## Fall 2021 SoA Incoming Graduate Student Enrollment Onboarding Information

The Carnegie Mellon University, School of Architecture (SoA) is excited to welcome you to our Graduate Program! Please read through the information provided in this document to assist you as you plan to begin your program this fall.

## Fall 2021 University Graduate Education Deadlines

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Immediately</strong></td>
<td>Set your <a href="https://www.cmu.edu/graduate/incoming-students/incoming-deadlines.html">Andrew ID password</a> and Andrew email account.</td>
</tr>
<tr>
<td>June</td>
<td><strong>Health History and Immunizations:</strong> Submit health history and immunization forms to <a href="https://www.cmu.edu/graduate/incoming-students/incoming-deadlines.html">Health Services via HealthConnect</a>.</td>
</tr>
<tr>
<td>July</td>
<td><strong>Student Health Insurance Enrollment:</strong> Enrollment begins for student health, dental, and vision insurance (Student Health Plan) for incoming students. Eligible participants have a specific enrollment period once each academic year (called “open enrollment”) for their medical enrollment or waiver decisions.</td>
</tr>
<tr>
<td>Mid-July</td>
<td><strong>COVID-19 Vaccine Requirement for 21-22 Academic Year Announced:</strong> Consistent with scientific evidence on the importance of vaccine adoption to control spread of the virus, to the extent permissible by law, Carnegie Mellon University will require all enrolled students to be vaccinated for COVID-19, effective this fall semester. This policy will apply to all undergraduate and graduate students in U.S.-based programs. CMU regularly updates the vaccines required by university policy, which will be updated by July 15 for the 2021-22 academic year. Learn more about <a href="https://www.cmu.edu/graduate/incoming-students/incoming-deadlines.html">fall 2021 vaccine requirements</a>.</td>
</tr>
<tr>
<td>August 15</td>
<td><strong>Deadline for Fall Tuition Payment:</strong> You can view/pay your bill via the Billing &amp; Payments page at The HUB. Carnegie Mellon offers payment options that allow students and families to pay amounts due to the university in manageable monthly installments and provides the convenience of enrolling and making payments online.</td>
</tr>
<tr>
<td>August (TBA)</td>
<td><strong>ALL International students</strong> are required to attend a mandatory <a href="https://www.cmu.edu/graduate/incoming-students/incoming-deadlines.html">International Graduate Student Orientation and Immigration check-in</a>. Visit the <a href="https://www.cmu.edu/graduate/incoming-students/incoming-deadlines.html">Office of International Education</a> for more information.</td>
</tr>
<tr>
<td>August 16-20</td>
<td><strong>University-wide Graduate Student Fall Orientation</strong> for ALL new graduate students. Full Schedule and Canvas Course will OPEN in August. Email the <a href="https://www.cmu.edu/graduate/incoming-students/incoming-deadlines.html">Graduate Education Office</a> of questions or issues connecting to Canvas or our synchronous event. Email <a href="https://www.cmu.edu/graduate/incoming-students/incoming-deadlines.html">Disability Resources</a> if you have a disability and need an accommodation for your disability in order to participate fully in Graduate Student Orientation.</td>
</tr>
<tr>
<td>August 30</td>
<td><strong>First day of Fall 2021 semester classes.</strong></td>
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<tr>
<td>September</td>
<td><strong>Deadline for Student Health Insurance Enrollment:</strong> Enrollment ends for student health, dental, and vision insurance (Student Health Plan) for incoming students.</td>
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<tr>
<td><strong>Immediately,</strong></td>
<td><strong>If campus parking is desired</strong> <strong>Campus Parking Permit:</strong> Submit your application. Anyone seeking a parking permit on campus must contact <a href="https://www.cmu.edu/graduate/incoming-students/incoming-deadlines.html">Parking &amp; Transportation Services</a>.</td>
</tr>
</tbody>
</table>
Overall Helpful Links about Graduate Education at CMU:
The university has created several helpful webpages for incoming graduate students:

