



# 2024 GRADUATE HANDBOOK: MUD



THE UNIVERSITY OF BRITISH COLUMBIA  
School of Architecture + Landscape Architecture

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# 1 ABOUT SALA



Deeply committed to the quality of the built and natural environment, we are a close-knit community of scholars, designers, and makers brought together by a shared collaborative spirit.

The Coast Salish Peoples, including the *xwməθkwəyəm* (Musqueam), *Skwxwú7mesh* (Squamish), and *Səlílwətaʔ/Selilwitulh* (Tsleil- Waututh) Nations, are the original inhabitants and stewards of the land we work and teach on. As we endeavour to teach and create knowledge about the design of spaces and places, we must engage and learn from the centuries of wisdom of these Nations.

We are deeply rooted in the cultures, contexts and climates of the place we call home: at the edge of a continent, the west coast of Canada. Our programs engage the world—from our campus, a world leader in green buildings and infrastructure, to Vancouver, a global city among the greenest in the world, to the geographies and landscapes of our collaborators across North America, Europe and the Pacific Rim.

We believe that the outcomes and processes of architecture, landscape architecture, and urban design create spaces and places of rich human experience that enable a world facing urgent social and environmental crises. We aim for a school environment that models the equitable, sustainable and inclusive world to which we aspire.

We are diverse community of thinkers, researchers and professionals. But we are all designers. We are united by a passion for design that delights, inspires, and creates beauty in the places and spaces we share.

# 2 PEOPLE

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# 3 STUDENT ORGANIZATIONS

## ARCHUS + LASA

ARCHUS (Architecture Union of Students) and LASA (Landscape Architecture Student Association) assist in the facilitation of a positive student experience for their respective student cohorts within SALA. They help to create a safe, secure, and respectful atmosphere that fosters and encourages professional development and strong social networks. ARCHUS and LASA empower students to take ownership over their education and strive to reach their fullest potential inside and outside of the academic realm.

Elections are held each spring to appoint representatives for the following academic year. Additionally, incoming students nominate and elect a first year representative in the fall. Representatives from these groups meet monthly as part of the student executive committee, as well as monthly meetings within each organization. Updates are posted on each group's Instagram:

[ARCHUS](#)

[LASA](#)

## OTHER ORGANIZATIONS

Groups that represent interests that span beyond the programs are welcome to organize. As with ARCHUS and LASA, these organizations often host events to engage the community, and provide development opportunities. SALA currently has two active organizations in addition to the program organizations:

### FaFa

FaFa is a student-run organization seeking to engage and challenge the mono-cultural attitudes and conversations predominant in design practice and architectural education by uplifting the voices of all sexualities, abilities, and genders.

[Instagram](#)

[Facebook](#)

[Blog](#)

### NOMAS

UBC NOMAS is a student chapter that hopes to advocate for equality and equity in architecture, both in professional and educational aspects. They are a source for minority architects and designers who seek to create discussions that begin to eliminate the barriers that inhibit equal access to professional opportunities.

[Facebook](#)

### ILANDS

The Indigenous Landscape and Architecture Network of Design Students is a supportive and inclusive community for self-identifying Indigenous students. Their network fosters connections between Indigenous students creating a sense of belonging and peer support.

[Instagram](#)

## LUNCH LECTURES

Throughout the semester, the student organizations coordinate regular lectures over the lunch hour. These lectures are presented by students, faculty members, and guests from the professional and design community, and are a great opportunity for students to showcase projects in which they are involved.

Students are encouraged to contact a student organization representative if they wish to make a presentation or recommend a lecturer. Lectures are advertised through the weekly eBlast, posters in the studio, as well as the SALA Instagram.

# 4 HEALTH + WELLNESS

Studio life plays a large role in your time here. It's the place where you'll spend most of your day while you pursue your studies. The studio is a place of creativity and collaboration, but it can also be a stressful place. Design school students all commonly report lack of sleep, poor eating habits, and high pressure. Finding time to balance your schoolwork with your health and wellbeing is an integral part of succeeding at SALA. Your student organizations host wellness events and workshops during the semester, centred around maintaining your health as you navigate your program. Good Times is a long-time tradition of student-hosted parties (both in and out of the studio) that give you a weekly opportunity to take a break and connect with your peers.

