

**School of Architecture | Georgia Tech | Fall 2026**

**ARCH 2211 + 6229: Construction Technology & Design Integration I (3 credits)**

*Required Course for B.S.Arch., M. Arch 2, and M. Arch 3*

*Undergraduate and Graduate Offering*

## **ARCH 2211 + ARCH 6229 Syllabus**

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*Construction Technology & Design Integration I*

*[Fall Semester - 2026]*

### **Instructor Information**

**Instructor: Katherine Wright, Lecturer**

**Email: [katherine.wright@design.gatech.edu](mailto:katherine.wright@design.gatech.edu) (Use Canvas for all course related communication.)**

**Office Location: Arch East RM 110**

**Office Hours: TBD**

TA Name: TBD

TA Email: TBD

## **General Course Information**

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### **Course Description**

Introduction to building anatomy, technical and expressive characteristics of materials and their organizational assembly.

### **Course Learning Outcomes**

Upon successful completion the course, students should be able to:

- Use terminology and definitions associated with each category of construction methods and materials presented and discussed in class.
- Know the technical and environmental characteristics of manufacture, fabrication, and field application applicable to each method/material.
- Know the conventions of representing construction and material assemblies through the study of construction document drawings, and through the making of sketches and more technical drawings (Wall Section, Details, Plan Details, etc.)
- Compare and evaluate construction materials and techniques in terms of aesthetics, conceptual appropriateness, and performance criteria, in the service of design integration goals.

Note: For all M. Arch courses, see also "Professional Standards Addressed."

## Required Course Materials

It is recommended that students purchase the required course textbook(s) as an essential part of learning. Additionally, these references are foundational resources for architectural education and are listed as study material for the ARE (Architecture Registration Exam). Additional texts, readings, and resources may be distributed throughout the semester and will be announced and posted on Canvas.

Course textbooks and additional readings are available through the library. Link provided.

### Required Course Textbooks

Allen, E., & Iano, J. (2014). *Fundamentals of building construction : materials and methods* (Sixth edition.). Wiley. Online Access: [https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI\\_GIT/v7a0vn/alma9914987640802947](https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI_GIT/v7a0vn/alma9914987640802947)

Ching, F. D. K. (2014). *Building construction illustrated* (Fifth edition.). Wiley. Online Access: [https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI\\_GIT/v7a0vn/alma9914987617502947](https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI_GIT/v7a0vn/alma9914987617502947)

Deplazes, A. (2005). *Constructing architecture : materials, processes, structures, a handbook*. Birkhäuser. Online Access: [https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI\\_GIT/kp0an9/alma998148143402947](https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI_GIT/kp0an9/alma998148143402947)

### Additional Readings

Selected readings will be posted on Canvas from the following books. Additional readings may be assigned throughout the semester and will be announced on Canvas.

Elliott, C. D. (1992). *Technics and Architecture : the development of materials and systems for buildings /*. MIT Press. Online Access: [https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI\\_GIT/v7a0vn/alma9914950355002947](https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI_GIT/v7a0vn/alma9914950355002947)

Allen, E., & Rand, P. (2016). *Architectural Detailing : Function, Constructability, Aesthetics* (3rd ed.). John Wiley & Sons, Incorporated. [https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI\\_GIT/v7a0vn/alma9915220353402947](https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI_GIT/v7a0vn/alma9915220353402947)

Bell, V. B., & Rand, P. (2006). *Materials for design /*. Princeton Architectural Press.

Ford, E. R. (1990). *The details of modern architecture, vol I*. MIT Press. [https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI\\_GIT/v7a0vn/alma993214973402947](https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI_GIT/v7a0vn/alma993214973402947)

Ford, E. R. (1994). *The details of modern architecture, vol II*. MIT Press. [https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI\\_GIT/v7a0vn/alma993214973402947](https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI_GIT/v7a0vn/alma993214973402947)

## Additional References and Resources

BUILDING TYPES ONLINE (Birkhauser) - Login through institution: <https://bdt.degruyter.com/>

DETAIL Inspiration (DETAIL Magazine) – login on campus for full access:  
<https://inspiration.detail.de/startseite.html?lang=en>

Edition DETAIL Construction Manual Series by Birkhauser. Volumes by material: Concrete, Steel, Brick, Timber, Glass, etc.

EI CROQUIS (Journal / each volume represents a collection of work from and architect/practice) - Access while on campus or VPN. [https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI\\_GIT/n2rphv/alma9985613402947](https://galileo-gatech.primo.exlibrisgroup.com/permalink/01GALI_GIT/n2rphv/alma9985613402947)

MODERN CONSTRUCTION ONLINE (Birkhauser) - Login through library/institution

## Materials

A laptop or access to a computer is required for this course.

Computer aided drawing software is required: AutoCAD or RHINO 3DS.

A sketchbook and drawing instruments for weekly sketches.

Pens, pencils, architectural scale and triangles for use during class.

Students will need to purchase materials and cover costs of printing for the design project.