- **Graduate Education** - for other programs, services, financial matters, policies, etc. - [http://www.cmu.edu/graduate/](http://www.cmu.edu/graduate/)
- **Incoming Graduate Student Information** – preparation for campus arrival, moving to Pittsburgh, and orientation - [http://www.cmu.edu/graduate/incoming-students/index.html](http://www.cmu.edu/graduate/incoming-students/index.html)
- **Office of International Education (OIE)** - [https://www.cmu.edu/oie/foreign-students/index.html](https://www.cmu.edu/oie/foreign-students/index.html)
- **Center for Student Diversity and Inclusion** - [https://www.cmu.edu/student-diversity/](https://www.cmu.edu/student-diversity/)
- **Counseling and Psychological Services (CaPS)** - [https://www.cmu.edu/counseling/](https://www.cmu.edu/counseling/)
- **Disability Resources** - [https://www.cmu.edu/disability-resources/](https://www.cmu.edu/disability-resources/)
- **Graduate Student Association (GSA)** - [https://www.cmu.edu/stugov/gsa/](https://www.cmu.edu/stugov/gsa/)

Obtaining Andrew ID and Accessing your Andrew Account:
Your Andrew ID * gives you access to your Andrew account to give you access to the university’s computing services such as Student Information Online (SIO), the computing clusters, and your Carnegie Mellon Google Mail email account. You will also need your Andrew ID and password to submit your health history and immunization forms, enroll in student health insurance, register for classes, and apply for temporary or permanent university housing. You should have already received an email from Computing Services with the subject line "Receive your Andrew userID". The initial email will be sent to the personal email used in your application. The email will contain a link for retrieving your Andrew userID and instructions for continuing the First Pass process to set your initial password.

To receive your Andrew userID and set your initial password:

1. Follow the link in the email you received from Computing Services ([it-help@cmu.edu](mailto:it-help@cmu.edu)).
   
   **Note:** The link is unique and can only be used once. Be sure to visit the web page before the expiration date stated in the email. If you have not activated your Andrew ID prior to the expiration date, please contact [it-help@cmu.edu](mailto:it-help@cmu.edu).

2. Follow the on screen First Pass instructions to receive your Andrew userID. Write down your Andrew userID; you will only see it once and you will need it to set your password.

3. Once you have received your Andrew userID, a confirmation page will be displayed.

4. You will receive another email with instructions on how to set a permanent password.

Your Carnegie Mellon email account with Google Mail is your source for official and important Carnegie Mellon communications. Please check it frequently before you arrive on campus and during your academic career (for international students, I-20 information is sent to your Andrew email).

To get started with email and other computing at Carnegie Mellon, please visit the Computing Services website to explore the computing resources available to you as a Carnegie Mellon student.

**Note:** Incoming graduate student records were created in late April and early May. Around that time you should have received an email from Computing Services requesting you to set up your Andrew userID. If you haven’t received your Andrew ID, and the link that you received in that email has expired, you must contact Computing Services at [it-help@cmu.edu](mailto:it-help@cmu.edu).

*Andrew ID:*
All incoming students are issued an "Andrew ID." Your Andrew ID acts as your Carnegie Mellon User ID, and allows you access to the University's various websites. Your Andrew ID is also used as your CMU email address (example: AndrewID@andrew.cmu.edu).

The HUB (Enrollment Services):
The HUB has most of the information that you will need to manage your time as a student here at CMU. If you have not already, please take some time to look through their website. As a student, it is here that you can access your Student Information Online (SIO) to manage your personal information, register for classes, check your grades and other academic information, and review your finances. You will also find many "helpful links" as you scroll through their homepage and answersto “frequently asked questions” at the bottom of the page.

*Updated: 7 June 2021*
**Student Information Online**

CMU’s **Student Information Online (SIO)** is your personal student account containing information on Finances, Grades, Courses, and much more. This page also includes important university announcements, updates, and information for students.

**Computing & Technology:**

Students are provided access to many computer labs on campus with necessary software for coursework, but students are not guaranteed computer access. SoA facilities include a woodshop and digital fabrication lab (dFab). Students are required to have their own computer/laptop and should reference the 2021 Master’s Student Computing Guidelines in **ADDENDUM B** at the end of this document.

Please visit the [Computing Services website](https://www.cmu.edu/) to explore the computing resources available to you as a Carnegie Mellon student.

**Design Skills Workshop (DSW):**

As indicated in your admission letter, all incoming MAAD, M.Arch, MSBPD, MSSD, and MUD students are required to complete the Design Skills Workshops (DSW) summer course to establish a baseline of digital design skills expected in the SoA Graduate Program.