We have a [decision tree](#) to help you find resources for issues you may face during your time at SALA.

UBC offers a variety of services to help you improve your health and wellbeing:

### Centre for Accessibility

The Centre for Accessibility provides support and programming initiatives designed to remove barriers for students with disabilities and facilitates disability related accommodations for members of the UBC community.

### Counselling Services

Speaking with a counsellor can help clarify concerns or situations and open up new ways of dealing with them. UBC offers a variety of services that can help you manage mental health concerns and have the best university experience possible.

### Health Services

Student Health Service offers a variety of health care services. UBC's family doctors and registered nurses can help you take care of your physical and mental health to help you live well, feel good, and achieve your goals.



# 5 STUDENT RESOURCES

## CAMPUS WIDE LOGIN (CWL) + UBC EMAIL

You need a CWL to access most of UBC's online systems. It's an essential component of studying at UBC. [Detailed information about setting up a CWL can be found here.](#) Registered students are also eligible for a student.ubc.ca email account. [Find information on how to access your account here.](#) This account grants you access to certain UBC services, including Microsoft Teams and OneDrive.

## UBC STUDENT SERVICES CENTRE

After obtaining your CWL, you can log into [Workday](#) to register for courses, pay for tuition and fees, view your course schedule and grades, apply for awards, and track your degree progress.

## MYVPN

A Virtual Private Network (VPN) connection uses encryption to protect data and prevent others from listening-in on the data that is transferred between your computer and the campus network. UBC Information Technology offers free VPN services to UBC students, faculty, and staff at both the Vancouver and Okanagan campus. Certain UBC applications, including our [booking site](#), require VPN connection to use. You can configure your connection by going to [myvpn.ubc.ca](#) and logging in with your CWL credentials.

## UBC CARD + KEY CARD ACCESS

Your UBC Card acts as your student identification, your library card, and can store value to use at campus eateries and the bookstore. [You can apply for your card online.](#) Importantly, your UBC Card will give you access to SALA facilities after hours. This process is automatically initiated by SALA once you have obtained your student card. If you find that your card is not working, contact Robert Geyer at [rgeyer@sala.ubc.ca](mailto:rgeyer@sala.ubc.ca).

## EBLAST

Our weekly newsletter, the eBlast, is sent out every Thursday afternoon. The eBlast contains upcoming events, job postings, opportunities to engage with the design community, as well as general news relevant to the SALA community. [Subscribe here.](#) Notices for inclusion in the newsletter should be sent to [eblast@sala.ubc.ca](mailto:eblast@sala.ubc.ca).

## COMPASS CARD + U-PASS

Your [Compass Card](#), is your ticket to public transportation in the Lower Mainland. Compass Cards are [widely available](#) for a \$6 refundable deposit. Once you get your Compass Card, you can link it to your U-Pass, which is included in your student fees. [You can load your U-Pass online every month.](#)

## PARKING + DRIVING

Parking permits are available from UBC Parking, however monthly passes are limited. Permit types and rates can be viewed on the [UBC Parking website](#). The closest parkades to the Lasserre Building are Rose Garden and Fraser. The closest parkades to

MacMillan and the Landscape Annex are West and Health Sciences. There are several [car-share services](#) in Vancouver and UBC. Many lots have free designated parking spaces for these cars.

## **SUPPLIES**

The [SALAFab blog](#) has a listing of off-campus sources for supplies. The UBC Bookstore also has a limited selection of supplies.

# **6 OUTSIDE SALA**

## **FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES**

The role of the Faculty is to support graduate students, postdoctoral fellows and the entire UBC graduate community in pursuit of personal, professional and academic experience. Among other responsibilities, they seek to ensure a transparent, consistent and equitable administration of graduate programs and awards. They provide evaluation and quality assurance of graduate programs, advocacy for graduate and postdoctoral students and professional development opportunities.

