.Arch Pre-Thesis* (9)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Footnotes:**

1. If previous work meets our standards, students may apply for exemptions from coursework listed, though not a reduced total unit count.
2. The Real Estate Design & Development course can also be taken as a graduate course in semester 3 for 9–12 units.
3. One computational design selective must be taken in any one of the 4 semesters of the program e.g. FoCD, GenMod, Design Fabrication, ITAR. See your adviser for a current list.
4. A one semester Thesis Studio is optional. All students considering Thesis must take “Pre-Thesis” and “Thesis Seminar” in semesters 2 & 3.

10 June 2020
3.4 MASTER OF ADVANCED ARCHITECTURAL DESIGN

3.4.1 Program Description

The Master of Advanced Architectural Design (MAAD) is a post-graduate, studio-based program that engages emerging methods of design and fabrication through architectural design to speculate upon future modes of architectural practice, enhanced construction methods, and material culture within the built environment.

With a particular emphasis upon design, the four-semester program leverages the School of Architecture’s and Carnegie Mellon’s core strengths in design fabrication, architectural robotics, computational design, and ecological thinking as vehicles for knowledge acquisition and speculation.

The program focuses on the creation of new insights and new knowledge—or “research”—through the design process, or “research by design.”

The program seeks to probe the technical and cultural opportunities and implications of a data-rich future in which design methodologies, construction processes, and sustainable building life cycles are intrinsically interlaced.

The goal is consciously speculative and experimental work that is deeply enmeshed with social and environmental concerns, with explicit ties to humanistic and cultural discourses, industry, and contemporary practice. The faculty seek advanced-level projects that will position graduates as future thought leaders in architecture and allied fields relating to advanced fabrication, material performance, construction methodologies, or academia.

3.4.2 Residency Requirements

The MAAD is a 2-year (4 semester) program with an option for advanced standing at 3 semesters. Students must complete a minimum residency requirement of three (3) academic semesters. Full-time status (minimum 36 units per semester) is required during the residency period.

3.4.3 Graduation Requirements

In addition to the standard requirements for all graduate students in the School of Architecture, students in the MAAD program must satisfy the following:

- Students are required to attend a Digital Fabrication Workshop in the week immediately preceding the start of the fall semester of their first year. These sessions will provide basic skills to utilize digital fabrication tools available in the school of architecture.
- Students must complete a minimum of 165 units of course work including a minimum of 63 units of elective coursework for graduation.
- All course substitutions must be approved by the program Track Chair.
3.4.4 Curriculum

MAAD
Master of Advanced Architectural Design

Orientation:
Digital Fabrication Workshop

1 Fall 1st Year (48 units)
Studio:
ASO Studio (18)
Coursework:
Pro-seminar 1 (9)
Parametric Modeling (12)
Intro to Arch. Robotics (6)
Elective Studies:
Elective 1 (9)

Program Description:
The Master of Advanced Architectural Design (MAAD) is a two-year program intended for early- to mid-career professionals who already hold an architecture degree (BA, BS, B.Arch, M.Arch or international equivalent).
The program leverages School and University core strengths in design fabrication, architectural robotics, computational design, and ecological thinking as vehicles for knowledge acquisition and speculation. Experimental design studios in the first year foreground material and fabrication affordances. The second year of study centers on the two-semester research by design project, during which students work with a committee of advisors on an independent or collaborative project and complement this project with two electives each semester. Admitted students may apply for advanced standing based on previous coursework or professional experience, eliminating the first semester. Admitted students may be required to attend a Digital Fabrication Workshop in the week immediately preceding the start of the fall semester of their first year. These sessions will provide basic skills to utilize digital fabrication tools available in the school of architecture.

2 Spring 1st Year (45 units)
Studio:
ASO Studio (18)
Coursework:
Pro-seminar 2 (9)

Elective Studies:
Elective 2 & 3 (18)

3 Fall 2nd Year (36 units)
Design Thesis:
Research by Design Project (18)
Elective Studies:
Elective 4 & 5 (18)
Optional:
Teaching Fellowship

4 Spring 2nd Year (36 units)
Design Thesis:
Research by Design Project (18)
Elective Studies:
Elective 6 & 7 (18)
Optional:
Teaching Fellowship

Program Requirements:
In addition to the standard requirements for all graduate students in the School of Architecture, students in the MAAD program must satisfy the following:
• Students must complete a minimum residency requirement of three (3) academic semesters.
• Full-time status (minimum 36 units per semester) is required during the residency period.
• All course substitutions must be approved by the program Track Chair.

1 June 2018
3.5 MASTER OF URBAN DESIGN

3.5.1 Program Description

The Master of Urban Design (MUD) is a post-professional, two-year program that prepares graduates for careers using urban design to critically address environmental, economic, social, political, and cultural issues affecting contemporary urbanization. The studio-based curriculum allows students to explore design strategies in a variety of scales and settings, from the post-industrial city to the suburban periphery to the dense global metropolis.

The studio sequence is supported by small-group seminars and workshops to develop the skill sets necessary for an urban designer in the twenty-first century. Students graduate with a firm grasp of the history, theory and practice that has established urban design as a discipline, as well as skills in cutting-edge media and design methods.

This program is distinguished by its emphasis on integrating socially engaged practice with new tools and techniques for representing, understanding, and designing cities; by the opportunity to work in trans-disciplinary teams at the intersection of the arts, humanities and technology across Carnegie Mellon's departments and colleges; and by its location in Pittsburgh—a thriving post-industrial laboratory.

3.5.2 Residency Requirements

The MUD is a two-year program with a minimum residency of four (4) academic semesters at full-time status (36 units).

3.5.3 Graduation Requirements

In addition to the standard requirements for all graduate students in the School of Architecture, students in the MUD program must satisfy the following:

- Students must complete a minimum of 180 units of coursework for graduation.
- Each semester requires a minimum of 36 units to achieve Full Time Status; however, the typical semester course load is 45 units.
- Core course substitutions are allowed only with the consent of the Track Chair.
# 3.5.4 Class of 2020 Curriculum

## MUD
Master of Urban Design – Class of 2020

<table>
<thead>
<tr>
<th>1 Fall 1st Year (45 units)</th>
<th>2 Spring 1st Year (45 units)</th>
<th>3 Fall 2nd Year (45 units)</th>
<th>4 Spring 2nd Year (45 units)</th>
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<tbody>
<tr>
<td><strong>Optional:</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Digital Skills Workshops (Aug 1)</td>
<td>Studio: (18 units)</td>
<td>Studio: (18 units)</td>
<td>Studio: (18 units)</td>
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<tr>
<td>UD Studio 1</td>
<td>Urban Places (18)</td>
<td>UD Studio 2</td>
<td>Urban Systems (18)</td>
</tr>
<tr>
<td><strong>Coursework:</strong> (27 units)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban Design Media:</td>
<td>Intro (6)</td>
<td>Urban Design Media:</td>
<td>GIS (9)</td>
</tr>
<tr>
<td>History of Urban Design (9)</td>
<td></td>
<td>Urban Ecology (9)</td>
<td>Data Analytics (9)</td>
</tr>
<tr>
<td>Graduate Seminar 1</td>
<td>The Practice of Urban Design (3)</td>
<td>Graduate Seminar 2</td>
<td>Issues of Global Urbanization (3)</td>
</tr>
<tr>
<td>Urban Design Methods &amp; Theory (6)</td>
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<td></td>
</tr>
<tr>
<td><strong>Electives:</strong> (6 units)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Coursework:</strong> (21 units)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Program Description:
The Master of Urban Design (MUD) post-professional, two-year degree program prepares graduates for careers using urban design to critically address environmental, economic, social, & cultural issues affecting contemporary urbanization. The studio-based curriculum allows students to explore design strategies in a variety of scales and settings, from the post-industrial city to the suburban periphery to the dense global metropolises.

The studio sequence is supported by small-group seminars and workshops to develop the skill sets necessary for an urban designer in the twenty-first century. Students graduate with a firm grasp of the history, theory & practice that has established urban design as a discipline, as well as skills in cutting-edge media & design methods.

Students take required and elective courses in the School of Architecture and elective courses in graduate programs at the six other colleges within the university.

The program is currently STEM-eligible being classified with CIP code 30.3301.

SoA’s MUD program is both venerable and innovative, shaped by these and other distinctive conditions:

- **A strong legacy of participatory urban design.**
  - Beginning in 1964, SoA pioneered the Urban Laboratory concept, wherein students and faculty work in the field and engage with citizens on neighborhood revitalization projects.
- **Location in a transformed post-industrial city.**
  - Pittsburgh, perhaps the quintessential post-industrial city, has transformed itself since 1985 from a declining economy based on heavy industry to a robust and diverse economy based on technology.
- **Active participation in the technological ethos of Carnegie Mellon.**
  - Benefitting from Carnegie Mellon’s unique research culture in emerging media and advanced technologies, the Master of Urban Design program redefines socially engaged practice in the 21st century.

## Program Requirements:
In addition to the standard requirements for all graduate students in the School of Architecture, students in the MUD program must satisfy the following:

- Complete a minimum of 180 units of course work with a minimum residency of four (4) academic semesters at full-time status (36 units). The typical semester course load is 45 units.
- Core course substitutions are allowed only with the consent of the Track Chair.
### 3.5.5 Class of 2021+ Curriculum

#### Master of Urban Design – Class of 2021

<table>
<thead>
<tr>
<th>Semester</th>
<th>Year</th>
<th>Units</th>
<th>Course Type</th>
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<tbody>
<tr>
<td><strong>Fall 1st Year</strong></td>
<td>(45 units)</td>
<td></td>
<td>Studio</td>
<td>UD Studio 1: Urban Places (18)</td>
</tr>
<tr>
<td><strong>Coursework</strong></td>
<td>(27 units)</td>
<td></td>
<td>Urban Design Media:</td>
<td>Intro (6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Urban Design Media:</td>
<td>GIS (6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Graduate Seminar 1:</td>
<td>The Practice of Urban Design (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>History of Urban Design (9)</td>
<td></td>
</tr>
<tr>
<td><strong>Spring 1st Year</strong></td>
<td>(45 units)</td>
<td></td>
<td>Studio</td>
<td>UD Studio 2: Urban Systems (18)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Coursework</td>
<td>Semester 1: Urban Design Strategies (21 units)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Urban Design Media:</td>
<td>Emerging Media (9)</td>
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<td></td>
<td>Urban Ecology (9)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Graduate Seminar 2:</td>
<td>Issues of Global Urbanization (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Electives</td>
<td>(6 units)</td>
</tr>
<tr>
<td><strong>Fall 2nd Year</strong></td>
<td>(45 units)</td>
<td></td>
<td>Studio</td>
<td>UD Studio 3 (18)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Coursework</td>
<td>Semester 2: Urban Design Methods &amp; Theory (21 units)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Urban Design Methods &amp; Theory (9)</td>
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<td>Real Estate Design &amp; Development (6)</td>
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<td>Graduate Seminar 3:</td>
<td>Public Policies &amp; Planning (3)</td>
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<td>Electives</td>
<td>(6 units)</td>
</tr>
<tr>
<td><strong>Spring 2nd Year</strong></td>
<td>(45 units)</td>
<td></td>
<td>Studio</td>
<td>UD Studio 4 (18)</td>
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<tr>
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<td>Coursework</td>
<td>Semester 3: Urban Design Research &amp; Design (3 units)</td>
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<td>Graduate Seminar 4:</td>
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<td></td>
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<td>Electives</td>
<td>(24 units)</td>
</tr>
</tbody>
</table>

**Program Description:**

The Master of Urban Design (MUD) post-professional, two-year degree program prepares graduates for careers using urban design to critically address environmental, economic, social, & cultural issues affecting contemporary urbanization. The studio-based curriculum allows students to explore design strategies in a variety of scales and settings, from the post-industrial city to the suburban periphery to the dense global metropolis.

The studio sequence is supported by small-group seminars & workshops to develop the skill sets necessary for an urban designer in the 21st century. Students take required and elective courses in the School of Architecture and elective courses in graduate programs at the six other colleges within the university.

Students graduate with a firm grasp of the history, theory & practice that has established urban design as a discipline, as well as skills in cutting-edge media & design methods.

The program is currently STEM-eligible being classified with CIP code 30.3301.

SoA’s MUD program is both venerable and innovative, shaped by these and other distinctive conditions:

- A strong legacy of participatory urban design.
  - Beginning in 1964, SoA pioneered the Urban Laboratory concept, wherein students and faculty work in the field and engage with citizens on neighborhood revitalization projects.
- Active participation in the technological ethos of Carnegie Mellon.
  - Benefitting from Carnegie Mellon’s unique research culture in emerging media and advanced technologies, the Master of Urban Design program redefines socially engaged practice in the 21st century.

**Program Requirements:**

In addition to the standard requirements for all graduate students in the School of Architecture, students in the MUD program must satisfy the following:

- Complete a minimum of 180 units of course work with a minimum residency of four (4) academic semesters at full-time status (36 units). The typical semester course load is 45 units.
- Core course substitutions are allowed only with the consent of the Track Chair.
- 48714 | Data Analytics for Urban Design is strongly recommended in the 3rd semester.
3.6 MASTER OF SCIENCE IN ARCHITECTURE, ENGINEERING AND CONSTRUCTION MANAGEMENT

3.6.1 Program Description

The Master of Science in Architecture–Engineering–Construction Management (MSAECM) Program is jointly offered by the School of Architecture and the Department of Civil & Environmental Engineering.

The MSAECM degree program is intended for practitioners, researchers, and educators in engineering, architecture, construction management fields, and other professionals in the building industry who wish to be leaders in advanced management technologies and their application to the built environment.

The program is designed to accommodate flexibility in the admission and graduation needs of candidates through program length and prerequisite courses that build up toward more advanced courses.

Admission to the MSAECM FAST TRACK program is contingent upon a resume review documenting a minimum of eight years of leadership experience in Architecture, Engineering, and/or Construction Management.

For those that matriculate during the 2020-2021 school year we are temporarily offering an alternative course of study due to the pandemic and visa restrictions. Please see the “Spring Start” curriculum charts for both the MS AECM and MSAECM FAST TRACK programs.

3.6.2 Residency Requirements

Students admitted to the standard MSAECM must complete a minimum residency of three academic semesters at full-time status (minimum of 36 units per semester).