The first part of DSW will be an online course focused on **Media (June 28 - August 6)** and the second part will be a series of hands-on sessions introducing you to **Fabrication (August 16 – September 3)**. Please reference **ADDENDUM A** at the end of this document for important information about registering for DSW and course specifics. You will also reference the 2021 Master’s Student Computing Guidelines in **ADDENDUM B** for computer and software requirements.

All incoming MSAECM and MSCD students have the option to complete the Digital Skills Workshops (DSW) summer course and should talk to their track chair to determine if the DSW will be helpful for your individual course of study.

Students must first have an active Andrew ID and use it to register for DSW via the following link: [https://forms.gle/pBAq8DqgFQxqaSY18](https://forms.gle/pBAq8DqgFQxqaSY18)

After registration, all information regarding the DSW course will be available via the course Canvas site: [https://canvas.cmu.edu/courses/23550](https://canvas.cmu.edu/courses/23550)
**Fall 2021 Course Registration:**
Fall 2021 semester course registration opens in early June for Carnegie Mellon students; however, there is no rush for new incoming School of Architecture graduate students to register at this time. Incoming master’s students will be registered for their **required courses** by your program’s respective graduate program coordinator:

- Erica Oman – MAAD, MArch, and MUD programs <roman@cmu.edu>
- Darlene Covington-Davis – M.S. and PhD programs <do1e@andrew.cmu.edu>

Your program’s faculty track chair will be in touch with you to advise your registration and preparation for the upcoming year. Please contact your program’s track chair or graduate program coordinator for questions about course registration.

*AECM students will register for their courses at the direction of their program’s track chair, Joshua Lee.*

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**Fall 2021 Orientation:**
Graduate student participation in the following orientation events are **required**. Please plan your arrival accordingly. If you have questions, please contact Darlene Covington Davis at do1e@andrew.cmu.edu.

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**University Graduate Student Orientation:** Carnegie Mellon University will host the University Graduate Student Orientation the **week of August 16-20, 2021** and is required for all new entering graduate students. The program and registration will be available August 2021 at [https://www.cmu.edu/graduate/programs-services/orientation/index.html](https://www.cmu.edu/graduate/programs-services/orientation/index.html)

Questions can be addressed to grad-ed@cmu.edu.

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**School of Architecture Graduate Student Orientation****: The School of Architecture’s Graduate Programs Orientation is scheduled the **week of August 16, 2021**. This orientation gives you an opportunity to meet other architecture graduate students, receive an introduction and overview of your program, and learn more about university computing, administrative policies, and procedures. It has proven essential for all new graduate students. More information will be communicated to you via email and will be available online in the coming months.

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**International Student Orientation:** **All new foreign students and scholars are required to complete International Student Orientation and a Mandatory Immigration Check-In with OIE upon arriving at CMU.** International Student Orientation and Mandatory Immigration Check-in dates for the Fall 2021 semester have not yet been announced. Visit the OIE website at [https://www.cmu.edu/oie](https://www.cmu.edu/oie) for additional information about arrival and international orientation.

**IMPORTANT:** Before attending International Student Orientation, students are **required** to complete the “Newly Admitted Student Arrival E-Form” in their MyOIE Portal.

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**Some SoA graduate programs may host events/workshops (like DSW) specific to the needs of that program during CMU’s orientation weeks.**

**If your graduate program will have additional events/workshops, you will be notified well in advance to your arrival in Pittsburgh.**

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**Foreign Students and Scholars:**
All foreign students and scholars will work with the **Office of International Education (OIE)** to facilitate the process of obtaining a student visa, document procedures, and employment options. You will want to familiarize yourself with their website [www.cmu.edu/oie](http://www.cmu.edu/oie). There are a few important sections of their website that you will need to visit:

- “Coming to Carnegie Mellon” explains the steps you will need to take now that you have accepted your admission offer [https://www.cmu.edu/oie/foreign-students/coming-to-cmu.html](https://www.cmu.edu/oie/foreign-students/coming-to-cmu.html)

**Updated: 7 June 2021**
Immunization & Health Insurance Requirements:
All incoming students are required to meet certain immunizations standards as well as carry personal health insurance. University Health Services has created several helpful websites for incoming graduate students:

- **Immunization and Vaccines:** Current immunization and vaccine requirements including information on CMU's COVID-19 vaccine requirement for all students.
- **Student Health Insurance Plans:** Updated student health insurance plans (CMU SHIP) and updated criteria for students who wish to waive the CMU SHIP.
- **Health Insurance Basics and FAQ:** For answers to many common health insurance questions.
- **COVID-19 Vaccine Requirement for CMU Students:** Consistent with scientific evidence on the importance of vaccine adoption to control spread of the virus, to the extent permissible by law, Carnegie Mellon University will require all enrolled students to be vaccinated for COVID-19, effective this fall semester. This policy will apply to all undergraduate and graduate students in U.S.-based programs.
  - CMU regularly updates the vaccines required by university policy, which will be updated by July 15 for the 2021-22 academic year. Learn more about COVID-19 vaccine.

Questions about graduate student health, immunizations, and health insurance requirements can be directed to:
-- General Clinic Questions: health@andrew.cmu.edu or 412-268-2157 (press option 2)
-- Insurance information: health@andrew.cmu.edu or 412-268-2157 (press option 3)
-- Immunization Requirement Questions: health@andrew.cmu.edu or 412-268-2157 (press option 4)
-- LGBTQIA+ Health Questions: Email Noah Riley

Official Transcripts:
As part of the terms of enrollment in the SoA Graduate Program, incoming students are required to provide an official copy of a transcript for each degree earned. Transcripts for study abroad, certificate programs, or individually taken classes are not necessary unless the transcript includes a program-required prerequisite course or the program requires the transcript for an evaluation of course exemption.

The transcripts that were uploaded as part of your application are not considered official as they were not sent to us directly from the institution.

Incoming students are required to submit Official Transcripts for all partial and completed degree programs no later than July 31, 2021. For completed degree programs, you must ensure that the date of conferment is listed on your transcript. You cannot begin Fall semester courses until we receive copies of all Official Transcripts.

**TRANSCRIPT FROM INSTITUTIONS WITHIN THE UNITED STATES:**

Transcripts must be FINAL, meaning that the degree earned and the date of degree conferral (graduation date) must be printed on the transcript. If you are still enrolled in your degree program, you may have to wait until after you have graduated to have the official transcript sent to soagrad@andrew.cmu.edu.

The transcript must be sent directly from your institution to the School of Architecture. We cannot accept transcripts issued to you, and any copies you have in your possession (even if they are signed and sealed) cannot be used. Your official transcript can be sent to the School of Architecture by any of the following delivery methods:

1. **Electronic Delivery**
   - If possible, we prefer electronic delivery of transcripts.

Updated: 7 June 2021
• The transcripts should be sent directly from the registrar of the institution (if your institution offers this service)

2. **U.S. Postal Service**
   • Transcripts that are mailed to the SoA must be enclosed in a sealed, unopened envelope, signed across the seal by the registrar's office, and mailed to the following address:

   Carnegie Mellon University  
   School of Architecture  
   Attn: Graduate Admission & Enrollment  
   4919 Frew Street  
   CFA Bldg., Room 201  
   Pittsburgh, PA 15213  
   US

**TRANSCRIPT FROM INSTITUTIONS OUTSIDE THE UNITED STATES:**

If you have completed degrees from institutions located outside of the United States (except Canada), you are required to provide all official transcripts translated into English.

**Transcripts must be FINAL**, meaning that the degree earned and the date of degree conferral (graduation date) must be printed on the transcript. If your official transcript does not show a degree conferral date, then you must send to our graduate admission office a certified, true copy of the diploma or certificate of degree completion showing the date the degree was conferred.

Transcripts must be certified and come directly from the issuing authority. Please contact the Director of Recruitment of Enrollment, Alexis McCune Secosky <amccune@andrew.cmu.edu>, to let us know when your transcript was sent, what courier service was utilized, and any tracking information that would be helpful for us to be able to know when to expect your transcript documents.