## **GRADUATE STUDENT SOCIETY**

The Graduate Student Society advocates for, promotes, and protects the academic, social, intellectual, cultural and recreational interests of its members. The GSS is a registered Society under the Society Act of British Columbia, and is administratively divided into four departments: Administration, Academic & External Issues, Events & Services, and Finance. An Executive Committee, elected annually by graduate students, and the Council are responsible for the administration of the GSS. The Council is comprised of executive members and graduate students elected from each graduate department of the University.

# **7 FINANCES**

## **TUITION + FEES**

Please note that tuition for graduate studies is a yearly tuition, paid in three installments: September, January and May. Payment is made through [Workday](#). The most up-to-date information on the cost of tuition and fees can be found on the [G+PS program listings](#).

All fees for the year are subject to adjustment and UBC reserves the right to change any fees without notice at any time, including tuition and student fees. Tuition fees are reviewed annually by the UBC Board of Governors. In recent years, tuition increases have been 2% for continuing domestic students and between 2% and 5% for

continuing international students. New students may see higher increases in tuition. Admitted students who defer their admission are subject to the potentially higher tuition fees for incoming students effective at the later program start date. In case of a discrepancy between this webpage and the UBC Calendar, the UBC Calendar entry will be held to be correct.

## **SCHOLARSHIPS + AWARDS**

SALA awards and scholarships are awarded by the faculty each academic year. You do not need to apply for these scholarships. [View the full list of SALA awards and scholarships here.](#) We have also compiled a [list of external scholarships](#) that you can apply for. G+PS also has a [list of funding resources](#) available through UBC.

## **GTA + GAA POSITIONS**

Teaching Assistants (GTA) and Graduate Academic Assistants (GAA) are [posted on our website](#) with positions for the summer and winter semesters advertised in the spring. They are awarded to students on the basis of their qualifications as teachers in the curricular areas they pertain to. They are usually given out to returning students, with occasional exceptions to an incoming student who is exceptionally qualified by virtue of prior academic and/or professional experience.

# **8 UBC ACADEMIC INTEGRITY**

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences. Students are responsible for informing themselves of the guidelines of acceptable and nonacceptable conduct for graded assignments established by their instructors for specific courses.

Plagiarism, which is intellectual theft, occurs where an individual submits or presents the oral or written work of another person as his or her own. Scholarship quite properly rests upon examining and referring to the thoughts and writings of others. However, when another person's words (i.e. phrases, sentences, or paragraphs), ideas, or entire works are used, the author must be acknowledged in the text, in footnotes, in endnotes, or in another accepted form of academic citation. Where direct quotations are made,

they must be clearly delineated (for example, within quotation marks or separately indented). Failure to provide proper attribution is plagiarism because it represents someone else's work as one's own. Plagiarism should not occur in submitted drafts or final works. A student who seeks assistance from a tutor or other scholastic aids must ensure that the work submitted is the student's own. Students are responsible for ensuring that any work submitted does not constitute plagiarism. Students who are in any doubt as to what constitutes plagiarism should consult their instructor before handing in any assignments.

More information can be found on the [UBC Academic Integrity](#) website, and the [Academic Calendar](#) has information about UBC policies and procedures.

## 9 STUDIO PROTOCOL

The studio is a major component of design education, and the central focus for design learning. It is a place for experimentation and exchange, discussion and debate. Some of the following aspects of studio protocol have emerged over the years, by tradition and by necessity, as a way of making the studio an effective, creative, and civic place.

### **GOOD WORKING SPACES**

A good working space is essential. This space includes places to hang or lay out work, store books, use computers, and feel comfortable. Everyone needs to take responsibility for their space. If your space isn't working, it's your responsibility to seek out ways it can be improved. This also means that you may have to adjust your spaces to assist your neighbors.

### **PEER LEARNING**

You can often learn as much (or more) from your fellow students as you do from your professors. Your peers are an opportunity to share ideas, criticisms, techniques, and information. Much research on design process cites peer learning as essential to design education.