Students admitted to the standard MSAECM FAST TRACK must complete a minimum residency of two academic semesters at full-time status (minimum of 36 units per semester).

3.6.3 Graduation Requirements for MSAECM

In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSAECM program must satisfy the following:

- Students must complete a minimum of 120 units as outlined on the curriculum chart below.
- Pre/Co-requisites: Waivers are available by request if similar work has recently been completed elsewhere. These units will be replaced with Approved Electives.
- Required Internship: See “SoA STANDARDS, POLICIES & PRACTICES FOR GRADUATE PROGRAMS, Outside Work and Internships” in this handbook for additional requirements.
• **Selectives**: 12 units each in the “Or/And” categories of Sustainability Assessment, Quantitative Modeling, Management, and Computational Skills. Students are encouraged to take the other selective courses as electives.

• **Approved Electives**: A minimum of 36 units as noted on the chart or by petition. Prerequisites count towards this total.

• A maximum of 54 units per semester.

• Grade of B or better in courses marked with an asterisk (*) on the curriculum chart.

• Advanced standing is available to qualified CMU students within the B.A. in Architecture or B.Arch or other Master’s programs through the Accelerated Master’s Program (AMP).

### 3.6.4 Graduation Requirements for MSAECM Fast Track

• Students must complete a minimum of **96 units** as outlined on the curriculum chart below.

• **Core courses**: Two semesters of 12-794 Graduate Seminar, 48-725 Real Estate Design & Development, 48-759 Value Based Design. 48-767 Transdisciplinary Thinking and 48-765 AECM Synthesis Project are not required but are encouraged as electives.

• **Required Internship**: Not required.

• **Selectives**: 12 units each in the “Or/And” categories of Sustainability Assessment, Quantitative Modeling, Management, and Computational Skills. Students are encouraged to take the other selective courses as electives.

• **Approved Electives**: A minimum of 36 units as noted on the chart or by petition. Prerequisites count towards this total.

• A maximum of 54 units per semester.

• Grade of B or better in courses marked with an asterisk (*) on the curriculum chart.

• Advanced standing is available to qualified CMU students in other Master’s programs through the Graduate Accelerated Master’s Program (GAMP).
### MS AECM Curriculum

**Master of Science in Architecture–Engineering–Construction Management**

<table>
<thead>
<tr>
<th>1 Fall 1st Year (40 units)</th>
<th>2 Spring 1st Year (40 units)</th>
<th>3 Summer</th>
<th>4 Fall 2nd Year (40 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core:</strong> (12 units)</td>
<td><strong>Core:</strong> (12 units)</td>
<td></td>
<td><strong>Core:</strong> (24 units)</td>
</tr>
<tr>
<td>12-794 Graduate Seminar, Section D (0) [PPN]</td>
<td>12-794 Graduate Seminar, Section D (0) [PPN]</td>
<td>48-704 MS Internship (3 units) [PPN]</td>
<td></td>
</tr>
<tr>
<td>48-720 Real Estate Design &amp; Development (12)</td>
<td>48-759 Value Based Design (12)</td>
<td>48-787 Transdisciplinary Thinking (12)</td>
<td></td>
</tr>
<tr>
<td><strong>Sustainability Assessment:</strong> (12 units)</td>
<td><strong>Management:</strong> (12 units)</td>
<td>48-765* AECM Project (12)</td>
<td>48-768 Transdisciplinary Thinking (12)</td>
</tr>
<tr>
<td>48-768* Indoor Environmental Quality (12)</td>
<td>12-750 Infrastructure Management (12)</td>
<td><strong>Quantitative Modeling:</strong> (12 units)</td>
<td>48-765* AECM Project (12)</td>
</tr>
<tr>
<td>Or/And* 48-729* Productivity, Health &amp; Quality of Buildings (12)</td>
<td>Or/And* 48-756 Project Planning &amp; Reporting (12)</td>
<td>12-706 Civil Systems Investment &amp; Planning (12)</td>
<td>Or/And* 48-733 Environmental Performance Simulation (12)</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong> (15 units)</td>
<td><strong>Computational Skills:</strong> (12 units)</td>
<td><strong>Approved Electives:</strong></td>
<td><strong>Approved Electives:</strong></td>
</tr>
<tr>
<td>12-411 Project Management for Construction (9)</td>
<td>12-711 BIM for Eng, Construct &amp; Facility Management (12)</td>
<td>Same as Fall 1st Year</td>
<td>Same as Fall 1st Year</td>
</tr>
<tr>
<td>12-421 Engineering Economics (6)</td>
<td>Or/And* 48-781 Spatial Analysis in Infrastructure Planning (12)</td>
<td><strong>Program Description:</strong></td>
<td><strong>Program Requirements:</strong></td>
</tr>
</tbody>
</table>
| **Approved Fall Electives:** | | The Master of Science in Architecture–Engineering–Construction Management (MS AECM) program is jointly offered by the School of Architecture and the Department of Civil & Environmental Engineering. The program prepares building-delivery professionals for careers in capital project delivery dealing with the entire life-cycle of capital projects, from pre-design to design, construction, commissioning, operation, and maintenance stages. It focuses on the integration of design and technology, particularly advanced information systems, as a means of both improving building performance and eliminating negative environmental impact. | In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSAECM program must satisfy the following:
- One-Hundred twenty (120) units of coursework are required for graduation. Course substitutions and prerequisite waivers will be reviewed on a case-by-case basis.
- The maximum per semester unit count is 54 units.
- Students must complete a minimum residency requirement of three (3) academic semesters at full-time status (minimum 36 units per semester).
- Advanced standing is available to qualified CMU students within the B.A. in Arch or B.Arch or other master’s programs through the Accelerated Master’s Program (AMP). Students must choose one of these two courses and are encouraged to take the other as an elective.
- Courses below this line are outside of the SoA and CEE. Registration is limited.
- Minimum grade of B required. |
| 12-741 Data Management (6) | 12-714 Environmental LCA (12) | | |
| 48-749 Parametric Modelling with BIM (6/12) | 12-718 EES&S Project (12) | | |
| 48-798 HVAC & Power Supply for Low-Carbon Buildings (9/12) | 12-737 Innoic Build & Natural Environ. (12) | | |
| 48-763 Prolean Systems (9) | 12-745 Advanced Infrastructure Project (12) | | |
| 62-706 Generative Systems for Design (12) | 48-711 Paradigms Research in Arch. (8/12) | | |
|  | 48-722 Building Performance Modeling (12) | | |
|  | 48-752 Zero Energy Housing (9) | | |
|  | 19-684 Eng & Tech Innovation Mgmt (3/6) | | |
|  | 19-689 Finance for Innovation. Management (6) | | |
|  | 90-789 Resilient & Sustainable Comm (12) | | |

**Program Description:**
Graduates of our program are educated to become effective decision makers who can positively impact economic, environmental, and ethical aspects of the built environment through professional management strategies.

**Program Requirements:**
- Students must choose one of these two courses and are encouraged to take the other as an elective.
- Courses below this line are outside of the SoA and CEE. Registration is limited.
- Minimum grade of B required.
**MSAECM – Fast track**

Master of Science in Architecture–Engineering–Construction Management

**Program Description:**

The Master of Science in Architecture–Engineering–Construction Management (MSAECM–Fast track) program is jointly offered by the School of Architecture and the Department of Civil & Environmental Engineering. Admission to the MSAECM–Fast track program is contingent upon resume review documenting a minimum of 8 years of experience in Architecture, Engineering, and/or Construction Management.

The program prepares building delivery professionals for careers in capital project delivery dealing with the entire life-cycle of capital projects, from pre-design to design, construction, commissioning, operation, and maintenance stages. It focuses on the integration of design and technology, particularly advanced information systems, as a means of both improving building performance and enhancing environmental performance and sustainability.

Graduates of our program are educated to become effective decision makers who can positively impact economic, environmental, and ethical aspects of the built environment through professional management strategies.

Our graduates have successful careers in government, industry, business and NGO (non-governmental organization) sectors, prospering in positions where design professionals continuously make large-scale capital project design, construction, and operations decisions.

**Program Requirements:**

In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSAECM–Fast track program must satisfy the following:

- **96 units of coursework are required for graduation.**
- Course substitutions and prerequisite waivers will be reviewed on a case-by-case basis.
- Students must complete a minimum residency requirement of two (2) academic semesters of full-time status (minimum 36 units per semester).
- A maximum of 54 units per semester.
- Students must choose one of these two courses and are encouraged to take the other as an elective.
- Courses below this line are outside of the SoA and CEE. Registration is limited.
- Minimum grade of B required.

January 1, 2020

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### 1 Fall 1st Year (48 units)

**Core:** (12 units)
- 12-794 Graduate Seminar, Section D (0) [P/N]
- 48-725 Real Estate Design & Development (12)

**Sustainability Assessment:** (12 units)
- 48-768 Indoor Environmental Quality (12)

**Quantitative Modeling:** (12 units)
- 12-706 Civil Systems Investment & Planning (12)

**Approved Fall Electives:**

- 12-712 Sustainable Eng. Principles (12)
- 48-749 Parametric Modeling with BIM (5/12)
- 48-788 HVAC & Power Supply for Low-Carbon Buildings (5/12)
- 48-763 Protein Systems (9)
- 62-706 Generative Systems for Design (12)

### 2 Spring 1st Year (48 units)

**Core:** (12 units)
- 12-794 Graduate Seminar, Section D (0) [P/N]
- 48-759 Value Based Design (12)

**Management:** (12 units)
- 12-750 Infrastructure Management (12)
  - Or/And
- 48-756 Project Planning & Reporting (12)

**Computational Skills:** (12 units)
- 12-711 BIM for Eng., Construct & Facility Management (12)
  - Or/And
- 48-781 Spatial Analysis in Infrastructure Planning (12)

**Approved Spring Electives:**

- 12-603 Construction Estimating (9)
- 12-714 Environmental LCA (12)
- 48-711 Paradigms Research in Arch.  (9/12)
- 48-752 Zero Energy Housing (9)

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**MS AECM (Spring Start) Curriculum**

**MSAECM- Spring start**

**Master of Science in Architecture–Engineering–Construction Management**

### 1 Spring 1st Year (40 units)

**Core:** (12 units)
- 12-794 Graduate Seminar, Section D (6) [P/N]
- 48-759* Value Based Design (12)

**Management:** (12 units)
- 12-750 Infrastructure Management (12)
- 48-756 Project Planning & Reporting (12)

**Computational Skills:** (12 units)
- 12-711 BIM for Eng, Construct & Facility Management (12)
- 48-781 Sustainability Assessment
- 48-722 Building Performance Modeling (12)

**Approved Spring Electives:**
- 12-603 Construction Estimating (9)
- 12-714 Environmental LCA (12)
- 12-718 EE&S Project (12)
- 12-745 Advanced Infrastructure Project (12)
- 48-711 Paradigms Research in Arch. (9/12)
- 48-722 Building Performance Modeling (12)
- 48-752 Zero Energy Housing (9)
- 48-781 Spatial Analysis in Infrastructure Planning (12)

**Approved Fall Electives:**
- 12-706 Civil Systems Investment & Planning (12) [Core]
- 12-712 Sustainable Eng. Principles (12)
- 12-741 Data Management (6)
- 48-725 Real Estate Design and Development (12) [Core]
- 48-733 Environ. Prot. Ssn. (12) [Core]
- 48-765 AECM Synth. Project (12) [Core]
- 48-796 HVAC & Power Supply for Low-Carbon Buildings (9/12)
- 48-783 Protean Systems (9)
- 62-706 Generative Systems for Design (12)

**Program Description:**
The Master of Science in Architecture–Engineering–Construction Management (MSAECM) program is jointly offered by the School of Architecture and the Department of Civil & Environmental Engineering.

The program prepares building delivery professionals for careers in capital project delivery dealing with the entire life cycle of capital projects, from pre-design to design, construction, commissioning, operation, and maintenance stages. It focuses on the integration of design and technology, particularly advanced information systems, as well as improving building performance and eliminating negative environmental impact.

Graduates of our program are educated to become effective decision makers who can positively impact economic, environmental, and ethical aspects of the built environment through professional management strategies.

**Program Requirements:**
In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSAECM program must satisfy the following:

- One hundred twenty (120) units of coursework are required for graduation. The 3-unit [P/N] summer internship does not contribute to the total unit count. Course substitutions and prerequisite waivers will be reviewed on a case-by-case basis.
- The maximum per semester unit count is 54 units.
- Students must complete a minimum residency requirement of three (3) academic semesters at full-time status (minimum 36 units per semester).
- Advanced standing is available to qualified CMU students within the B.A. in Arch or B.Arch or other master’s programs through the Accelerated Master’s Program (AMP). Students must choose one of these two courses and are encouraged to take the other as an elective.
- Courses below this line are outside of the SoA and CEE. Registration is limited.
- Minimum grade of B required.

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August 1, 2000
### MSAECM – Fast track - Spring start

Master of Science in Architecture–Engineering–Construction Management

#### Program Description:
The Master of Science in Architecture–Engineering–Construction Management (MSAECM)–Fast track program is jointly offered by the School of Architecture and the Department of Civil & Environmental Engineering. The MSAECM–Fast track program requires 24 fewer units than the standard MSAECM program, but admission is contingent upon a resume review documenting a minimum of 8 years of experience in Architecture, Engineering, and/or Construction Management.

The program prepares building-delivery professionals for careers in capital project delivery dealing with the entire life-cycle of capital projects, from pre-design to design, construction, commissioning, operation, and maintenance stages. It focuses on the integration of design and technology, particularly advanced information systems, as a means of both improving building performance and enhancing environmental performance and sustainability.

Graduates of our program are educated to become effective decision makers who can positively impact economic, environmental, and ethical aspects of the built environment through professional management strategies.

Our graduates have successful careers in government, industry, business and NGO (non-governmental organization) sectors, prospering in positions where design professionals continuously make large-scale capital project design, construction, and operations decisions.

#### Program Requirements:
In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSAECM–Fast track program must satisfy the following:

• 96 units of coursework are required for graduation.
• Course substitutions and prerequisite waivers will be reviewed on a case-by-case basis.
• Students must complete a minimum residency requirement of two (2) academic semesters of full-time status (minimum 36 units per semester).
• A maximum of 14 units per semester.
• Students must choose one of these two courses and are encouraged to take the other as an elective.
* Courses below this line are outside of the SoA and CEE. Registration is limited.
* Minimum grade of B required.