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**Financial Assistance:**

For information on non-SoA financial assistance, visit: [http://www.cmu.edu/graduate/financial-assistance/index.html](http://www.cmu.edu/graduate/financial-assistance/index.html)

This information includes:

- [https://www.cmu.edu/sfs/tuition/graduate/index.html](https://www.cmu.edu/sfs/tuition/graduate/index.html) for graduate student tuition and fees by college and program
- [https://www.cmu.edu/sfs/financial-aid/index.html](https://www.cmu.edu/sfs/financial-aid/index.html) for student financial aid including application process and timeline

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**Housing:**

Information about finding a place to live, and living in Pittsburgh can be found at: [https://www.cmu.edu/graduate/incoming-students/after-you-arrive/housing.html](https://www.cmu.edu/graduate/incoming-students/after-you-arrive/housing.html). Additionally, the Graduate Student Assembly (GSA) at CMU has developed a Graduate Student Housing Handbook for the Pittsburgh area. Information about housing: [https://www.cmu.edu/stugov/gsa/Resources-for-Graduate-Students/Housing-Resources.html](https://www.cmu.edu/stugov/gsa/Resources-for-Graduate-Students/Housing-Resources.html)

Many of our graduate students live off-campus in nearby neighborhoods, including but limited to: Squirrel Hill, Shadyside, Oakland, Greenfield, East Liberty, Uptown, Friendship, Bloomfield, and Lawrenceville.

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Thank you for your attention to these matters. We appreciate your patience as we have been coordinating information from various offices across the university. We will be in touch over the summer with important university/school announcements. The past year has been unprecedented; however, we look forward to you joining the Graduate Program this upcoming academic year in Pittsburgh.

If you have any program-specific and course registration questions, please contact your program’s track chair or your program’s respective graduate program coordinator listed below. You may also contact Joshua Bard, Associate Head for Design Research in the School of Architecture at jdbard@andrew.cmu.edu.

Sincerely,

Carnegie Mellon University, School of Architecture
Graduate Program Faculty & Staff

<table>
<thead>
<tr>
<th>Erica Oman, Graduate Program Coordinator for MAAD, M.Arch, and MUD</th>
<th><a href="mailto:eoman@cmu.edu">eoman@cmu.edu</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeremy Ficca, MAAD Faculty Track Chair</td>
<td><a href="mailto:jficca@andrew.cmu.edu">jficca@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Sarosh Anklesaria, M.Arch Faculty Track Chair</td>
<td><a href="mailto:sanklesa@andrew.cmu.edu">sanklesa@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Stefan Gruber, MUD Faculty Track Chair</td>
<td><a href="mailto:smgruber@andrew.cmu.edu">smgruber@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Darlene Covington-Davis, Graduate Program Coordinator for M.S./PhD Programs</td>
<td><a href="mailto:dc1e@andrew.cmu.edu">dc1e@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Joshua Lee, MSAECM and PhD-AECM Track Chair</td>
<td><a href="mailto:jdlee2@andrew.cmu.edu">jdlee2@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Vivian Loftness, MSBPD and PhD-BPD Track Chair</td>
<td><a href="mailto:loftness@andrew.cmu.edu">loftness@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Daniel Cardoso Llach, MSCD Track Chair</td>
<td><a href="mailto:dcardoso@andrew.cmu.edu">dcardoso@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Ramesh Krishnamurti, PhD-CD Track Chair</td>
<td><a href="mailto:ramesh@andrew.cmu.edu">ramesh@andrew.cmu.edu</a></td>
</tr>
<tr>
<td>Dana Cupkova, MSSD Track Chair</td>
<td><a href="mailto:dcupkova@andrew.cmu.edu">dcupkova@andrew.cmu.edu</a></td>
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</tbody>
</table>
Part 1: June 28 – August 6 (Media)
Part 2: August 16 – September 3 (Fabrication)

**INTRODUCTION**

DSW is a summer course (#48-689 3-units Mini-1) for incoming SoA graduate students to establish a baseline of technical skills appropriate to the expectations of the design culture at SoA. This course is mandatory for MAAD, M.Arch, MUD, MSSD, and MSBPD students. There are two parts to the course that must both be completed in order to receive a passing grade for the course that will appear on the fall semester transcript. The course is included in the cost of your full time fall tuition and will not incur additional costs. Students in the Accelerated Master's Program (AMP) may opt out of the course.

**DSW Part 1: Media**, is an online-only series of workshops, assignments, and tutorials on digital design skills delivered remotely. Organized around four short design exercises, students will demonstrate the fundamentals of 2D graphics (Photoshop, Illustrator, InDesign), architectural drafting (Rhino), 3D modeling (Rhino), and parametric modeling (Grasshopper).