### **WORKING IN THE STUDIO**

Everyone is encouraged to work in the studio, including after class hours. This not only encourages peer learning, but also creates a more lived-in and friendly studio environment. At a very minimum, students are expected to be in the studio during assigned studio times. Grades may not be given for projects completed primarily outside of the studio environment.

### **TIME MANAGEMENT**

An important aspect of design education is learning how to manage time and meet deadlines for both formal reviews and the more informal desk crits that students will

regularly have with their design instructors. Your ability to meet these deadlines is among the criteria for evaluating your work and development.

## **DESIGN CRITICISM**

Process and content are vital to design learning. As such, you can expect constructive criticism about both the nature of your design proposals (content) as well as how you're exploring and developing those proposals (process). Criticism can cause some students to feel apprehensive, but your design education will flourish if you seek, embrace, and grow from it.

## **STUDIO GUESTS**

Studio guests are a common and important part of design education. They provide multiple points of view and forms of expertise. Studio visitors can include studio critics, guest lecturers, as well as students and experts from other disciplines. Our guests are welcomed and appreciated.

## **STUDIO PROJECTS + DRAWINGS**

Studio projects are effectively and by tradition the property of the university and not the student. While we do not hold onto all student drawings, your projects should be recorded at the end of each studio and, from time to time, students may be expected to have their drawings made available for public exhibition or for [our website](#).

## **STUDIO CULTURE**

Within the culture of the studio, as with in any professional activity, you operate as both advocate and citizen. If you see a problem, you are expected to identify it to the larger community, as well as seek solutions. You do not have to wait to be asked to advocate for a solution! In the spirit of community, you are expected to share in the planning for various community activities, and in the resolution of community needs.

## **DESIGN SUPPORT**

There is a long-standing tradition for the first and second year students to assist graduating students with their graduate project work and presentations. Laying out plans, rendering, making models, and assisting with the presentation are great ways to take some of the pressure off the third year students, given the volume of drawings they need to produce. This is also a great way for first and second year students to learn about the expectations around your graduate project.

## **FINAL REVIEWS**

Reviews of studio work are scheduled over several days at the end of each term. Students present their final projects to their fellow students, instructors, and a panel of guest critics that includes faculty members, as well as local and out-of-town professionals. The reviews are also open to other students at UBC and the public. A schedule for the reviews with a list of critics is posted on the website before they begin.

# 10 GRADING PRINCIPLES + PRACTICES

## DEFINITION OF SATISFACTORY PROGRESS

A minimum of 60% must be obtained in any course taken by a student enrolled in a master's program for the student to be granted pass standing. However, only 6 credits of pass standing may be counted towards a master's program. For all other courses, a minimum of 68% must be obtained. Because all design studios are 9 credits, a minimum grade of 68% is required to pass studio.

On the recommendation of the graduate program and the approval of the Dean of the Faculty of Graduate and Postdoctoral Studies, the student may repeat a course for higher standing or take an alternate course. If the graduate program does not make such a recommendation, or if the recommendation is not approved by the Dean of the Faculty of Graduate and Postdoctoral Studies, the student will be required to withdraw. A student who obtains a grade of less than 68% in an excessive number of courses will normally be required to withdraw. The student will be informed of unsatisfactory academic progress in writing before any action regarding withdrawal is taken.

A minimum mark of 68% must be obtained in all courses taken as part of a qualifying year. When repeating a failed required course, a minimum mark of 74% must be obtained. Higher minimum grades may be required. If a course is repeated, both marks will appear on the transcript. The higher mark will be used to determine promotion in a program and in any decision to admit or withdraw a student from a program. For all other purposes, averages will be calculated using both marks.

## GENERAL GRADING PRACTICES

Instructors are responsible for providing written guidelines to all students at the start of each course, outlining how the final grade for the course will be calculated, and including any related policies such as arrangements that may be made for students who are unable to complete a test or other graded work due to illness or absence. Guidelines made available online meet this requirement. Faculties, departments, and schools reserve the right to scale grades in order to maintain equity among sections and conformity to University, faculty, department, or school norms. Therefore, you should consider your grade unofficial until it appears on your academic record.