#### 1 Spring (48 units)

**Core:** (12 units)

- 12-794 Graduate Seminar, Section D (0) [P/N]
- 48-759* Value Based Design (12)

**Management:** (12 units)

- 12-750 Infrastructure Management (12)

**Computational Skills:** (12 units)

- 12-711 BIM for Eng, Construct & Facility Management (12)

**Approved Spring Electives:**

- 12-603 Construction Estimating (9)
- 12-714 Environmental LCA (12)
- 12-718 EES&S Project (12)
- 12-745 Advanced Infrastructure Project (12)
- 48-711 Paradigms Research in Arch (3/12)
- 48-722 Building Performance Modeling (12)
- 48-762 Zero Energy Housing (9)

^ 19-684 Eng & Tech Innovation Mgmt (3/6)
19-689 Finance for Innovat. Management (6)
90-789 Resilient & Sustainable Comm (12)

#### 2 Fall (48 units)

**Core:** (12 units)

- 12-794 Graduate Seminar, Section D (0) [P/N]
- 48-725* Real Estate Design & Development (12)

**Sustainability Assessment:** (12 units)

- 48-768* Indoor Environmental Quality (12)

**Computational Skills:** (12 units)

- 12-712 Sustainable Eng. Principles (12)
- 12-741 Data Management (6)
- 48-798 HVAC & Power Supply for Low-Carbon Buildings (9/12)
- 48-763 Protean Systems (9)

**Approved Fall Electives:**

- 12-714 Infrastructure Planning (12)
- 48-733 Environmental Performance Simulation (12)

- 12-750 Infrastructure Management (12)
- 48-756 Project Planning & Reporting (12)

- 12-706 Civil Systems Investment & Planning (12)

- 48-733 Environmental Performance Simulation (12)

- 12-712 Sustainable Engineering (12)
- 12-741 Data Management (6)
- 48-798 HVAC & Power Supply for Low-Carbon Buildings (9/12)
- 48-763 Protean Systems (9)

- 62-706 Generative Systems for Design (12)
3.7 MASTER OF SCIENCE IN BUILDING PERFORMANCE AND DYNAMICS

3.7.1 Program Description
The Master of Science in Building Performance & Diagnostics (MSBPD) degree program is intended for practitioners, researchers, and educators in architecture and the building industry who wish to be leaders in advanced building technologies and building performance outcomes. The program is based on the premise that the integrated design of building and community systems is critical for environmental sustainability and human health and productivity. The MSBPD is a building science and research-oriented program, with technical depth for careers in sustainability-focused professional practice, environmental research and consulting, the building industry, or pursuing a PhD in Building Science.

3.7.2 Residency Requirements
The MSBPD is a 2-year (4 semester) program with a minimum residency of three (3) academic semesters at full-time status (36 units).

3.7.3 Graduation Requirements
In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSBPD program must satisfy the following:

- Students must complete a minimum of 164 units of course work for graduation.
- Students must complete a minimum residency requirement of three (3) academic semesters.
- Core and computing course substitutions must be approved by the program Track Chair.
- For (G)AMP candidates this degree can be achieved more quickly by applying a maximum of forty-eight (48) units of course work from their concurrent SoA program with a minimum residency of three (3) academic semesters as a graduate student at full-time status (36 units).
### MSBPD
Master of Science in Building Performance & Diagnostics

#### 1 Fall 1st Year (40 units)
Prep:
- **Pre-Requisite:** 9 units
- 48-315 | ES 1: Climate & Energy (9)

**Core:** 18 units
- 48-798 | HVAC & Power Supply for Low-Carbon Buildings (9-12)
- Productivity, Health & the Quality of Buildings (9-12)

**Computing:** 10 units
- Principles of Computing (10)

**Selectives:** 12 units
- Refer to List Below

#### 2 Spring 1st Year (40 units)

**Core:** 21 units
- Paradigms of Research (9)
- Performance of Advanced Building Systems (9)
- Building Performance Modeling (12)

**Computing:** 10 units
- Intro to Data Structures (10)

#### 3 Fall 2nd Year (39 units)

**Core:** 27 units
- LEED, Green Design & Building Rating in Global Context (9)
- Building Controls & Diagnostics (9)
- Resilient & Sustainable Communities (9)

**Project:** 18 units
- Masters Thesis Prep (18)

#### 4 Spring 2nd Year (45 units)

**Core:** 27 units
- GIS/CAFM (9)
- Statistical Methods for Managers (12)

**Project:** 18 units
- Masters Thesis (18)

#### Program Description:
The Master of Science in Building Performance & Diagnostics (MSBPD) is a two-year program intended for practitioners, researchers, and educators in architecture and the building industry who wish to be leaders in advanced building technologies and their performance. This is a research-based degree, designed as a stepping stone to PhD-level education.

Admitted students may apply for advanced standing based on previous coursework or professional experience, eliminating the first semester. Advanced standing is also available to qualified CMU students within the B.Arch program through the (Graduate) Accelerated Master's Program ((G)AMP).

#### Program Requirements:
In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSBPD program must satisfy the following:
- Complete a minimum of 164 units of course work with a minimum residency of three (3) academic semesters at full-time status (36 units).
- For (G)AMP candidates this degree can be achieved more quickly by applying a maximum of forty-eight (48) units of course work from their concurrent SoA program with a minimum residency of three (3) academic semesters as a graduate student at full-time status (36 units).
- Core and computing course substitutions must be approved by the program Track Chair.

#### Pre-Approved Selectives:
- Introduction to Ecological Design Thinking (F)
- Sustainable Buildings (F)
- Indoor Environmental Quality (F)
- Environmental Performance Simulation (F)
- Data Analytics for Design (F)
- Experimental Design for Behavioral & Social Sciences (F)
- Real Estate Design & Development (F)
- Systems Thinking for Environmental Policy & Planning (F)
- Zero Energy Housing (S)
- Urban Ecology (S)
- Computation for Content-Sensitive Urban Design (S)
- Planning by Design: Campuses to Cities (S)
- Environmental Life Cycle Assessment (S)
- Sustainable Energy - The Developing World (S)
- Energy Policy & Economics (S)
- Cities, Technology & the Environment (S)

20 August 2019
3.8 MASTER OF SCIENCE IN COMPUTATIONAL DESIGN

3.8.1 Program Description

The Master of Science in Computational Design (MSCD) is a post-professional research-based program investigating new design opportunities and critical perspectives at the intersection of design and computation. The program mobilizes Carnegie Mellon University’s computational strengths to enable students to explore technical and cultural aspects of computation as it relates to architecture, design, and the built environment. In spheres ranging from the applied to the speculative, and from the poetic to the critical. Students in the program study subjects such as artificial intelligence, architectural robotics, digital fabrication, simulation, computational geometry, responsive environments, and shape grammars—as well as on embodied and tangible forms of design interaction, fabrication, and expression.

The MSCD adopts a broad view of computation as a vehicle of design inquiry and as a worthy subject of scholarly analysis and debate. The program is well suited to highly inquisitive applicants who are interested in challenging disciplinary boundaries, developing a unique research agenda, and acquiring the conceptual and technical skills to conduct computational design research at the highest levels of scholarly rigor and creativity.

3.8.2 Residency Requirements

The MSCD is a two-year program with a minimum residency of three (3) academic semesters with full-time status (minimum 36 units per semester). Highly proficient candidates may request waivers for certain course requirements during the admission process.

3.8.3 Graduation Requirements

In addition to the standard requirements for all graduate students in the School of Architecture, and the standard requirement of thesis submission for all MS programs, students in the MSCD program must satisfy the following:

- Complete a minimum of 144 units of course work including a 36-unit thesis for graduation.
- Complete the sequence of three research seminars and 36 units of thesis described in the curriculum chart (see below).
- Satisfy the thesis submission requirement as specified in this document and in the following link:
  https://soa.cmu.edu/ms-thesis-submission/

3.8.4 Resources

Students in the MSCD program are housed in the Computational Design (CoDe) Lab, a beautiful double-height space strategically located in the Margaret Morrison building’s fourth floor. MSCD students work closely and collaboratively with students and faculty from neighboring SoA programs such as Building Performance and Diagnostics, Sustainable Design, and Advanced Architectural Design, as well as the Schools of Art, Drama, HCI, and Design. For more info and news visit http://code.arc.cmu.edu/
MSCD students have access to the School of Architecture and Carnegie Mellon University’s world-class research environment and facilities, including state-of-the-art Design Fabrication and Applied Architectural Robotics laboratories. For more info on the dFab laboratory, visit https://soa.cmu.edu/dfab

### 3.8.5 Applying to the PhD Program from the MSCD

MSCD students who wish to be considered for admission into the PhD program in Computational Design (PhD-CD) should submit an application through the School's online application system by the appropriate deadline. While applicants from the MSCD program are not required to submit new transcripts or GRE/TOEFL scores, including an updated statement of purpose and a letter of support from a Computational Design faculty member is strongly encouraged. See more information about the PhD program in Computational Design (PhD-CD) at https://soa.cmu.edu/phdcd.
# Curriculum

## MSCD

Master of Science in Computational Design

<table>
<thead>
<tr>
<th>1 Fall 1st Year (36 units)</th>
<th>2 Spring 1st Year (36 units)</th>
<th>3 Fall 2nd Year (36 units)</th>
<th>4 Spring 2nd Year (36 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research: (9 units)</td>
<td>Research: (9 units)</td>
<td>Research: (6 units)</td>
<td>Research: (36 units)</td>
</tr>
<tr>
<td>Inquiry into Computation, Architecture &amp; Design (9)</td>
<td>Pre-Thesis Prep (6)</td>
<td>Pre-Thesis (6)</td>
<td></td>
</tr>
<tr>
<td>Computation: (9–10 units)</td>
<td>Computation: (9–12 units)</td>
<td>Computation: (9–12 units)</td>
<td></td>
</tr>
<tr>
<td>C1: Students with prior programming background are advised to take Fundamentals of Programming and Computer Science. Students without programming background are advised to take an introductory programming course such as Principles of Computing, Computing for the Arts with Processing, or Introduction to Computing for Creative Practice.</td>
<td>C2: Intermediate programming course such as Fundamentals of Programming and Computer Science, or a more advanced programming course such as Principles of Imperative Computation, based on C1.</td>
<td>C3: Advanced computing course such as Principles of Imperative Computation. Students whose research project requires knowledge of specific computational paradigms such as Physical Computing, Machine Learning or Robotics may choose to enroll courses that explore these subjects, based on C2.</td>
<td></td>
</tr>
<tr>
<td>Selectives: (18–24 units)</td>
<td>Selectives: (18–24 units)</td>
<td>Selectives: (18–24 units)</td>
<td>Selectives: (18–24 units)</td>
</tr>
<tr>
<td>SC 1 &amp; 2</td>
<td>SC 3 &amp; 4</td>
<td>SC 5 &amp; 6</td>
<td></td>
</tr>
</tbody>
</table>

### Program Description:

As a research program, the MSCD adopts a broad view of design technologies as vehicles of design inquiry, as cultural artifacts, and as worthy subjects of critical analysis and debate. The program is well suited to highly inquisitive applicants from a variety of fields who are interested in challenging disciplinary boundaries, developing a unique research agenda, and acquiring the conceptual and technical skills to conduct computational design research at the highest levels of scholarly rigor and creativity. The curriculum comprises three areas:

- **Research:** A sequence of required seminars exploring Computational/Design as an arena of creative research and practice, and to the methods of academic inquiry needed for the formulation of research projects.
- **Computation:** A required sequence of courses providing a solid technical understanding of computational concepts and techniques. The precise choice and sequence is based on each student’s prior skill level and the nature of their research project. A list of recommended courses is available upon request.
- **Selectives:** The Selectives give students the flexibility to develop an emphasis based on their specific research interests and strengths. Any courses taught by Computational Design faculty count as ‘Selectives,’ as well as approved extra-departmental courses.

### Program Requirements:

In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSCD program must satisfy the following:

- Students must complete a minimum of 144 units of course work including a 36 unit thesis for graduation.
- Students must complete a minimum residency of three (3) academic semesters with full-time status (minimum 36 units per semester).
- All course substitutions must be approved by the program Track Chair.
- Students with strong programming/mathematical skills may apply for advanced standing in the program.

November 2016
3.9 MASTER OF SCIENCE IN SUSTAINABLE DESIGN

3.9.1 Program Description
The Master of Science in Sustainable Design is a post-professional research-based graduate program focused on enabling innovative design solutions through deep technical expertise and critical thinking. The MSSD offers an integrated education that strives to prepare its graduates for careers that will reshape the built environment. The MSSD program engages socio-ecological and environmental issues related to architecture and urbanism at the intersection of design, building science and technology. This program welcomes applications from both research and practice-oriented candidates.

MSSD's intensive curriculum is structured as a combination of critical thinking inquiry with technical skills and design-research classes based in the School of Architecture and offered across Carnegie Mellon University. The curriculum stresses the importance of design and technology integration, value of total-building performance, human-centered design, large scale ecology and natural systems knowledge within the design processes. Classes provide both depth and breadth, while the culminating Synthesis Thesis Project allows each individual student the opportunity to narrow his or her research focus to a topic of personal and professional interest.

The MSSD Advanced program welcomes applications from both research and practice-oriented candidates and features a four-semester (two academic years) curriculum. For candidates with extensive professional experience in design practice of eight years or more we offer the MSSD Applied program, which can be completed in three semesters.

3.9.2 Residency Requirements
The MSSD Advanced program is a two-year (4 semesters) program with a minimum residency of three (3) academic semesters at full-time status (36 units). The MSSD Applied program is a 1.5-year (3 semesters) program with a minimum residency of two (2) academic semesters at full-time status (36 units).