**DSW Part 2: Fabrication**, is a series of hands-on introduction to the woodwork machineries, laser cutter, CNC router, 3D printer, vacuum former, general policies and procedures of the ArchSHOP and Design Fabrication Laboratory (dFAB) facilities. Students are required to attend in person during the time slots that will be posted towards the end of DSW Part 1 session.

DSW will cover specific tools and workflows to equip students with the foundational skills for solving design problems through the use of technical tools. All SoA graduate students are expected to be familiar with the protocols and workflows covered in DSW.

**REGISTRATION**

All incoming graduate students must complete the following survey. AMP students can use the form to opt out of the course. Students must first have an active Andrew ID to use the form:
https://forms.gle/pBAq8DqxFQxaSY18

Students are not allowed to register for this course on their own (i.e. via SIO). The school will register for students and issue a final grade upon successful completion of both parts of the course.

**CANVAS SITE**

After registration, all information regarding the DSW course will be available via the course Canvas site:
https://canvas.cmu.edu/courses/23550
**DSW STAFF**

*Course Instructors*
- Matthew Huber — mzh@andrew.cmu.edu
- Eddy Man Kim — mankim@andrew.cmu.edu

*Teaching Assistants*
- TBA

*Facility Managers*
- **ArchSHOP**: Jon Holmes — jcholmes@andrew.cmu.edu
- **dFAB**: Terry Hritz — thritz@andrew.cmu.edu

**STRUCTURE**

There are two sequential parts to the DSW course:

**Part 1: Media**
- **Duration**: Jun 28 – Aug 6 (6 weeks)
- **Location**: online (Web-based via Zoom)
  - Meets twice a week:
    - Lecture/Workshop (2hrs) — Mondays 10:00 am (EST)
      - *Live (virtual) attendance is highly recommended. If live attendance is not possible, students are expected to view recorded versions of the sessions in a timely manner.*
    - Individual Critique (12mins) — Wednesdays/Thursdays time will be assigned according to the time slots chosen in the *registration form*
      - *Live (virtual) attendance is required.*
- **Content**:
  - Design studio culture, best practices, and work rigor
  - Fundamental skills in communicating design intent and narrative through the use of drafting, modeling, and rendering workflows
  - Generative and dynamic workflows using Rhino and the Grasshopper scripting platform

**Part 2: Fabrication**
- **Duration**: Aug 16 – Sep 3 (3 weeks)
- **Location**: on-campus (ArchSHOP - CFA A9; dFAB - MMCH C4)
  - Date, time to be updated on the Canvas site calendar upon conclusion of Part 1
  - *In person attendance is required
- **Content**:
  - Usage and training protocol for the following fabrication tools: woodwork machineries, laser cutter, CNC router, 3D printer, vacuum former

**DETAILS – Part 1: Media**

Through weekly assignments, workshops/lectures, and *mandatory* individual critique sessions, Part 1 of the course will establish a baseline of digital design communication and generative design skills while setting certain expectations about studio culture and work rigor at SoA. This part of the course isn’t about learning software skills but more importantly about establishing a consistent work quality and ethic across the cohort. The weekly breakdown of this part of the course is as follows:

- **Week 1** – Architectural Drafting & 2D Graphics
- **Week 2** – 3D Modeling
- **Week 3** – 3D Modeling
- **Week 4** – Parametric Modeling
- **Week 5** – Parametric Modeling
- **Week 6** – Parametric Modeling

**DETAILS – Part 2: Fabrication**

More information will be posted on the course [Canvas site](#).
SOFTWARE REQUIREMENTS
You must have the following software installed and ready to use on your own computer before coming to class. If you do not, start by referring to ADDENDUM B, “2021 Masters’ Student Computing Guidelines,” for more instructions and recommendations.
Photoshop
AutoCAD
Illustrator
Rhino 6
InDesign
Vray 4 for Rhino

ONLINE TUTORIALS
CMU students are given full access to all Linkedin Learning tutorials for free by logging in with their Andrew IDs via this link: https://www.cmu.edu/web/training/linkedin-learning.htm. It is strongly recommended that students complete as many tutorials on their own, prior to attending DSW Part 1.