%	Letter grade	Program indicators
90 to 100	A+	
85 to 89	A	Clearly excellent engagement, knowledge and performance.
80 to 84	A-	
76 to 79	B+	
72 to 75	B	Good grasp of material with evidence in work products.
68 to 71	B-	Minimum grade required to pass a studio course.
64 to 67	C+	
60 to 63	C	Satisfactory comprehension and work products, little initiative. Minimum grade require to pass non-studio courses.
0 to 59	F	Fail

## STUDIO EVALUATION CRITERIA STANDARDS

Evaluation Criteria	Low	Mid	High
<b>Completeness</b> <i>Ability to complete projects fully and on time</i>			
All projects due to date are complete			
<b>Design process</b> <i>Ability to initiate and sustain an effective, creative, and productive design process throughout project</i>			
Ability to define issues and requirements for design			
Ability to apply appropriate process tools and techniques			
Ability to identify and critique appropriate case			
Ability to develop and refine concepts throughout process			
<b>Design content</b> <i>Awareness and knowledge of core subject areas and ability to apply that knowledge in design</i>			
Consistency and competency in form giving			
Selection and use of materials			
Experiential quality			
Visual and spatial fluency, spatial sequencing			

<b>Evaluation Criteria</b>	<b>Low</b>	<b>Mid</b>	<b>High</b>
Resolution of functional issues and requirements			
Knowledge of discipline-related subjects and concepts			
Resolution of contextual issues and requirements			
<b>Design media</b> <i>Knowledge of, and fluency with, visual media and representation as a means of design investigation and communication</i>			
Knowledge of, and skill with, relevant media			
Ability to determine and apply appropriate media to process			
Craft and quality of representations			
<b>Scholarship</b> <i>Ability to initiate and sustain significant intellectual inquiry through design</i>			
Intellectual and creative ambition and rigour			
Ability to sustain significant inquiry throughout process			
Ability to articulate and communicate ideas or points of view			
<b>Engagement</b> <i>Ongoing participation in, and contribution to, studio</i>			
Regularly participates and contributes to class			
Effectively engages faculty and peers			
Seeks out and responds productively to criticism			
Supplements design process with effective reading and research			
Maintains logical and whole record of process and products			



## **PRINCIPLES FOR ASSESSMENT OF STUDENT WORK**

### **Set clear learning objectives**

- Syllabus includes clearly written learning objectives for each class
- Each assignment similarly includes learning objectives
- Set high, yet reasonable, expectations of students' learning

### **Actively involve students in learning and evaluation**

- Teaching practices and evaluation recognizes that learning is a process
- Engage students in the process of evaluation
- Evaluate and assess learning in a manner consistent with established goals and learning outcomes
- Assist students to participate in self-directed learning activities

### **Communicate effectively with students**

- Clearly and effectively communicate goals, outcomes and expectations with students in writing and in discussion
- Use fair, consistent and transparent methods of evaluating learning
- Communicate evaluations of student work in writing

### **Attend to intellectual growth of students**

- Provide, and discuss with students, explicit criteria for assessing learning
- Provide regular and timely reviews of students' progress in achieving learning outcomes

### **Respect diverse talents and learning styles of students**

- Promote a stimulating learning environment
- Recognize and accommodate different learning and working styles
- Balance collaborative and individual student learning to reflect the course aims and outcomes and enable individual evaluation

### **Evaluation should be fair and equitable**

- Students who meet learning objectives should be considered the "middle"
- Students who exceed the learning objectives and produce exemplary work should be recognized for high achievement
- Students who fall short of the learning objectives should be notified that they are falling behind/weak, ideally by mid-term

# 11 FABRICATION

Physical making is a cornerstone of SALA's learning experience. We challenge students to be hands on with their designs, engaging in the 3D realm to investigate and critique their ideas. With the constant advent of new technologies, it is important to us that we equip students with a relevant education, digitally and physically. Information and tutorials about our equipment and facilities can be found on the [Making + Building at SALA blog](#).