3.9.3 Graduation Requirements
In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSSD program must satisfy the following:

- **MSSD Advanced** students must complete a minimum of 159 units of coursework.
- **MSSD Applied** or (G)AMP students must complete a minimum of 135 units of coursework.
- All MSSD students must take at least one (1) selective from each category as noted on the following chart, with a cumulative total of 36 units.
- All MSSD students are limited to a maximum of 54 units per semester.
- All course selectives and substitutions must be approved by the program Track Chair.
MSSD – Advanced
Master of Science in Sustainable Design

Prep:
- Summer Online: 3 units
  48-689 | Digital Skills Workshops (3)
- Pre-Requisite: 0 units
  48-315 | ES 1: Climate & Energy (9)

1 Fall 1st Year (45 units)
Core: (9 units)
- 48-743 | Intro to Ecological Design Thinking (9)
- 48-798 | HVAC & Power Supply for Low-Carbon Buildings (9-12)
- 48-733 | Environmental Performance Simulation (9)
- 62-225 | Generative Modeling (9)

Selectives: (9 - 18 units)**

2 Spring 1st Year (45 units)
Core: (9 units)
- 48-711 | Paradigms of Research in Architecture (9)
- 48-722 | Building Performance Modeling (9)

Selectives: (12 - 18 units)**
Free Electives: (15 - 18 units)

Program Description:
The Master of Science in Sustainable Design is a post-professional research-based graduate program focused on enabling innovative design solutions through deep technical expertise and critical thinking. The MSSD offers an integrated education that strives to prepare its graduates for careers that will reshape the built environment. The MSSD program engages socio-ecological and environmental issues related to architecture and urbanism at the intersection of design, building science and technology. This is a 4 semester program that welcomes applicants from both research and practice-oriented candidates.

Program Requirements:
In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSSD program must satisfy the following:
- Students in the 4 semester track (advanced) must complete a minimum of 159 units of coursework with a minimum residency of three (3) academic semesters at full-time status (36 units).
- For (G)AMP students or candidates with greater than eight years of design practice experience this degree can be achieved in 3 semesters (Applied) by completing a minimum of 135 units of coursework with a minimum residency of two (2) academic semesters at full-time status (36 units).

Optional Summer: (3 units)
- 48-700 | Practicum (3)
  NB: F1 students must file for CPT

3 Fall 2nd Year (45 units)
Core: (9 units)
- 48-729 | Productivity, Health & the Quality of Buildings (9)
- 48-795 | LEED, Green Design & Building Rating in Global Context (S)
- 48-732 | MSSD Synthesis (18)

Selectives: (15 - 18 units)**
Free Electives: (3 - 12 units)

4 Spring 2nd Year (24 units)
Project (24 Units)
- 48-732 | MSSD Synthesis (18)
- xx-xxx | Synthesis Support Course (6)

Category 1: Environmental Tools & Data Modeling
- 48-753 | Intro to Urban Design Media (F)
- 62-275 | Fundamentals of Comp Design (S)

Category 2: Environmental Law & Policy
- 90-708 | Environmental Policy & Planning (F)
- 48-756 | LEED Green Building Rating in Global Context (S)

Category 3: Sustainable Design & Development
- 48-750 | Real Estate Design & Development (F)
- 48-752 | Zero Energy House (S)

20 August 2019
### MSSD – Applied Curriculum

**Master of Science in Sustainable Design**

#### Prep:
- **Summer Online:** (3 units)
  48-689 | Digital Skills Workshops (3)
- **Pre-Requisite:** (9 units)
  48-315 | ES 1: Climate & Energy (9)

#### 1 Fall 1st Year (45 units)
- **Core:** (36 units)
  - 48-743 | Intro to Ecological Design Thinking (9)
  - 48-798 | HVAC & Power Supply for Low-Carbon Buildings (9–12)
  - 48-733 | Environmental Performance Simulation (9)
  - 62-225 | Generative Modeling (9)

- **Selectives:** (9 - 18 units)**

#### Program Description:

The Master of Science in Sustainable Design is a post-professional research-based graduate program focused on enabling innovative design solutions through deep technical expertise and critical thinking. The MSSD offers an integrated education that prepares students for careers that will reshape the built environment. The MSSD program engages socio-ecological and environmental issues related to architecture and urbanism at the intersection of design, building science and technology. This is a 4 semester program that welcomes applications from both research and practice-oriented candidates.

#### Program Requirements:

In addition to the standard requirements for all graduate students in the School of Architecture, students in the MSSD program must satisfy the following:

- Students in the 4 semester track (advanced) must complete a minimum of 159 units of course work with a minimum residency of three (3) academic semesters at full-time status (36 units).
- For GAMP students or candidates with greater than eight years of design practice experience this degree can be achieved in 3 semesters (Applied) by completing a minimum of 135 units of course work with a minimum residency of two (2) academic semesters at full-time status (36 units).

#### Optional Summer: (3 Units)

- 48-700 | Practicum (3)

**NB:** F1 students must file for CPT

#### 2 Spring 1st Year (45 units)
- **Core:** (18 units)
  - 48-711 | Paradigms of Research in Architecture (9)
  - 48-722 | Building Performance Modeling (9)

- **Selectives:** (12 - 18 units)**

- **Free Electives:** (15 - 18 units)

#### 3 Fall 2nd Year (45 units)
- **Core:** (9 units)
  - 48-729 | Productivity, Health & the Quality of Buildings (9)

- **Project:** (24 Units)
  - 48-732 | MSSD Synthesis (18)
  - XX-XXX | Synthesis Support Course (6)

- **Selectives:** (12 - 18 units)**

#### Core Selectives*

MSSD students must take at least one (1) selective from each category, with a cumulative total of 36 units. MSSD students are limited to a maximum of 54 units per semester.

Changes to curricular offerings take place regularly. Visit the CMU Schedule of Classes for up-to-date information.

A full list of selectives is available from the track chair. The selective categories and pre-approved courses include:

- **Category 1: Environmental Tools & Data Modeling**
  - 48-753 | Intro to Urban Design Media (F)
  - 62-275 | Fundamentals of Comp Design (S)

- **Category 2: Environmental Law & Policy**
  - 90-798 | Environmental Policy & Planning (F)
  - 48-795 | LEED, Green Design & Building Rating in Global Context (S)

- **Category 3: Sustainable Design & Development**
  - 48725 | Real Estate Design and Development (F)
  - 48-752 | Zero Energy House (S)

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20 August 2019
SoA STANDARDS, POLICIES & PRACTICES FOR GRADUATE PROGRAMS

Unless otherwise stated, and where specific and detailed declarations are provided by the School of Architecture, the Graduate Programs in the School adopts the standards, policies and practices stated in the prevailing Carnegie Mellon University Graduate Student Handbook (“The WORD”) pertaining to academic advising, academic resources, curricular and enrollment issues, and academic rights and responsibilities. The WORD can be found online at: https://www.cmu.edu/student-affairs/theword/.

4.1 ADMISSIONS REVIEW

Admissions are normally reviewed in the Spring Semester.

The Admissions and Enrollment Coordinator and Graduate Program Working Committee (GPWC) oversee admissions to all graduate programs. The Track Chair coordinates the review process for applications to their program and communicates all admission decisions to the GPWC. All applicants to the must complete the online application in full, and with all required supporting documentation. Information pertaining to application requirements, policies and procedures is available online at: https://soa.cmu.edu/graduate-admissions.

Multiple faculty members review every application. Exceptions to admissions requirements to any program are referred to the Committee. In cases when a decision is neither ascertained nor readily ascertainable, the application is then referred to the GPWC at large for review. Exceptions to admissions requirements to any program are also referred to the GPWC. The GPWC will decide on the outcome of the application based on a review of the completed application materials. Each applicant will be notified of the outcome by email from the Graduate Admission Coordinator.

For PhD students, positive decisions require at least one faculty agreeing to advise the applicant.

Student representatives in the Committee are excused from the review and decision-making process.

4.2 ACADEMIC ADVISING

Every master’s student is assigned an Advisor, typically the Track Chair of the respective master’s program. The Advisor and/or Track Chair guides a master’s student throughout their academic study in the SoA.

PhD students are advised by a member of the PhD Program Committee with specific content knowledge aligned with the student’s Personal Statement.

Students may also seek advice from the GPEC, the Head of School and the other graduate program faculty as well as the Graduate Programs administrative staff.
Students are required to meet with their Advisor prior to each semester’s course registration to discuss matter such as course selections, course performance, and other academic matters, and periodically during the duration the semester to report progress in courses, research, thesis, and other aspects of academic life. Students are expected to bring administrative matters such as course substitution and program transfers, to the attention of both the Advisor and the Track Chair in cases when they are different people.

### 4.3 ACADEMIC RESOURCES

The University offers a range of academic resources, which are listed in the University Graduate Student Handbook (The WORD). These include Academic and Professional Development Seminars and Workshops, Teaching Support, intercultural communication, computing services and libraries.

### 4.4 CURRICULA AND ENROLLMENT INFORMATION

The University Graduate Student Handbook (The WORD) provides information pertaining to:

- Standards for Academic and Creative Life
- Privacy Rights for Students
- Academic Standards and Actions
- Cheating and Plagiarism Policies
- Academic Disciplinary Actions Overview

### 4.5 ENROLLMENT VERIFICATION

Enrollment Services is the only University office that can provide an official letter of enrollment, official transcript and enrollment verification. Enrollment verification can be requested online through The HUB at: [https://www.cmu.edu/hub/registrar/student-records/verifications/enrollment.html](https://www.cmu.edu/hub/registrar/student-records/verifications/enrollment.html).

Specific Declarations in the School of Architecture

### 4.6 PRIVACY RIGHTS OF STUDENTS


Generally, schools must have written permission from the student in order to release any information from a student's education record. However, FERPA allows schools to disclose those records, without consent, to the following parties or under the following conditions (34 CFR § 99.31):

- School officials with legitimate educational interest;
- Other schools to which a student is transferring;
• Specified officials for audit or evaluation purposes;
• Appropriate parties in connection with financial aid to a student;
• Organizations conducting certain studies for or on behalf of the school;
• Accrediting organizations;
• To comply with a judicial order or lawfully issued subpoena;
• Appropriate officials in cases of health and safety emergencies; and
• State and local authorities, within a juvenile justice system, pursuant to specific State law.

Schools may disclose, without consent, "directory" information such as a student's name, address, telephone number, date and place of birth, honors and awards, and dates of attendance. However, schools must tell students about directory information and allow students a reasonable amount of time to request that the school not disclose directory information about them. Schools must notify students annually of their rights under FERPA. The actual means of notification, such as this student handbook, is left to the discretion of each school.

Access and review of a student’s records by students and university personnel are governed by the Public Law 93-380 “The General Education Provisions Act” and other relevant policies of Carnegie Mellon University, as stated in the University Graduate Student Handbook (The WORD).

4.7 COURSE OVERLOAD

There is a university policy for course overload, which applies to undergraduate and graduate programs alike: 
https://www.cmu.edu/hub/registrar/registration/course-overload.html

SoA has established a normal course load for each program. Students should check with their academic advisor, track chair, department head, or dean's office for the definition of a normal course load. Individual colleges may have overload policies that are more restrictive; therefore, students should consult with their advisor when considering an overload.

4.8 INDEPENDENT STUDY

Independent Study allows opportunities for students to pursue self-directed study with a faculty advisor pending written approval of the faculty member and the Track Chair for MA and MS students or Committee Chair for doctoral students. Students who are not on an academic action are permitted to take one independent study course up to 18 units per semester with a CMU faculty member. This limitation does not apply to 48792 Ph.D. Independent Study, 48793 Ph.D. Thesis, 48797 PhD Dissertation Defense, 48811 Proposal Preparation, 48812 Thesis Preparation DPP, and other similar courses.

4.9 ACADEMIC ACTIONS AND STANDARDS

4.9.1 Academic Integrity and Disciplinary Action

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

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

4.9.2 Grading Policy

Unless otherwise specifically declared, the School of Architecture adopts the University policy, which offers details concerning university grading principles for students taking courses, https://www.cmu.edu/policies/student-and-student-life/grading.html.

This policy covers the specifics of Assigning and Changing Grades (including Final and Mid-Semester grades, Incompletes and Conditional Failures), Grading Options (Audit and Pass/Fail), Drop/Withdrawals, Course Repeats, and defines the undergraduate and graduate Grading Standards. “Non-factorable” is not factored into the semester or cumulative Quality Point Average (QPA).

At a minimum, a student must attain a QPA of 3.0 in order to be granted a graduate degree. The GPEC must approve any exception.
The graduate student grading standard is as follows (as of Fall 1995):

<table>
<thead>
<tr>
<th>Grading</th>
<th>Quality Points</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.33</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td>Minimum grade for passing a course for graduate students</td>
</tr>
<tr>
<td>C-</td>
<td>1.67</td>
<td></td>
</tr>
<tr>
<td>D+</td>
<td>1.33</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>0.0</td>
<td>Failure</td>
</tr>
<tr>
<td>X</td>
<td>0.0</td>
<td>Conditional failure</td>
</tr>
<tr>
<td>S</td>
<td>Non-factorable</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>P</td>
<td>Non-factorable</td>
<td>Passing</td>
</tr>
<tr>
<td>N</td>
<td>Non-factorable</td>
<td>Not Passing</td>
</tr>
<tr>
<td>O</td>
<td>Non-factorable</td>
<td>Audit</td>
</tr>
<tr>
<td>W</td>
<td>Non-factorable</td>
<td>Withdrawal</td>
</tr>
<tr>
<td>I</td>
<td>Non-factorable</td>
<td>Incomplete</td>
</tr>
<tr>
<td>AD</td>
<td>Non-factorable</td>
<td>Credit granted for work completed at another institution or by examination credit</td>
</tr>
</tbody>
</table>
Passing (P) / Not Passing (N) A Grade of P counts towards graduation requirements but is not factored into the semester or cumulative Quality Point Average (QPA). The Graduate Program Working Committee has adopted the following additional requirements regarding P/N:

<table>
<thead>
<tr>
<th></th>
<th>Inside Arch</th>
<th>Outside Arch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Course</td>
<td>No P/N</td>
<td>No P/N</td>
</tr>
<tr>
<td></td>
<td>*C or Better</td>
<td>*C or Better</td>
</tr>
<tr>
<td>Selectives</td>
<td>No P/N</td>
<td>Yes P/N</td>
</tr>
<tr>
<td></td>
<td>*C or Better</td>
<td>*C or Better</td>
</tr>
<tr>
<td>Electives</td>
<td>Yes P/N</td>
<td>Yes P/N</td>
</tr>
<tr>
<td></td>
<td>C or Better</td>
<td>C or Better</td>
</tr>
<tr>
<td>48-704 MS INTERN</td>
<td>Yes P/N, credits count except AECM</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes: You must have the minimum credit hours for the degree and have a minimum cumulative QPA of 3.0 to graduate.
*Unless stated otherwise in the specific graduate program requirements.
Only one course per year can be taken P/N except as noted in specific graduate program requirements.
The university may overrule these requirements if it declares otherwise due to a pandemic or other unforeseen emergency.