Essential
- Photoshop CC 2021 Essential Training: The Basics https://www.linkedin.com/learning/photoshop-2021-essential-training-the-basics/ (6h 29m)
- InDesign CC 2021 Essential Training https://www.linkedin.com/learning/indesign-2021-essential-training/ (5h 11m)
- AutoCAD 2021 Essential Training https://www.linkedin.com/learning/autocad-2021-essential-training/ (3h 58m)
- Rhino 6 Essential Training https://www.linkedin.com/learning/rhino-6-essential-training-2/ (2h 8m)
- Grasshopper Essential Training https://www.linkedin.com/learning/grasshopper-essential-training/ (6h 24m)

Optional
- Illustrator CC 2021 Essential Training https://www.linkedin.com/learning/illustrator-2021-essential-training/ (5h 27m)
- AutoCAD: Construction Drawings https://www.linkedin.com/learning/autocad-construction-drawings/ (3h 18m)
- Architectural Site & Envelope in Rhino https://www.linkedin.com/learning/architectural-site-envelope-in-rhino/ (1h 12m)
- Rhino: Architectural Interior & Detail https://www.linkedin.com/learning/rhino-architectural-interior-detail/ (1h 45m)
- Vray for Rhino Official Documentation https://docs.chaosgroup.com/display/VNFR

Other Resources
- http://www.grasshopper3d.com/page/tutorials-1 (Get started here with access to tutorials, videos, and other resources)
- https://discourse.mcneel.com/c/grasshopper-developer (Go here to find answers to specific GH questions from the GH community)
- https://grasshopperdocs.com/ (a list of all GH components with minimal description)
- http://modelab.is/grasshopper-primer/ (Grasshopper Primer: great pdf reference to have on hand)
- http://www.food4rhino.com/grasshopper-addons (Extensions for the Grasshopper environment)
- http://wiki.mcneel.com/developer/python (Get started here with tutorials, sample code, etc.)

GENERAL TEXTS
Textbook / Resources
- Arturo Tedeschi. AAD – Algorithms-Aided Design. (Len Penseur Publisher, 2014) – Full text available – Full text available online
• Helmut Pottmann, Andreas Asperl, Michael Hofer, and Axel Kilian. Architectural Geometry. (Bentley Institute Press, 2007) – Full text available online
• Wassim Jabi. Parametric Design for Architecture. (Lawrence King Publishing, 2013) – Full text available online

**Essays**
• Evans, Robin. “Translations from Drawing to Building.” in Translations from Drawing to Building and Other Essays, (The MIT Press, 1997) - Full text available online
• Lynn, Greg. “Animate Form,” in Animate Form, (The Princeton Architectural Press, 1999) - Full text available online

**QUESTIONS or CONCERNS.**
For general questions, contact the instructor at the email address above. For computer and networking problems, contact the SoA computing services at soa-ithelp@andrew.cmu.edu.
INTRODUCTION
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. We expect all SoA students to be resourceful with 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. We most strongly encourage you to follow the guidelines below prior to the beginning of Design Skills Workshop (on June 28, 2021), and definitely before arriving on campus, to ensure a smooth start to your coursework. Following these guidelines will ensure that you get the best possible support from the instructors, SoA, and CMU. If you have questions or concerns unique to your circumstances, please contact your program Track-Chair immediately.

HARDWARE ESSENTIALS
Design work is often data-intensive and consequently a reliable computer can boost productivity and go a long way in a designer’s career. Hedge against last-minute crashes and unexpected surprises down the line by following the guidelines below.

Bring Your Own Computer — All SoA students are expected to bring their own laptop computers that are compatible and sufficiently powerful for coursework. A mobile and powerful computing capability is an essential part of the current design studio culture. Your laptop should be a vessel to communicate your design ideas and not only for your personal use. Beyond doing the actual design work, you will often use your laptop and an external monitor to present the work during informal desk critiques and formal reviews. Be prepared to be a versatile communicator with your laptop. In addition, Virtual Andrew computers managed by the university (not by SoA) are available for students to use.

Limited Apple Computer Support — The majority of design software packages in your curriculum require the use of Windows-based operating systems and powerful processors. While it is possible to run Windows on an Apple computer, there are significant performance drawbacks compared to equivalently priced “PC” laptop. You will be expected to be an advanced user and manage on your own with the Apple computer. While there are virtualization tools like VMware and Parallels, they cannot access all of the laptop’s processing power. If you are not confident about managing on your own with an Apple computer, you should plan on purchasing a new PC computer as soon as possible.