## FACILITIES

### Lasserre Building

#### Room 2: Workshop

Our comprehensive woodworking shop provides all tools required to produce anything from small models to full-sized building components. Students in all SALA programs can use it as a resource for both studio and technical courses. We train our students in the safe use of tools and machines appropriate to their projects. A selection of portable tools can be signed out for overnight use at home or in the studio. A variety of the most commonly used materials are available for purchase in the workshop, as well. The shop is located in the basement. Hours are posted on the [Google calendar](#) on the [front page of the blog](#), and any changes to those hours are shared in the eBlast.

#### Room 4: Assembly room

The assembly room has workbenches with electrical and compressed air outlets as well as a drill press, disc sander, hot wire foam cutters, and sandblaster. The room is accessible to students around the clock.

#### Room 4A: CNC router

The CNC is only available after approving the file with the CNC tech. Once the file is approved, email [digifab@sala.ubc.ca](mailto:digifab@sala.ubc.ca) to set up a timeslot.

#### Room 5B: Laser lab

The laser cutter is available for use during reserved time slots while the laser tech is present. Prior training is not required. Reserve your time slot through the [booking site](#) (VPN required).

#### Third floor studio

Located in the third floor studio are three Tinkerine Ditto Pro printers, two plotters, and a paint room.

### Macmillan Building

#### Room 394A: Laser lab

The laser cutter is available for use during reserved time slots while the laser tech is present. Prior training is not required. Reserve your time slot through the [booking site](#) (VPN required). The Macmillian lab also hosts the [Varga Safety Saw](#) that is free to use whenever the laser cutter is in operation.

## Landscape Architecture Annex Workshop

This space, located on the ground floor of the Annex and accessible through the north first floor studio includes some hand tools and an assembly space.

## OUTPUT DEVICES

### Plotters, printers, and scanners

There are multiple plotters, loaded with different paper qualities, a large format scanner, and small format printers available in the various studio locations. The plotters provides the ability to print up to 42" wide, to a length of your preference (though you're advised to limit the length to under 10'). The printers offer up to 11"x17". The scanners can scan a maximum of 32" wide. Payment is handled through UBC's [Pay for Print](#) system, and is made through a balance loaded to your UBC Card. Printing rates are also published through this system. As a student, you must append the suffix ".stu" to your CWL account to log in.

### Laser cutters

These devices can quickly and accurately engrave or cut material using energy from a carbon dioxide laser. The laser cutter can only be used during scheduled time slots with a Laser Cutter Assistant. You can [book a time slot online](#) at either the Lasserre or Macmillan laser cutter. Rates for use are published at the beginning of the year. You must provide your own materials and tape. Generally these are paper, wood or acrylic up to 1/4" (6mm) thick.

### CNC router

Our three-axis CNC router is capable of cutting out parts in 2D or milling shapes out of material in 3D. A common use for this machine is to mill the topography of project sites for studio courses. The CNC is only available after approving the file with the CNC tech. Once the file is approved, email [digifab@sala.ubc.ca](mailto:digifab@sala.ubc.ca) to set up a time slot. Each student is only permitted 4 hours per week, and must have completed Design Media II or had the course waived. Rates for use are published at the beginning of the year. You must provide your own materials. Generally they are wood products. Light weight MDF is the most common material used.

### 3D printers

3D printers can create detailed models that would be hard to realize by traditional means. The printers print ultra-thin layers of PLA plastic on top of each other to build up a very high-resolution plastic model. The 3D printers are available to use after a one-time training session. After the training session, the 3D printers are free to use during available booking times. There is no fee for use; however, there is a one-time \$15 fee for the tutorial that is required before using them. Filament is for sale in the work shop, and you must provide your own SD card.

# 12 COMPUTERS + SOFTWARE

Your computer is one of the most important tools you will use during your time at SALA. You will require a laptop computer that can handle the advanced graphics and design applications we teach in our curriculum. Why a laptop? Portability is key, as you will change desks each semester to sit with your studio. You can easily take a laptop to studio, class, and home, as well as site visits or a study abroad. A correctly-configured laptop can easily handle the majority of the computing needs you will encounter in your studies. If you need more horsepower, you have access to a number of desktop workstations on the studio floor. These machines are capable of handling larger files and more intensive computational tasks. Appropriately configured laptops may cost up to \$4000, depending on brand and specifications.