Questions about grading for a specific course should be addressed to the instructor of the course in question. Graduate students with questions about Pass/Fail and Drop/Withdrawal should contact their Program Track Chair, or Graduate Program Director.

4.9.3 Process for Appealing Final Grades
https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html

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

4.9.4 Policy on Grades for Transfer Courses

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

4.9.5 Progress Review

After midterm grades have been issued, students are advised to check their grades online and may receive a WARNING letter for achieving a grade below a minimum of B for any class identified on the program curriculum with an asterisk (*) to qualify for graduation OR a grade below a minimum of C in any course taken in any semester OR a semester quality point average of below 3.00. If any of these conditions are met, students are required to arrange a meeting with their Track Chair to discuss a plan for immediate improvement.

The Graduate Program Working Committee holds a Grades Meeting at the end of each semester, after the semester grades have been issued. The purpose of this meeting is to review and monitor the academic progress of all graduate students. In this meeting, the Track Chair will present an oral report to the Graduate Program Working Committee along with oral reports by the Principal Advisor of each doctoral student. Any academic actions or recommendations developed are transmitted, in writing, to students and to the Head of the School by the Graduate Program Executive Committee, after the Graduate Program Grades Meeting.

In addition to the Grading Practices and Academic Actions stipulated by the University and College of Fine Arts, the Graduate Program in the School of Architecture has implemented the following School-level actions:

- **COMMENDATION** – For achieving a quality point average of 4.0 or above in any semester while carrying a full academic load of a minimum of 36 units AND comprising a minimum of four (4) courses, OR an 18-unit studio and a minimum of two (2) courses.

- **STUDIO COMMENDATION** – Studio commendations are given to students for excellence in design work and/or leadership during a particular semester. The studio professors teaching in that year select recipients at the semester grades meeting.

- **PROBATION** – For achieving a grade below a minimum of B in any course identified on each program curriculum with an asterisk(*) to qualify for graduation OR a grade below a minimum of C in any other course taken in any semester OR a semester quality point average below 3.00 AND when the Track Chair and Graduate Program Executive Committee determines that there is still a possibility for the student to improve their performance to meet requirements for graduation as stipulated in the respective program descriptions online. Academic probation may result in any scholarships, research assistantships and/or financial awards to be rescinded. Students on academic probation cannot be selected to receive awards. For a student on academic probation, this status will be automatically removed during the next academic review if the semester and cumulative QPA are 3.0 or better.

- **DROP FROM PROGRAM** – For achieving a PROBATION AND when the Track Chair and Graduate Program Executive Committee determines it is NOT likely that the student will be able to meet the requirements for graduation OR under extraordinary circumstances as determined by the faculty, you may be dropped without previously having been on probation. The student will be notified in writing and should meet with their Advisor and Track Chair as soon as possible to discuss their academic situation. The student will
then meet with the Department Head. If a decision for removal from the program is made, the student will receive the decision in writing and may appeal the decision by sending a formal letter stating the basis for appeal to the Department Head. The student will have an opportunity to appeal a removal decision by the Department Head to the Dean of the College of Fine Arts.

Generally, sanctions resulting from an Academic Action (e.g. probation or drop) take effect immediately, regardless of whether an appeal is filed. In exceptional circumstances, however, the appropriate Dean of Graduate Students or the Provost may elect to hold sanctions in abeyance pending the resolution of an appeal. If the removal decision is not overturned, the student is not entitled to a refund of tuition or student fees incurred during the semester in which the appeal was being considered.

4.10 WITHDRAWAL OF A DEGREE

The university reserves the right to withdraw a degree even though it has been granted should there be discovery that the work upon which it was based or the academic records in support of it had been falsified. In such a case, the degree will be withdrawn promptly upon discovery of the falsification. The complete reference to this university policy is available at: https://www.cmu.edu/policies/student-and-student-life/withdrawal-of-a-degree.html.

4.11 ACADEMIC RIGHTS AND RESPONSIBILITIES

Standard information pertaining to academic rights and responsibilities listed in the University Graduate Student Handbook (The WORD) cover the following:

- Degree attainment: achievement, timeline & format of requirements
- Financial Support
- Dissertation & Theses
- Graduate Student Concerns & Grievances
- All But Dissertation Policy
- Intellectual Property Policy
- Research
- Policy for Handling Alleged Misconduct in Research

4.12 STUDENT RIGHTS – APPEAL AND GRIEVANCES

Graduate students will find the Summary of Graduate Student Appeal and Grievance Procedures on the Graduate Education Resource webpage, https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html. This document summarizes processes available to graduate students who seek review of academic and non-academic issues. Generally, graduate students are expected to seek informal resolution of all concerns within the applicable department, unit or program before invoking formal processes. When an informal resolution cannot be reached, however, a graduate student who seeks further review of the matter is to follow the formal procedures outlined here. These appeal and grievance procedures shall apply to students in
all graduate programs of the University. Students should refer to the department specific information in this handbook for department and college information about the administration and academic policies of the program. Additionally, students may confer with the graduate student ombudsman on issues of process or other concerns as they navigate conflicts.”

The School of Architecture adopts the University’s practices regarding student rights. Students who believe that they have been treated inappropriately are encouraged to raise their concern(s) with their Program Track Chair, the GPEC, Head of School or other designated people in their department, college or central administration. For further information about procedures that graduate students can pursue when addressing concerns and grievances, go to https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html.

4.13 “GRANDFATHER” POLICY

The School maintains a “grandfather” policy that assures that students can graduate under the policies in effect at the time of matriculation.

4.14 NEW POLICIES

When policies are changed it is because the school believes the new rules offer an improvement; graduate students will be informed of any changes. However, students currently enrolled in a degree program that is affected by a change in policy may choose to be governed by the older policy that was in place at the time of their matriculation so long as the change is curricular and not procedural. In case degree requirements are changed and certain courses are no longer offered, the school will try to find some compromise that allows those students to satisfy the original requirements.

4.15 INTELLECTUAL PROPERTY POLICY, RESTRICTED RESEARCH AND POLICY FOR HANDLING ALLEGED MISCONDUCT IN RESEARCH

The School adopts the University’s policies pertaining to:

- Restricted Research: https://www.cmu.edu/policies/research/restricted-research.html
- Handling of Alleged Misconduct in Research: https://www.cmu.edu/policies/research/handling-alleged-misconduct-in-research.html

4.16 FINANCIAL OBLIGATIONS AND SUPPORT

The tuition charges for each academic year, as published by the university, apply only to the Fall and Spring semesters. Summer tuition, whenever applicable, are additionally charged and are normally based on number
of academic units taken. The university also publishes estimated cost of living for a graduate student each year at: https://www.cmu.edu/sfs/tuition/graduate/index.html.

Exceptional applicants may be offered Merit Scholarships when they are admitted to the SoA. These scholarships award will be processed at the beginning of each Fall and Spring terms and will continue in the following year(s) only if you maintain full time status, pay your balance according to the University’s schedule, and remain in good academic standing. The Merit Scholarship is valid only for the program to which you were first admitted, and cannot be applied to cover living or travel expenses, medical insurance, enrollment fees, or book and supplies for which you are responsible.

All enrolled students are automatically considered for an increase to the SoA Graduate Student Merit Scholarship in their second year. You will be notified at the end of your first year should you receive this increased award. Increased scholarships are awarded only to exceptional students based on the strength of their performance in the CMU program and demonstrated potential for advancing in their careers. Further funding can be obtained through paid Teaching and Research Graduate Assistantships, a limited number of which are available. See “Research Assistantship (RA) and Teaching Assistantship (TA)” below.

The School of Architecture does consider application requests for financial support. However, the award of graduate student support is dependent on several factors:

- Acceptance into one of the graduate programs in the school
- Needs of the school for Teaching Assistants
- Funds available to the school for various research projects and/or programs from within the university or from external sources
- Other budgetary resources of the school which may be allocated for graduate student support (only for Fall and Spring semesters)

### 4.16.1 Research Assistantship (RA) and Teaching Assistantship (TA)

A limited number of Research Assistantships (RA) and Teaching Assistantships are available to graduate students on a first-come and as-needed basis. Students should consult their Track Chairs and other SoA faculty for opportunities that build on previous strengths and experiences.

International students are reminded that they must comply with United States Citizenship and Immigration Services (USCIS) policies pertaining to their visa status. The Office of International Education is a resource for international students on this issue.

The Eberly Center for Teaching Excellence is a resource for TA and instructor training and included in the section Additional University Resources, Appendix A.

Graduate students are required to have a certain level of fluency in English before they can instruct in Pennsylvania, as required by the English Fluency in Higher Education Act of 1990. Through this Act, all institutions of higher education in the state are required to evaluate and certify the English fluency of all instructional personnel, including teaching assistants and interns. The full university policy can be reviewed at: https://www.cmu.edu/policies/faculty/evaluation-certification-english-fluency-instructors.html. The fluency of all instructional personnel will be rated by the Language Support in the Student Academic Success Center to determine at what level of responsibility the student can TA.
In addition to administering the International Teaching Assistant (ITA) Test (a mandatory screening test for any non-native speaker of English), Language Support in the Student Academic Success Center which helps teaching assistants who are non-native English speakers develop fluency and cultural understanding to teach successfully at Carnegie Mellon. Visit the Student Academic Success website for additional information: https://www.cmu.edu/student-success/.

**Employment Eligibility Verification**

If you are receiving a stipend, you are going to be a TA or you are planning to have a position with CMU then Employment Eligibility Verification is required.

Form I-9 must be completed within 3 business days of beginning work for any type of compensation (stipend or employment). Additional details are highlighted below.

To ensure compliance with federal law, Carnegie Mellon University maintains the [Employment Eligibility Verification (I-9) Policy](https://www.cmu.edu/student-success/) covering the university’s I-9 and E-Verify requirements:

Every individual receiving a stipend from CMU or employed by CMU must comply with the I-9 Policy by completing the Form I-9 within three business days following the first day of stipend start date/employment.

Individuals who expect to work on a federally funded project are further responsible for submitting an E-Verify Processing Request Form to the Office of Human Resources.

For more information, please see CMU’s [Guidance for Completing the Form I-9 and E-Verify Requirements at CMU](https://www.cmu.edu/student-success/) or visit the Human Resources Service website to learn more about Form I-9 and E-Verify and to schedule an appointment to complete the Form I-9.

**Additional Policies for PhD Students:**

A Ph.D. student who is fully funded (tuition and stipend) by the School during the Fall or Spring semesters is expected to contribute 20 hours of work per week. The work may involve serving as Research Assistant for project(s), or Teaching Assistant, or both. The nature of work and responsibilities will vary depending on the project(s) and courses.

The School has no obligation to provide RA-ships or TA-ships for self-supported Ph.D. students. Should these students be appointed as RA or TA, monetary compensation will be provided based on the hourly rate established by the university, and up to 20 hours per week, unless otherwise agreed with the faculty providing the support and approved by the PhD Program Committee.

Every effort will be made by the faculty to support and mentor those Ph.D. students who have an interest in an academic career and to give them increasing teaching responsibilities as the ability of the student develops. For Ph.D. students willing to and capable of being course instructors, teaching a course is equivalent to serving as a TA for two courses. In this case, the student will be supervised by a faculty advisor or mentor.

As a default, summer stipend support, if available, remains the same as the regular semester and hours expected remain the same (i.e., 20 hours per week). The principle is that students will continue to work on their own Ph.D. research work during summer. Any variation to this may be negotiated between the student and the
Principal Advisor.

Only students engaged in full 3 months of RA work in summer can be given two weeks off (paid). Otherwise, the student will only be paid for their actual working time.

4.16.2 Graduate Student Enrichment Fund

The School of Architecture encourages students to advance their own academic, professional, and career development. Limited funds are available to each Track-Chair on an annual basis to award on a first-come basis to the students currently enrolled in their programs. The funds are intended to offset the costs associated with student research projects including materials and equipment; special studio travel; earning professional credentials; presenting papers, posters, research products or creative work; and under special circumstances to supplement internships and research work for others and student fellowships. The Funds may NOT be used to pay students to do faculty research or other professional work, even if there is a perceived benefit for the students. Students should contact their Track Chair to inquire.

4.16.3 Outside Employment and Internships

In general, outside employment is discouraged during the period of full-time graduate studies except where specified by any given program. When employment is for an outside organization the student’s Program Track Chair and the Head of the School must be notified in writing. It is the student’s responsibility to ensure that such outside employment is allowed by the appropriate regulations (e.g., immigration rules, scholarship funding agency rules etc.).

In the case of an internship, it must meet a declared curricular or research objective. In such cases, the internship is equivalent to either 3 units of required elective credit, or up to a maximum of 36 units of independent study to fulfill a curricular requirement. Internships require approval of the Program Track Chair. Internships may be taken at any time during the calendar year unless specified by the program.

International students are required to consult with the Office of International Education for eligibility before seeking outside employment, an internship/co-op or signing an offer contract.

Graduate students wishing to do a Summer Internship are responsible to secure their position. International master’s and doctoral students interested in working off campus during the summer may apply for CPT status provided that they have completed one academic year of full-time enrollment and will be enrolled in the Fall semester.

All international graduate student internships must be in a field related to their program, have academic oversight, and students must be enrolled in an associated course that is counted toward the degree. All M.Arch internships must follow the NCARB AXP Guidelines outlined below. Student Interns will register for 3 units of 48-704 MS INTERN or 48-695 M.Arch Internship in the summer semester. MS students doing an internship will be coded INT and MS students remaining on campus to do research will be coded MMR. An Internship Plan Form must be submitted once the position is secured, and a Final Internship Report will be submitted once the Internship is complete for grading.

International students must consult with the Office of International Education for eligibility before seeking an
internship or signing an offer contract. It is also recommended that international students review the CPT handout at: [https://www.cmu.edu/oie/foreign-students/docs/cpt.pdf](https://www.cmu.edu/oie/foreign-students/docs/cpt.pdf) for detailed information about this employment authorization option.

PhD students that are required to be off campus to collect data for their research may be permitted to apply for CPT. Because the PhD program does not have a course requirement all other PhD students wishing a Summer Internship would apply for pre-completion OPT.