## Grading Policy

### Description of Graded Components

The final grade will be composed of the following:

- **Attendance:** Attendance will be taken at all class meetings, collected in-class assignments and/or sketches. See attendance policy.
- **Participation (10%):** Participation will include in-class activities, active discussion, and completion of reading quizzes and practice exams (grade based on completion).
- **Design + Construction Project (20%):** There will be one design and construction assignment that will require researching a precedent, building materials and construction, and either producing scale drawings and/or models. Grading rubric will be posted to assignment.
- **Quizzes + Exams (55%):** Reading quizzes will be posted in canvas. There will be several exams that are intended to help students learn key construction terms and concepts and to understand the basic sequence and hierarchies of construction. Exams will include multiple choice, true/false, fill in the blank, short answer and sketch problems. Exams will be taken on Canvas with the use of a shutdown browser. See digital exams policy. When there is a sketch problem, these will be taken during class. The material will be taken directly from the daily class lectures, readings, reading quizzes and practice exams. A final comprehensive exam will be given as per the Institute final exam schedule.
- **Sketch-of-the-Week (15%):** Students are required to do ONE free-hand sketch per week and to submit a photo of the sketch to CANVAS as a pdf document. Sketch assignment details are posted on Canvas. The objective is to encourage sketching and the keeping of a sketchbook. These sketches should be presentation/portfolio worthy. Poorly documented sketches will be returned for resubmission. Students may resubmit for a better grade if first submission is on time (due date). All submissions must use the file naming standard to be considered for a grade. Sketch grades: Exceptional (10), Excellent (9) Good/Satisfactory (8), Acceptable (7), Unacceptable/Resubmit (5), No Submission (0). See Canvas assignment for further details. Format: JPEG, 300 dpi.

File Naming Standard: LastName.FirstInitial\_ARCH2211\_URARCH6229\_Sketch-Week#\_YYYY

## Grading Scale

A	90–100%
B	80–89%
C	70–79%
D	60–69%
F	Below 60%

## Course Schedule

Please see the annotated class schedule on Canvas. This schedule is subject to periodic revisions; updated schedules will always be posted on Canvas.

WEEK 01	08/24 – 08/28	Classes start
WEEK 02	08/31 – 09/04	
WEEK 03	09/07 – 09/11	Labor Day 09/07 – Official Institute Holiday
WEEK 04	09/14 – 09/18	
WEEK 05	09/21 – 09/25	
WEEK 06	09/28 – 10/02	
WEEK 07	10/05 – 10/09	Fall Break 10/05-06 – No Classes
WEEK 08	10/12 – 10/16	
WEEK 09	10/19 – 10/23	
WEEK 10	10/26 – 10/30	Institute Course Withdrawal Deadline (W grade) – 10/31
WEEK 11	11/02 – 11/06	
WEEK 12	11/09 – 11/13	
WEEK 13	11/16 – 11/20	
WEEK 14	11/23 – 11/27	Student Recess (No Classes) – 11/25 Thanksgiving Break 11/26 & 11/27 – Official Institute Holiday
WEEK 15	11/30 – 12/04	
WEEK 16	12/07 – 12/11	Final Instructional Class Days – 12/07 & 12/08 Final Exams
WEEK 17	12/14 – 12/18	Final Exams
WEEK 18	12/21	Grades Due

Attending SoA lectures during studio time on Mondays or Wednesdays is required for M. Arch students and highly recommended for B.S. Arch, M.S., and Ph.D. students.

## Supplemental Information:

### Professional Standards Addressed

#### NAAB Conditions for Accreditation

#### For Professional Degree Programs in Architecture (2020)

The accredited degree program must demonstrate that each graduate possesses the knowledge and skills defined by the criteria below. The knowledge and skills defined here represent those required to prepare graduates for the path to internship, examination, and licensure, and to engage in related fields. The program must provide student work as evidence that its graduates have satisfied each criterion.

The criteria encompass two levels of accomplishment:

- *Understanding*—The capacity to classify, compare, summarize, explain, and/or interpret information.
- *Ability*—Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

**Program Criteria (PC) and Student Criteria (SC):** The NAAB establishes PC and SC to help accredited degree programs prepare students for the profession while encouraging education practices suited to the individual degree program.

For the purpose of accreditation, while this course will cover more criteria than the ones listed below, the following will be actively covered:

PC.7 Learning and Teaching Culture — How the program fosters and ensures a positive and respectful environment that encourages optimism, respect, sharing, engagement, and innovation among its faculty, students, administration, and staff. This content is **Practiced**, meaning students practice, understand, and are assessed on it.

SC.1 Health, Safety, and Welfare in the Built Environment — How the program ensures that students understand the impact of the built environment on human health, safety, and welfare at multiple scales, from buildings to cities. This content is **Practiced**, meaning students practice, understand, and are assessed on it.

SC.4 Technical Knowledge — How the program ensures that students understand the established and emerging systems, technologies, and assemblies of building construction, and the methods and criteria architects use to assess those technologies against the design, economics, and performance objectives of projects. This content is **Assessed**, meaning it is a critical component of the course, students are evaluated, and the program assesses the student performance for accreditation and/or annually.

SC.6 Building Integration — How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating integration of building envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and the measurable outcomes of building performance. This content is **Practiced**, meaning students practice, understand, and are assessed on it.