Computer Recommendations — In order to ensure that your computer is sufficiently powerful to do the necessary coursework, and to ensure that you get the best possible support from the instructors, SoA, CMU, and the manufacturers, you will need to follow the guidelines below:

Recommended Specifications
Operating System: Windows10
Processor: 8-Core CPU (Intel or AMD)
Memory: 16GB+
Video Card: RTX 3070 or 3080
Hard Drive: 1TB SSD
Minimum Specifications
Operating System: Windows 10
Processor: Fastest you can afford, 6-Core CPU is recommended (Intel or AMD)
Memory: 16GB
Video Card: GTX 1660 or better
Hard Drive: 512GB or more

Warranty
We recommend only purchasing from brands that offer 3+ year warranties and adding Accidental Damage coverage if available.

When purchasing your computer, please make sure it is at or above our minimum specification.
If you have any questions about these recommendations or laptop purchasing, please contact Architecture Tech support at: soa-ithelp@andrew.cmu.edu

We also recommend contacting the Carnegie Mellon Computing Store prior to purchase. They offer various system configurations with educational discounts exclusive to CMU students.

Get Extended Warranty — School could be a volatile environment with moving parts, bulky models, sleepless nights, accidental spills, drops, and other accidents that could render you unable to proceed with your work. Unless you are an advanced user, hedge against this risk. Purchase and extend as much of the accidental damage warranty you can afford.

Get a Mouse — Using an external computer mouse is necessary in order to take full advantage of most design software packages. Not using one will compromise your productivity and negatively impact your coursework. Students are expected to attend classes prepared with the computer peripherals needed for class work.

Don't Rely on External Drives — While it is a good practice to use external data storage drives such as a Thumb / Flash / USB drive in an ad hoc or emergency setting, relying on them is very risky. They often break, get infected and get lost. Students are strongly encouraged to take advantage of the free unlimited storage on CMU’s Google Drive to back up data.

SOFTWARE ESSENTIALS
To ensure that you’re on track when you arrive on campus, this summer you should plan to purchase your laptop, purchase and/or download the software listed below, and install the software before classes begin.

Miro
• Web-based whiteboard tool for work submission in your courses.
• Log in using your Andrew email at: https://miro.com/sso/login/
• Contact eberly-assist@andrew.cmu.edu for Miro related questions.

Google Suite
• Essential suite of collaborative tools, including Docs, Sheets, Slides, and Forms.
• Unlimited storage and backup for CMU students via Drive—use this to backup your work!
• Free for CMU students to use with their Andrew IDs. Link for more information.

Creative Cloud All Apps
• Essential suite of digital media tools, including Photoshop, Illustrator, and InDesign
• $20 per month ($240 per year) student license.
  o Subscribe at this link: https://www.adobe.com/creativecloud/buy/students.html
• The “All Apps” package is more economical than purchasing apps individually.

Rhino
• Essential 3D modeling software.
• The school is currently using Rhino version 6
  o Free to use via the network license. Instructions here.
• Support for Rhino version 7 will be limited until the school acquires the license.
  o Student license can be purchased here.
AutoCAD
- Industry standard drafting software.
- Free for students.
  - Download AutoCAD and other Autodesk software at this link: https://www.autodesk.com/education/edu-software/overview

Office
- Essential office productivity software.
- Free for students
  - Download at this link: https://www.microsoft.com/en-us/education/products/office

V-Ray for Rhino
- Photorealistic rendering software.
- The school is currently using V-Ray for Rhino version 4
  - Free to use via the network license. Instructions here.
- Support for V-Ray version 5 will be limited until the school acquires the license.
  - Student license can be purchased here.

**DESIGN SKILLS WORKSHOP (DSW)**
Incoming students in certain programs may be eligible or required to complete the Design Skills Workshop course over the summer. The course’s purpose is to establish a baseline of digital design skills across the cohort and an assessment of your skills. For more information about the course, please refer to ADDENDUM A, “2021 Design Skills Workshop (DSW)”.

**ADDITIONAL SUPPORT**
If you have any additional questions about laptops, software, or anything IT related for the School of Architecture, please contact soa-ithelp@andrew.cmu.edu