PhD students who will be doing an internship will be coded either INT or IDR. The INT program code follows the Summer All calendar. The IDR program code is used for students who will continue to be supported through the entire summer.

Many of the graduate programs at the SoA have been assigned CIP codes that are STEM-eligible. This means that in addition to one year of OPT, a student may apply for a 24-month STEM OPT Extension.

The Master of Advanced Architectural Design (MAAD), the Master of Architecture (M.Arch) and the Master of Science in Building Performance & Diagnostics (MSBPD) programs are assigned the CIP code – 04.0902, Architectural and Building Sciences/Technology. The Master of Science in Architecture Engineering Construction Management (MSAECM) is assigned the CIP code – 15.1501, Engineering/Industrial Management. The Master of Science in Computational Design (MSCD) is assigned the CIP code – 15.1302, CAD/CADD Drafting and/or Design Technology/Technician. The Master of Science in Sustainable Design (MSSD) is assigned the CIP code – 30.3301, Sustainability Studies.

The MSAECM program requires an internship, so CPT will enable an F1 student to complete the required internship. The other STEM-eligible grad programs do not require internship, therefore F1 students do not automatically qualify for CPT. To qualify for CPT, students must demonstrate that the 3-unit practicum counts toward the units required for graduation. For example, if a program requires 120 units to graduate, and the practicum would lift a student’s total of required courses to 123 units, the CPT does NOT count towards graduation. Hence the student is not eligible for CPT. A student may take more units than the required minimum, but the CPT must fit into the required minimum.

**INTERNSHIP WHILE ENROLLED:** for ALL F1 students that want to do an internship while enrolled in our grad programs in the fall and spring semesters, must comply with the following provisions.

- Complete the necessary forms available from the Office of International Education (OIE)
- Enroll in 48700 - Practicum for three (3) units
- Get a letter of commitment from a faculty member to supervise the practicum
- Bring the forms and an employment offer letter to the head of school for signature.
- The offer letter must comply with the NCARB Employment Requirements excerpted below. In simple terms NO unpaid internships - it is both illegal and unethical.
- At the completion of the internship, submit a report to one's faculty adviser for grading.

**INTERNSHIPS TOWARDS NCARB LICENSURE:** For those pursuing architect licensure, the NCARB AXP Guidelines ([https://www.ncarb.org/sites/default/files/AXP-Guidelines.pdf](https://www.ncarb.org/sites/default/files/AXP-Guidelines.pdf)) describe Employment Requirements on page 17:

- To earn experience in setting A or work-related setting O opportunities including: “Other Work Experience Under Licensed Professionals,” “Design or Construction Related Employment,” and some scenarios in “Construction Work,” one must be employed.
- Unpaid internships are not eligible to earn experience hours with the exception of the approved Community-Based Design Center/Collaborative as defined in experience setting O.
- No experience may be earned outside of the U.S. or Canada, except at an organization engaged in the practice of architecture or an approved Community-Based Design Center/Collaborative as defined in experience setting O.
- If the employment situation earns academic credit or is a requirement for a class, it can still qualify for AXP hours. Only employment situations qualify for AXP in this condition. The experience needs to be in compliance with the employment requirement and submitted as per the AXP rules.

4.16.4 Student Leave and Return Policies

The School of Architecture adopts the University’s student leave and return policies. For more Student Leave and Return information, refer to: https://www.cmu.edu/policies/student-and-student-life/student-leave.html and https://www.cmu.edu/policies/student-and-student-life/return-student.html respectively.

4.16.5 Visiting Students, Scholars and Fellows

Visiting students, scholars and fellows supported by outside funding sources who wish to undertake post-graduate or non-matriculating academic work at the School of Architecture may do so at the discretion of the Head of the School, and may be required to provide an amount equal to the current graduate student tuition to the School on a semester by semester basis.

4.16.6 University Information on Finance and Financial Aid

The “Graduate Student Financial Aid Guide” provides detailed and useful information regarding the following:

- Financial Aid Application Process
- Loan Eligibility
- Fellowships and Scholarships Office (FSO)
- Tuition Payment Plans (TMS)
- Student Employment
- Summer Stipend Payment Options
- Tax Status of Graduate Student Awards
- Tuition Remission
- And more....

Detailed information can be found online at: https://www.cmu.edu/graduate/financial-assistance/index.html and https://www.cmu.edu/sfs/financial-aid/index.html.
4.17 STATUTORY RIGHTS AND COMPLIANCE WITH REGULATIONS

4.17.1 Assistance for Individuals with Disabilities

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

The Office of Disability Resources at Carnegie Mellon University has a continued mission to provide physical and programmatic campus access to all events and information within the Carnegie Mellon community. We work to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Sections 503 and 504 of the Rehabilitation Act of 1973. Students who would like to receive accommodations can begin the process through Disability Resources secure online portal or email access@andrew.cmu.edu to begin the interactive accommodation process.

Students with disabilities are encouraged to self-identify with the Office of Disability Resources and request needed accommodations. Any questions about the process can be directed to Catherine Getchell, 412-268-6121, getchell@cmu.edu.

4.17.2 Safeguarding Educational Equity Policy against Sexual Harassment and Sexual Assault

The University prohibits sex-based discrimination, sexual harassment, sexual assault, dating/ domestic violence and stalking. The University also prohibits retaliation against individuals who bring forward such concerns or allegations in good faith. The policy can be viewed in its entirety at:

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

- Office of Title IX Initiatives, http://www.cmu.edu/title-ix/, 412-268-7125, tix@cmu.edu
- University Police, 412-268-2323
- University Health Services, 412-268-2157
- Counseling & Psychological Services, 412-268-2922

Additional resources and information can be found at: https://www.cmu.edu/title-ix/resources-and-information/resources.html.

4.17.3 Consensual Intimate Relationship Policy Regarding Undergraduate Students


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

Students are responsible for notifying the HUB of all address changes in a timely manner. Students will be held responsible for any failure to receive official college notices due to not having a correct address on file; F-1 students may jeopardize their status if address information is not kept current. Students can change their address using SIO, which is available via the HUB website: http://www.cmu.edu/hub/index.html.

4.17.5 Vacations and Time-off

Students with graduate assistantships are expected to continue with their research during academic breaks (including the Summer months) with the exception of the official university holidays. A complete list of the official university holidays can be found at the Human Resources website.

Due to federal regulations governing graduate student support, paid time off for personal business and vacations is not provided. A supported graduate student wanting to take a one-week break during one of the summer months in which they are receiving a stipend is expected to get approval for that break with their advisor and make up the work during the other three weeks of that month. Supported graduate students wishing to take longer periods of personal time off must do so without pay and must receive advanced approval from their research advisor a minimum of four weeks prior to the requested time off. The advisor must then notify the Graduate Program Administrator and Business Manager of this approval so that stipend adjustments can be processed.

4.17.6 Parental Accommodation Protocol

The School of Architecture extends the Student Maternity Accommodation Protocol (https://www.cmu.edu/graduate/programs-services/maternity-accommodation-protocol.html) to all parents with births or adoptions as amended below with brackets.

[All] students seeking any of the [Parental] Accommodations described below must register with the Office of the Dean of Student Affairs by contacting the office for an appointment by calling 412-268-2075.

The birth [or adoption] of a child is a significant life event that may require time away from academic pursuits for delivery and recovery from delivery of a newly born child [or integration of an adopted child]. [All] students whose anticipated delivery [or adoption] date is during the course of a semester may need to take time away from their academic responsibilities. [All] Carnegie Mellon students seeking time away are afforded two options as possible [Parental] Accommodation:

- **Short-Term Maternity Accommodation** – A short term absence from academic responsibilities up to a maximum of six (6) weeks. Short-Term Maternity Accommodation may be extended by two (2) weeks, for a total of eight (8) weeks, where a longer absence is medically necessary. Prior to the absence students must work with relevant university faculty and staff to adjust their course work, research, teaching and other academic responsibilities during the period of absence. This may include extensions of time to complete assignments, incomplete grades, and/or dropping courses, shifting research responsibilities and adjusting TA assignments. Students who take a Short-Term Maternity Accommodation will remain enrolled.

- **Formal Leave of Absence** – A formal leave of absence under the Student Leave Policy. Generally, the Student Leave Policy permits students to take a leave of absence for a full-semester, mini-semester, or for the
time remaining in the semester during which the leave is taken. Students who take a Formal Leave of Absence drop all remaining courses for the semester and are unenrolled for the semester. International students must consult with the Office of International Education before considering this option due to visa implications.

See [https://www.cmu.edu/graduate/programs-services/maternity-accommodation-protocol.html](https://www.cmu.edu/graduate/programs-services/maternity-accommodation-protocol.html) for additional university resources. Students should also consult with their Track Chair either before or in conjunction with registering with the Office of the Dean of Student Affairs.

**CONTACT:** Holly Hippensteel, Associate Vice President for Community Standards and Diversity Initiatives
5

SoA FACULTY, STAFF, and COMMITTEES

Please see https://soa.cmu.edu/faculty-staff for the most recent faculty and staff directory.

5.1 SCHOOL ADMINISTRATION & STAFF

5.1.1 Administrative Faculty

Omar Khan, Professor and Head, is responsible for all of the activities of the School. He hires faculty and staff and oversees all the academic and financial aspects of the School. He is available to students by appointment.

Mary Lou Arscott, AADip, RIBA, Associate Head, is responsible for continuously improving the quality and effectiveness of the studio education, improving the level of discourse in the School, and raising our profile external to the School.

5.1.2 Financial

David Koltas, Assistant Head, is responsible for oversight of all financial and personnel matters of the school and serves as a liaison with central administration. Responsibilities include budgeting and reporting, purchasing oversight, hiring transactions, and submitting student accounts transactions for school charges, scholarships, and awards.

Diana Martin, Financial Assistant, is responsible for day-to-day financial transactions, including reimbursable expenses.

5.1.3 Alumni & Career Development

Kristen Frambes, Director of Alumni & Professional Relationships, is the career development and alumni relations director for the SoA. She is also responsible for administration of the faculty promotion & tenure cases and faculty search.

5.1.4 Shops & Labs

Jon Holmes, Shop Director, oversees the Architecture Shop. He is responsible for providing instruction, setting safety policy, and providing training/maintenance on all Shop equipment.

Terry Hritz, dFAB Lab Manager, along with a team of monitors who have training in the operation and safety of lab use, staff the dFAB Lab. They are responsible for the lab’s robots, equipment, computers, software and facilities scheduling.
5.1.5 **Computing**

Robert J. Armitage, Computing Administrator, is responsible for the school’s computing infrastructure, including hardware, software, servers, workstations, printers, plotters, and scanners.

5.1.6 **Communications**

Meredith Marsh, Marketing & Communications Manager, is responsible for all of the internal and external communications for the school.

Carolyn Ristau, Office Assistant, is responsible for the administration of the SoA office. She supports the marketing and communications efforts of the school and assists with room reservations, mailing list management, event coordination, office maintenance, and other various tasks.

5.1.7 **Admissions**

Alexis McCune Secosky, Director of Recruitment & Enrollment, works with admission for all undergraduate and graduate programs by meeting with prospective students, coordinating recruitment efforts, and managing the admission committees. She advises students on architecture licensure as the SoA’s Architect Licensing Advisor. She also serves as the Advisor for the school’s chapter of the American Institute of Architecture Students (AIAS). To schedule an appointment use: calendly.com/amccune.

5.1.8 **Graduate Program Advisors**

Darlene Covington-Davis, MS/PhD Graduate Program Administrator, assists in the daily administration of the graduate programs and advising current students on administrative policies and procedures for the school and the university.

Erica Oman, Senior Academic Advisor, Studio Based Graduate Programs, assists students in establishing their class schedules and gives guidance about general university regulations. She is responsible for registration and transcripts. She can answer scheduling, academic audit, and general academic progress questions. She coordinates study abroad activities including inquiries, applications, and transfer credits. To schedule an appointment, use: calendly.com/eoman.

5.2 **GRADUATE PROGRAMS COMMITTEES**

The Graduate Programs committees administer all of the master’s programs. Their roles and responsibilities are described here, as well as in relevant sections below.

5.2.1 **The Graduate Programs Executive Committee (GPEC)**

The Graduate Programs Executive Committee (GPEC) comprises four full time faculty members appointed by the Head for a period of two years. The GPEC monitors all professional and post-professional graduate...
programs and makes recommendations to the Head of the School.

5.2.2 The Graduate Programs Working Committee (GPWC)

The Graduate Programs Working Committee (GPWC) comprises the Track Chairs of every master’s program, as well as Principal Advisors of PhD students, Graduate Programs Coordinators, and Graduate Admissions Coordinators. The GPWC is responsible for holding periodic curricular reviews of all graduate programs and any changes thereto.

The members of the Executive Committee chair the working committee and may nominate other faculty and graduate students to serve as members of the GPWC.

The GPEC determines who can or cannot vote on any matter brought before the GPWC, based on consideration of the role, qualification and expertise of members in relation to the subject matter, any potential conflict of interest or violation of confidentiality circumstance. Such determination shall be communicated in writing in advance to the Committee along with motion(s) prior to the vote being taken. The GPEC considers and may approve any petition requesting an exception from the academic guidelines and requirements spelled out in this document.

5.2.3 PhD Program Committee

The PhD Program Committee, comprising all faculty members who are Principal Advisors of Ph.D. students, administers all matters pertaining to the Ph.D. programs. Members of the PhD Program Committee are also members of the Graduate Program Working Committee. The Chair of the Graduate Program Executive Committee is a member of the PhD Program Committee.
6.1 STUDIOS

The studio spaces are the heart of the physical environment of the School. The maintenance of the studio is the responsibility of the students. The studio is home to both your colleagues and your faculty. Its arrangement is a design problem that must serve many needs from individual expression to group meetings and communication. Students are expected to leave the studio at the end of the semester in the same condition they found it at the beginning. The costs to the School of cleaning the studios at the end of the semester or the costs of repair of damage to the studio beyond regular wear and tear will be evenly divided between the students in the studio. The School is not responsible for personal belongings brought into the studios. Individuals found destroying studio facilities can be suspended from the university. Students are not permitted on roofs, parapets or other non-public areas of campus. Anyone found throwing objects off the roof or out any window could be suspended from the university.