## LAPTOP SPECIFICATIONS

Processor	Latest generation processors	The faster, the better, but you do pay a premium for the latest and greatest and see diminishing returns at the highest end of the spectrum. Given the limited upgrade capabilities of laptops, however, this is one area where you could future-proof your investment.
Memory	16 GB RAM or higher	Graphic files are large. So is the software that generates them. 16 GB of DDR4 memory clocked at 2400 MHz should be ample. You can opt for more to work more efficiently, but you do pay for it.
Storage	512 GB or higher capacity solid state drive, 1 TB if you are able	Opening large applications, and loading or saving massive files on an old-timey hard disk drive is no fun. Get a Class 50 M.2 NVMe solid state drive.
Graphics	Dedicated AMD or NVIDIA graphics with at least 2 GB of video memory	Stay away from integrated graphics like Intel Iris or HD Graphics. Graphics capabilities are key in many of the applications you will use, and integrated graphics lack serious processing power.

### Windows

The [Dell XPS 15](#) is a popular choice and can be customized to be quite powerful (be sure to choose one of the options with a discrete graphics card). The [MSI GS65](#) is built for video games, but performs equally well for graphically intense design work. Offers a good bang for the buck. If you prefer another make, look for mobile workstations meeting the specifications above.

### Apple

The 16" [MacBook Pro](#) is a good choice. A 14" will also work. Both can be used with an external monitor. As of 2020, Apple refreshed its line-up with its own M1 processors. This new chip architecture impacts software updates and adoption. Please note that there are several industry-standard design software packages that are built for Windows; if you purchase an Apple product, you will be required to run some software on Parallels.

While we do our best to anticipate software and hardware requirements, we cannot guarantee that any given model will be adequate to address all computing needs throughout your progress through our curriculum.









## SOFTWARE

Below is the list of the most important drawing and graphic applications you will need, at least in your first year:

- Photoshop
- Illustrator
- InDesign
- AutoCAD
- Rhino

We highly recommend that you familiarize yourself with some basic software operations. You can find high-quality tutorials at all levels on YouTube, and our student groups will occasionally run tutorial sessions. Rhino also provides [tutorials on its website](#). We recommend that you keep the receipts of all software purchases or subscriptions.

## WHERE TO GET YOUR SOFTWARE

Microsoft Office	 	You can get free Office 365 subscription via UBC IT's <a href="#">Software Downloads page</a> .
Adobe Creative Cloud	 	Adobe offers <a href="#">educational pricing</a> for a subscription.
AutoCAD	 	Autodesk offers a <a href="#">free education license</a> .
Rhino	 	Rhino offers a <a href="#">discounted student version</a> . While Rhino 5 has been ported to Mac, it has limited functionality compared to Rhino 5 for Windows and is not available for the latest version, Rhino 6. We prefer you use the latest Windows release, Rhino 6.

SALA has licenses available for Rhino and Adobe Creative Cloud, as well as a number of other programs, for registered students. Information on how to access these licenses will be sent at the beginning of the school year, and can be [found on our website](#).

# 13 COURSE TRAJECTORY

## MASTER OF ARCHITECTURE

### Term 1: May to August

UDES 501	Design Studio I: Sustainable Neighbourhood Design	9 credits
UDES 509A	Urban Design Methods	3 credits
UDES 509B	Case Studies	3 credits

### Term 2: September to December

UDES 502	Design Studio II: Ecological Regional	9 credits
UDES 504	History and Theory of Urban Design	3 credits
UDES 505	Urban Design as Public Policy: Policymaking for a Sustainable Region	3 credits

### Term 3: January to April

UDES 503	Design Studio III: Urban Block Design	9 credits
UDES 506	Real Estate Economics: Development Feasibility and Financing	3 credits
UDES 509C	Three Great Waves Changing Cities	3 credits