6.1.1 Studio Furniture

Students are responsible for the condition of all studio furniture including, but not limited to, desks, chairs, file cabinets, and tool storage chests. Students must use a cutting mat when cutting on any surface, especially drafting boards, tables, or the floor. Students will be charged for damages, so please be careful.

6.2 PROJECTORS

Portable projectors are available for school-related activities. The projectors are kept with the computing team in CFA 201, the main office of the School of Architecture. To borrow a projector, students must work with a member of the faculty to assist in submitting their request. All requests must include a purpose, date, and time for pickup and return. Students should send this information to a faculty member and ask that they submit the request to soa-ithelp@andrew.cmu.edu.

6.3 COPIERS

Copiers are located throughout the campus. The School of Architecture copiers in CFA and MMCH are for the use of the faculty and staff only. Public printers and copy machines, including a color copier in Hunt Library, use Campus Xpress, Plaid Ca$h cards, or cash.
6.4 **FAX MACHINE**

Students may send and receive faxes via the office fax machine. Incoming faxes must be labeled with your full name and year. The fax number for the School is 412.268.7819.

6.5 **SOA FABRICATION FACILITIES**

Paint Spray Booths Paint spray booths are located in CFA A9 and MMCH 322. Spray adhesive, spray paint, and other aerosol media are forbidden in all indoor spaces and around campus buildings. Training on the use of each spray booth is required of all persons prior to usage. Studio coordinators are responsible for training their studio faculty at the beginning of each semester. Students are only permitted to use the booth for studio-related work or projects. Students are not permitted to use the booths to spray large items not related to studio work (e.g., buggies). Improper use of the spray booth will result in a loss of privileges of the unit and/or suspension from the university.

6.5.1 **Architecture Shop**

The School of Architecture maintains a shop facility on the ground level of CFA, room A9, and in surrounding spaces, for use by students, faculty, and staff of the School of Architecture. Students are trained to safely use a wide variety of tools and to explore the creative potentials of their interactions with various materials. The shop maintains equipment for working with wood and metal, a small crit space, and a student project storage area. Jon Holmes is the Shop Director. Assistant Shop Director Alex Troyer supervises during evenings and weekends with the help of a staff of student monitors. The schedule is always posted on the front door. The safety of all users is a primary concern at the shop. A strictly-enforced dress code requires shoes fully covering the tops of the feet, and the restraint or removal of loose clothing, hair and jewelry. Nonmedical personal listening devices are not permitted while using hazardous equipment. Eye protection must be worn by anyone in close proximity to operating machinery. Optional dust masks and hearing protectors are provided. Training by shop staff is required before use of any machine, regardless of prior experience elsewhere. Training sessions for new undergraduate students are scheduled through their classes. Additional training sessions for others may be arranged by request. Some hand and power tools may be borrowed overnight with staff approval, and with the understanding that they will be cared for and returned in good condition. A limited inventory of raw materials including plywood, lumber and specialty adhesives are available for purchase at the shop.

6.5.2 **Design Fabrication (dFAB) Lab**

The Design Fabrication (dFAB) Lab is located on the C-level of Margaret Morrison Carnegie Hall. This facility includes a range of digitally-driven additive and subtractive tools including 3D printers, laser cutters, a four-axis CNC router, CNC Bed Mill and vacuum former. The lab also includes a dedicated Page 45 robotic fabrication space that includes three large and one small industrial robotic arms. These four robotic arms are configured as a six-axis robot with a dedicated rotary table as well as a six-axis robot mounted on a 23-foot linear track. The small robotic arm is mounted on a mobile cart for use in locations outside the dFAB Lab. Tooling includes a milling spindle, gripper, hot wire saw and digital probe. Dedicated computer workstations
with CAD/CAM software compliment the fabrication equipment. Jeremy Ficca is Director of dFAB Lab and Terry Hritz is the dFAB Lab Manager. They, along with other faculty and trained Student Monitors, staff the lab for roughly 70-75 hours per week. Use of the lab facilities outside of staffed hours is strictly forbidden. Lab hours are posted in the lab and on the dFAB website at soa.cmu.edu/dfab. Access is limited to SoA faculty, staff, currently-enrolled students, and other students enrolled in dFAB authorized courses that specifically require the use of the lab as part of the course syllabus. All users of dFAB are subject to all policies and procedures posted on the dFAB website. Students may also reserve equipment time through the online reservation system found through the dFAB website.

6.6 COMPUTING

All incoming SoA students are expected to have familiarity with digital tools and workflows. CMU and SoA are world leaders in the area of computation and the many ways it relates to design and architecture, and we expect students to master these tools and skills as part of their education. The stronger your computing skills, the more you will be able to get out of your CMU SoA experience. To best support your educational experience and success as a student member of the CMU SoA community, you are expected to be prepared with your own sufficiently powerful laptop computer, specific software packages, and essential digital skills that are catered to your curricular needs at SoA.

The computing facilities of the School of Architecture are for SoA students, faculty, and staff only. Use by other students is by permission or by enrollment in courses offered by the School. If you observe unauthorized use, please inform: soa-ithelp@andrew.cmu.edu. General Computing Rules Violations of any computing rules or policies may result in disabling access to the SoA computing equipment.

- Game playing is forbidden on SoA workstations, unless it is specifically related to coursework.
- Headphones must be used for all music and sound.
- No personal software may be installed on SoA workstations.
- All data must be stored on an external device or on the server. Do not save to the desktops; the SoA team is not responsible for any data left on studio workstations.

6.7 PROBLEM REPORTING

Any and all issues with computers, printers, plotters and scanners should be immediately conveyed in detail to soa-ithelp@andrew.cmu.edu. The description of the problem should be as specific as possible, including: the machine in question; the software being used; the task being performed; etc. If reporting a computer problem please provide the hostname for the machine in question. In windows open a command prompt and type in “hostname”. Studio Computing Equipment CFA studios will provide power for laptop use and MMC studios will have desktops for the studios that require them. Plotters and printers are available in spaces adjacent to the undergraduate studios. Food or drink are expressly forbidden near any SoA computing equipment.

6.7.1 Flat Screen Monitors

Upon request the SoA will provide students in CFA Studio with one 22” flat screen monitor and articulated
arm for use at their studio desk.

- Monitors must NOT leave the studio and must remain locked at the studio desk the entire semester.
- Distribution times will be set at the beginning of each semester.
- Monitors are to be returned at the end of each semester in the condition in which they were received. Failure to do so will result in a fine equal to that of the replacement value.
- Studio Coordinators have final discretion as to whether monitors are allowed in studios.
- Monitors are available on a first-come, first-served basis. Students should contact SOA Computing [soa-ithelp@andrew.cmu.edu] to request a monitor once they have received approval to do so from a Studio Coordinator.

6.7.2 Server Space

The SoA provides file storage for each studio. While every effort is made to make the server stable, secure, and available, the SoA is in no way responsible for data or the guarantee of access. It is safe computing practice to have multiple backups of important data. Server space is limited to 40GB of shared space per studio. When a space has reached its size limitation, no further files are able to be uploaded until the required space has been cleared. Be mindful that this is a shared space; do not use more than your fair share. The SoA servers are exclusively reserved for the storage of school related data; software installers, movies, personal backups etc. will not be tolerated. Unauthorized Software All use, copying, distribution, or solicitation of unauthorized or pirated software is expressly forbidden and punishable by law. Fines can exceed $100,000 and jail time per incident.

6.7.3 Printing

- Printing multiple copies is forbidden. SoA printers are not copiers and should not be used as such. If you require multiple copies of a document, please print one copy and take the output to a copy station on campus. Tartan Ink is located in the University Center and services provided include black/white and color copies, single and double-sided copying, assortment of colored and textured papers, including cover stock, specialty papers such as gloss paper, resume quality paper, etc. They also offer binding and finishing options that include cutting, lamination, folding, padding, stapling, tape binding (thermal binding), collating, comb binding, and coil binding: www.cmu.edu/tartanink
- Large printing jobs (greater than 50 pages) are not permitted. Printing larger jobs or multiple copies can result in suspension from computer use.
- Use double-sided prints whenever possible for paper and ink conservation.
- Transparencies, sticky back, and all other personally supplied media are expressly forbidden in the studio laser printers. Use of these types of materials will damage the equipment.
- Please recycle print paper.
- Please inform [soa-ithelp@andrew.cmu.edu] if ink or toner is low in any SoA printer.

6.7.4 Studio-based Media

Both the second floor of CFA and the third floor of MMC have a 42” large-format color inkjet plotter, a flatbed scanner, and multiple black-and-white laser printers. There is also a 36” large format black and white laser plotter and scanner located in MMCH. SoA will provide plotter ink cartridges and paper, and laser toner
cartridges and paper. Plotter paper will be provided in limited quantities. If the free plotter paper privilege is abused, students will be responsible for providing their own paper.

*Printing on the HP 42” studio plotters will now be done through a PC Kiosk using PDF files.

6.7.5 SoA Media Center

The Media Center is located in CFA 213. Equipment currently includes:

- Two HP Designjet plotters with 36” or 42” 24lb bright white bond paper and 36” or 42” HP Heavyweight coated paper
- HP Color Laser printer capable of Letter & 11”x17” plain paper, card stock or satin finish
- Canon high quality photo inkjet capable of up to 13”x19” in Matte or Gloss photo paper.

The Media Center will be staffed, and these services are available on a fee-basis and charged to the student’s university account.

We prefer to use in house paper with our equipment, if you have a special request please check with the Media Center beforehand. When submitting files to the Media Center, make sure PDFs do not contain multiple page sizes, if you require more than one size printed, please submit multiple files with like sizing. Please allow extra time if you are submitting a large print job, it is suggested to contact the media center before submitting a large print job. Files that are over 200mb can cause a plotter to crash, please make sure to optimize your files in Acrobat, un-optimized files will take two to three times as long to process on the plotters. Vector graphics will cause plotters to take much longer to print, if at all. Please rasterize files containing vector graphics. Please be attentive to your email after submitting files to the Media Center as we will email you if there are any issues with your submission. Canon photo printers are extremely slow, please contact the media center about printing on these printers.

Hours will be posted on the SoA website and on the door of the media center.

6.7.6 CFA Multimedia Computer Labs

The CFA Multimedia Computer Labs are located in CFA 317, 318, 321, and 323. Computing Services and the College of Fine Arts Dean’s Office jointly maintain the Computer Lab. These spaces have PC and Mac stations and are available to SoA students. Staffed hours change throughout the year, for up to date information please check www.cmu.edu/computing/labs. These spaces are not operated or supported by the SOA team. Direct any questions about these Labs to a Support Specialist. [it-help@cmu.edu] Multimedia equipment, such as video camcorders, DSLR still cameras, and many other devices, are available for lending in Hunt Library at the main circulation desk. For more information, see www.cmu.edu/computing/tes/computerlabs/lending.

6.7.7 tech.soa

Tech.soa (tech.soa.cmu.edu) is an ecosystem of architectural design technology resources offered to and by CMU SoA students, faculty, and staff. At this website you can register for upcoming workshops, contribute your own content, learn about the facilities, view useful tutorials, and utilize a repository of common
references. In conjunction with tech.soa, the SoA also launched a Slack forum (cmuso.soa.slack.com) as a platform for more real time and organic discussion around SoA technology resources and general school culture.

6.8  SOA COMMUNICATIONS

A student’s failure to receive and read University communications delivered to their official email address in a timely manner does not absolve that student from knowing and complying with the content of such communications.

While students are allowed to redirect email from their official University email address to another address (e.g. @gmail.com), they do so at their own risk. The University is not responsible for the handling of email by other service providers. Having email redirected does not absolve students from knowing and complying with the content of the communication sent to their official University email address.

In addition to maintaining standard email etiquette, students are not allowed to use school distribution lists without first requesting permission. Students who wish to use these lists should contact Meredith Marsh [mamarsh@andrew.cmu.edu].

You may check your email at any University or School computer. Individual classes and studios may have separate bulletin boards or Canvas sites on the campus network. To access the Canvas system, go to: www.cmu.edu/canvas.

6.8.1  Announcements and Room Reservations

The SoA community is encouraged to share events, news, announcements, and updates with the Marketing & Communications team by completing the form at http://bit.ly/SoARoomReservation. All room reservations for student meetings, events, etc. must also be submitted through this form without exception. Submitting information through this form also allows students the opportunity to suggest content for the SoA newsletters, website, social media accounts, and calendars.

6.8.2  SoA Calendars

The SoA lists events on the SoA website calendar and on individual Google calendars for students, faculty, public events, and room reservations. The calendars are listed on the following pages on the SoA website:

- SoA Website Upcoming Events: soa.cmu.edu/events
- SoA Google Calendars: soa.cmu.edu/calendar

6.8.3  SoA Website

The SoA website, soa.cmu.edu, is a good source of information for SoA events, announcements, and course information.
6.8.4 **Marketing Surveys**

The SoA Marketing & Communications team sends out annual surveys to current students to collect feedback on the program. Stay tuned for information in SoA newsletters for the links to these surveys each year.

6.8.5 **Weekly Email Newsletters**

The School of Architecture shares news, upcoming events, reminders, and job opportunities in a weekly email newsletter to students. Students are responsible for reading this newsletter to know what is happening within the school.

6.8.6 **Social Media**

Students are encouraged to follow SoA on the school’s official social media accounts on Facebook, Twitter, Instagram, Vimeo, and Flickr under the handle @CMUSoA and on LinkedIn. These are the only social media accounts maintained by SoA; the SoA is not responsible for the content published by any other associated or non-associated account. These accounts serve a range of audiences, both internal and external, and do not comprehensively publish information necessary for students. As noted above, students must know and comply with all content of communications sent to their official University email address; social media does not act as a substitute for official email communication.

6.8.7 **Vitrines**

Display cases are located on the second floor of CFA by both stairwells and on the third floor of Margaret Morrison. A schedule of displays is coordinated with faculty from the School. Studio coordinators will work with their students to create displays in the vitrines and gallery spaces.

6.8.8 **Message Boards**

There are two message board locations maintained by the School of Architecture. Message boards are located in both of the stairwells outside the main studio of CFA 200. Two additional message boards are located on the third floor of Margaret Morrison by the elevator and between the staircases.

These message boards are for SoA communication only. They will include school announcements, important deadlines, community activities, conferences, lectures at other universities, scholarship information, and competition announcements. Students should check these message boards regularly for announcements and information.
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Graduate Student Resources

2020-2021
Highlighted University Resources for Graduate Students
and
The WORD, Student Handbook

Key Offices for Graduate Student Support

Graduate Education Office
www.cmu.edu/graduate; grad-ed@cmu.edu
The Graduate Education Office provides central support for all Master’s and Doctoral students with a focus on their academic experience at Carnegie Mellon. The Graduate Education Office serves as a hub for connecting graduate students to relevant campus experts and resources to support their academic success, understanding of university level policies and practices and to assist them in advancing their personal and professional development.

Examples of resources offered through the Graduate Education Office include- but are not limited to:

- Website with university resources, contact information for CMU programs and services, calendar of events related to graduate students
- Bi-monthly email to all graduate students with information on activities, resources and opportunities
- Professional Development Seminars and Workshops
- GSA/Provost Conference Funding Grants
- GSA/Provost Small Research Grants (GuSH)
- Consultations on issues related to the graduate student experience

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

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

Graduate students will find the enrollment information for Domestic Partner Registration and Maternity Accommodations in the Office of the Dean of Students or on their website. This Office also manages the Emergency Student Loan (ESLs) process. Emergency Student Loans are made available through generous gifts of alumni and friends of the university. The Emergency Student Loan is an interest-free, emergency-based loan repayable to the university within 30 days. Loans are available to enrolled students for academic supplies, medication, food or other expenses not able to be met due to unforeseeable circumstances.

Additional resources for graduate students include College Liaisons and the Student Support Resources team. College Liaisons are senior members of the Division of Student Affairs who work with departments and colleges addressing student concerns across a wide range of issues. College Liaisons are identified on the student SIO page in the Important Contacts list. The Student Support Resources team offers an additional level of support for students who are navigating any of a wide range of life events. Student Support Resources staff members work in partnership with campus and community resources to provide coordination of care and support appropriate to each student’s situation.

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

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

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

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

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

**Assistance for Individuals with Disabilities**

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

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

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

**Eberly Center for Teaching Excellence & Educational Innovation**

www.cmu.edu/teaching

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

**Graduate Student Assembly**
www.cmu.edu/stugov/gsa/index.html

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

GSA offers an expanding suite of social programming on and off-campus to bring graduate students from different departments together and build a sense of community. GSA is the host of the Graduate Student Lounge on the 3rd floor of the Cohon University Center- a great place to study or meet up with friends. GSA also maintains a website of graduate student resources on and off-campus. Through GSA’s continued funding for professional development and research conferences, the GSA/Provost Conference Funding Program and GSA/Provost GuSH Research Grants are able to run, as managed by the Graduate Education Office. As we move forward, GSA will continue to rely on your feedback to improve the graduate student experience at CMU. Feel free to contact us at <gsa@cmu.edu> to get involved, stop by our office in the Cohon University Center Room 304 or become a representative for your department.

**Office of International Education (OIE)**
http://www.cmu.edu/oie/

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

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

Carnegie Mellon Ethics Hotline
https://www.cmu.edu/hr/resources/ethics-hotline.html
The health, safety and well-being of the university community are top priorities at Carnegie Mellon University. CMU provides a hotline that all members of the university community should use to confidentially report suspected unethical activity relating to areas below:

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

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

The hotline is NOT an emergency service. For emergencies, call University Police at 412-268-2323.
Policy Against Retaliation
It is the policy of Carnegie Mellon University to protect from retaliation any individual who makes a good faith report of a suspected violation of any applicable law or regulation, university Policy or procedure, any contractual obligation of the university, and any report made pursuant to the Carnegie Mellon University Code of Business Ethics and Conduct.

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

Key Offices for Academic & Research Support

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

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

Student Academic Success Center
https://www.cmu.edu/student-success/
Student Academic Support Programs

Tartan Scholars
- The Tartan Scholars program was created to provide support for limited resourced students through an intentional first year undergraduate experience with the goals of enhancing the cohort’s skill and community building through a lens of self-authorship, growth mindset, and a sense of belonging. As part of the Student Academic Success
Center, Tartan Scholars are invited to join the University and participate in summer initiatives and pre-orientation activities prior to their first year at the University.

- There are opportunities for graduate students to serve as accountability, learning, or development partners, workshop facilitators, and presenters. Contact Diane Hightower at ddhighto@andrew.cmu.edu for more details.

**Learning Support**

- **Supplemental Instruction:** Supplemental Instruction (SI) is an academic support model that utilizes peer-assisted study sessions. The SI program provides regularly scheduled review sessions on course materials outside the classroom. SI is a non-remedial approach to learning as the program targets high-risk courses and is available in select courses based on data related to past student performance and feasibility.

- **Peer Tutoring:** Weekly Tutoring Appointments are offered in a one-on-one and small group format to students from any discipline who need assistance with a course that may not be supported by our other services. Weekly appointments give students the opportunity to interact regularly with the same tutor to facilitate deeper understanding of concepts. Students can register online through the Student Academic Success website.

- **Academic Coaching:** Academic Coaching provides holistic one-on-one peer support and group workshops to help students find and implement their conditions for success. We assist students in improving time management, productive habits, organization, stress management, and study skills. Students will request support through the Academic Success Center website and attend in-person meetings or meet using video and audio conferencing technology to provide all students with support.

- **“Just in Time” Workshops:** The Student Academic Success team is available to partner with instructors and departments to identify skills or concepts that would benefit from supplemental offerings (workshops, boot camps) to support students’ academic success and learning. We are eager to help convene and coordinate outside of the classroom skill-building opportunities that can be open to any student interested in building skill or reinforcing course concept mastery.

- **Study Partners:** Support for students to create and benefit from their own study groups: The Student Academic Success team assists students in forming and benefiting from peer study groups, whereby all students can reap the benefits of peer-to-peer learning, student agency, and collaboration skill development. Staff from the Student Academic Success Center will be made available to instructors and students to assist with the formation of peer-led study groups. This level of support is open to any course where the instructor requests or agrees such support is appropriate and students are
interested in both leading and participating.

Language and Cross-cultural Support
More than 60% of graduate students at Carnegie Mellon are international students, and others are nonnative speakers of English who have attended high school or undergraduate programs in the US. Many of these students want to hone their language and cross-cultural skills for academic and professional success. Students can choose from sessions on
- how to give a strong presentation,
- writing academic emails,
- expectations and strategies for clear academic writing,
- how to talk about yourself as a professional in the U.S.,
- developing clearer pronunciation,
- using accurate grammar,
- building fluency, and more.
- Students can make an appointment with a Language Development Specialist to get individualized coaching on language or cross-cultural issues.

The Student Academic Success Center is also charged with certifying the language of International Teaching Assistants (ITAs), ensuring that nonnative English speakers have the language proficiency needed to succeed as teaching assistants in the Carnegie Mellon classroom. Students preparing to do an ITA Certification should plan to take classes offered by the language support team at the SASC from the beginning of their first semester. Start by contacting the language support team at the SASC website or attend a Language Support Orientation at the SASC or in your department.

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

Research at CMU
www.cmu.edu/research/index.shtml
The primary purpose of research at the university is the advancement of knowledge in all fields in which the university is active. Research is regarded as one of the university’s major contributions to society and as an essential element in education, particularly at the graduate level and in faculty development. Research activities are governed by several university policies. Guidance and more general information is found by visiting the Research at Carnegie Mellon website.

Office of Research Integrity & Compliance
www.cmu.edu/research-compliance/index.html
The Office of Research Integrity & Compliance (ORIC) is designed to support research at Carnegie Mellon University. The staff work with researchers to ensure research is conducted with integrity and in accordance with federal and Pennsylvania regulation. ORIC assists researchers with human subject research, conflicts of interest, responsible conduct of research, export controls, and institutional animal care & use. ORIC also provides consultation, advice, and review of allegations of research misconduct.

Key Offices for Health, Wellness & Safety

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

Health Services
www.cmu.edu/HealthServices/
University Health Services (UHS) is staffed by physicians, advanced practice clinicians and registered nurses who provide general medical care, allergy injections, first aid, gynecological care and contraception as well as on-site pharmaceuticals. The CMU Student Insurance Plan covers most visit fees to see the physicians and advanced practice clinicians & nurse visits. Fees for prescription medications, laboratory tests, diagnostic procedures and referral to the emergency room or specialists are the student’s responsibility and students should review the UHS website and their insurance plan for detailed information about the university health insurance requirement and fees.

UHS also has a registered dietician and health promotion specialists on staff to assist students in addressing nutrition, drug and alcohol and other healthy lifestyle issues. In addition to providing direct health care, UHS administers the Student Health Insurance Program. The Student Health Insurance plan offers a high level of coverage in a wide network of health care providers and hospitals. Appointments can be made by visiting UHS’s website, walk-in, or by telephone, 412-268-2157.

Campus Wellness
https://www.cmu.edu/wellness/
At Carnegie Mellon, we believe our individual and collective well-being is rooted in healthy connections to each other and to campus resources. The university provides a wide variety of wellness, mindfulness and connectedness initiatives and resources designed to help students thrive inside and outside the classroom. The BeWell@CMU e-newsletter seeks to be a comprehensive resource for CMU regarding all wellness-inspired events, announcements and professional and personal development opportunities. Sign up for the Be Well monthly newsletter via https://bit.ly/BeWellNewsletter or by contacting the Program Director for Student Affairs Wellness Initiatives, at alusk@andrew.cmu.edu.

Religious and Spiritual Life Initiatives (RSLI)
www.cmu.edu/student-affairs/spirituality
Carnegie Mellon is committed to the holistic growth of our students, including creating opportunities for spiritual and religious practice and exploration. We have relationships with
local houses of worship from various traditions and many of these groups are members of
CMU’s Council of Religious Advisors. We also offer programs and initiatives that cross
traditional religious boundaries in order to increase knowledge of and appreciation for the full
diversity of the worldview traditions. Our RSLI staff are here to support students across the
spectrum of religious and spiritual practice and would be more than happy to help you make a
connection into a community of faith during your time at CMU.

University Police
http://www.cmu.edu/police/
412-268-2323 (emergency only), 412-268-6232 (non-emergency)
The University Police Department is located at 300 South Craig Street (entrance is on Filmore
Street). The department’s services include police patrols and call response, criminal
investigations, fixed officer and foot officer patrols, event security, and crime prevention and
education programming as well as bicycle and laptop registration. Visit the department’s
website for additional information about the staff, emergency phone locations, crime
prevention, lost and found, finger print services, and annual statistic reports.

Carnegie Mellon University publishes an annual campus security and fire safety report
describing the university’s security, alcohol and drug, sexual assault, and fire safety policies
and containing statistics about the number and type of crimes committed on the campus and
the number and cause of fires in campus residence facilities during the preceding three years.
Graduate students can obtain a copy by contacting the University Police Department at 412-
268-6232. The annual security and fire safety report is also available online at
https://www.cmu.edu/police/annualreports/.

Shuttle and Escort Services
Parking and Transportation coordinates the Shuttle Service and Escort Service provided for
CMU students, faculty, and community. The Shuttle & Escort website has full information about
these services, stops, routes, tracking and schedules.

The WORD
http://www.cmu.edu/student-affairs/theword/
The WORD is Carnegie Mellon University’s student on-line handbook and is considered a
supplement to the department (and sometimes college) handbook. The WORD contains
campus resources and opportunities, academic policy information and resources,
community standards information and resources. It is designed to provide all students with
the tools, guidance, and insights to help you achieve your full potential as a member of the Carnegie Mellon community. Information about the following is included in The WORD (not an exhaustive list) and graduate students are encouraged to bookmark this site and refer to it often. University policies can also be found in full text at: http://www.cmu.edu/policies/.

Carnegie Mellon Vision, Mission
Statement of Assurance
Carnegie Code

Academic Standards, Policies and Procedures
  Educational Goals
  Academic and Individual Freedom
  Statement on Academic Integrity Standards for Academic & Creative Life
  Assistance for Individuals with Disabilities
  Master’s Student Statute of Limitations
  Conduct of Classes
  Copyright Policy
  Cross-college & University Registration
  Doctoral Student Status Policy
  Evaluation & Certification of English Fluency for Instructors
  Final Exams for Graduate Courses
  Grading Policies
  Intellectual Property Policy
  Privacy Rights of Students
  Student’s Rights

Research
  Human Subjects in Research
  Office of Research Integrity & Compliance
  Office of Sponsored Programs
  Policy for Handling Alleged Misconduct of Research
  Policy on Restricted Research

Tax Status of Graduate Student Awards

Campus Resources & Opportunities
  Alumni Relations
Assistance for Individuals with Disabilities
Athletics, Physical Fitness & Recreation
Carnegie Mellon ID Cards and Services
Cohon University Center
Copying, Printing & Mailing
Division of Student Affairs
Domestic Partner Registration
Emergency Student Loan Program
Gender Programs & Resources
Health Services
Dining Services
The HUB Student Services Center
ID Card Services
Leonard Gelfand Center
LGBTQ Resources
Multicultural and Diversity Initiatives
Opportunities for Involvement
Parking and Transportation Services
Shuttle and Escort Services
Spiritual Development
University Police
Student Activities
University Stores

Community Standards, Policies and Procedures
Alcohol and Drugs Policy
AIDS Policy
Bicycle/Wheeled Transportation Policy
Damage to Carnegie Mellon Property
Deadly Weapons
Discriminatory Harassment
 Disorderly Conduct
Equal Opportunity/Affirmative Action Policy
Freedom of Expression Policy
Health Insurance Policy Immunization Policy
Missing Student Protocol
Non-Discrimination Policy
On-Campus Emergencies
Pets
Political Activities
Recycling Policy
Riotous and Disorderly Behavior
Safety Hazards
Scheduling and Use of University Facilities
Sexual Harassment and Sexual Assault Policy
Smoking Policy
Student Accounts Receivable and Collection Policy and Procedures
Student Activities Fee
Student Enterprises
Workplace Threats and Violence Policy
Standard Master’s Programs Forms

This appendix contains departmental forms for students’ use.
Thesis
Submitted in Partial Fulfillment of the requirements for the degree of

Master of Science in Sustainable Design

TITLE:
Thesis Title

AUTHOR:
Your Name

ACCEPTED BY ADVISORY COMMITTEE:

Professor NAME Principal Advisor DATE

Professor NAME Advisor DATE

Professor NAME Advisor DATE

Professor NAME Advisor DATE