# Course Policies

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## Attendance and Participation

Participation at all class meetings is mandatory and crucial to the successful completion of the class. Participation is graded through in-class activities and attendance.

Attendance is required and will be taken at the beginning of class or during class. Students are expected to arrive to class on time and to stay for the duration of the class period. Students are encouraged to take care of personal matters prior to class (bathroom, water bottle refill, texts, calls, coffee delivery, etc.). Beverages and food are prohibited in the classroom. Water bottles and drinks with a screw top lid are permitted.

Students who arrive more than five minutes late will sign in with the TAs and will be marked as late. Three lates will equal one absence. Absences accumulated through being late are subject to the absence policy and letter grade deduction.

Absences will be excused only for medical or family emergencies, Institute-approved events, and religious holidays documented in writing. Students must notify the instructor in writing during the first two weeks of the semester about any anticipated absences for religious holidays.

NOTE: Absences due to special and/or unforeseen circumstances must be discussed with the instructor as early as practically possible.

Excused Absences: All documentation to excuse an absence (per institute policy) must be sent to Instructor Katherine Wright through Canvas message. TAs will not be allowed to excuse absences.

Missing three classes without an approved excuse will result in a letter grade reduction. Missing more than three classes, excused or unexcused, may result in a meeting with your instructor and the Architecture Program Office to determine a course of action, and can result in an incomplete (I) or failing grade (F). [ School of Architecture Attendance Policy ]

Students are highly encouraged to submit absence verification for documented illness, hospitalization, accidents, family emergencies, or lengthy illnesses to the Dean of Students: <https://studentlife.gatech.edu/request-assistance>

## Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards.

Review [Georgia Tech's Honor Code](#) and the student [Code of Conduct](#). Any student suspected of cheating or plagiarism will be reported to the Office of Student Integrity.

For expectations of student and instructor conduct, consult [Code of Conduct \(rules/19\)](#) and [Student-Faculty Expectations \(rules/22\)](#).

## Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body.

[The Student-Faculty Expectations Agreement](#) articulates some basic expectations that you can have of me and that I have of you. Simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek.

### **Accommodations for Students with Disabilities**

If you are a student with learning needs that require special accommodation, contact the [Office of Disability Services](#) (404-894-2563) as soon as possible to make an appointment, obtain an accommodations letter, and discuss your special needs. Please also schedule an appointment with your instructor to discuss your learning needs.

### **Collaboration, Group Work, and Use of Generative AI**

#### **Generative AI Use Prohibited – ON ALL SKETCH AND DRAWING ASSIGNMENTS**

The use of Generative AI tools (such as Copilot, ChatGPT, Perplexity, etc.) is not allowed in this course. All assignments must represent your unassisted original thought and individual effort. Any use of Generative AI will be treated as a violation of Georgia Tech's Honor Code.

#### **AI Use is Assignment Dependent**

Use of Generative AI in this course will vary by assignment. Check each assignment's instructions to determine what AI use is allowed. Do not assume that because AI was allowed for one assignment, it will be allowed on others. When allowed, responsible use is expected with a required AI Usage Statement.

### **Extensions, Late Assignments, & Re-Scheduled/Missed Exams**

This course follows institute policy on all extensions and rescheduling of exams. All exams (including final exam) if missed must be completed within 48 hours of the exam date and time. Late assignment submissions will receive a deduction in grade at the rate of half a letter grade per day late. Students should try to submit work, even if not fully complete to receive the highest grade possible.

### **Inclement Weather and Digital Learning Days**

If a weather-related event affects campus operations, class will pivot to digital instruction or be canceled. An announcement will be made on Canvas.

### **Student Use of Mobile Devices in the Classroom**

The use of mobile devices for non-course related work (including personal use) in the classroom is prohibited.

### **Digital Proctoring**

Online quizzes and exams will be posted on Canvas and use HonorLock or Turnitin. Quizzes and exams should be taken alone in a quiet room, away from other people, and away from visual and auditory distractions and noises. Reliable high-speed internet required.

### **CIOS — Course Evaluations**

At the end of the term, students are asked to complete the online course evaluation for all courses at Georgia Tech (<https://gatech.smartevals.com>). CIOS scores and comments have different degrees of visibility based on roles:

Reporting access by role	CIOS Scaled Results	CIOS Comments	TA's Scaled Results	TA's Comments
Instructor	Their Own	Their Own	All within their own course	All within their own course
TA Supervisor	N/A	N/A	All within their own course	All within their own course
Teaching Assistant	None	None	Their Own	Their Own
School Administration	All within their own unit	None	All within their own unit	All within their own unit
Students	All – Summary only	None	None	None

More information: [CIOS Student FAQ](#)

## Campus Resources for Students

### Undergraduate Student Academic Success Resources

A list of resources for undergraduate students' academic success and advising can be found at [Success at Tech](#). Academic Support (a unit in the Office of Undergraduate Education & Student Success) provides free tutoring: [success.gatech.edu/tutoring](https://success.gatech.edu/tutoring).

### Graduate Student Academic and Professional Success Resources

A list of resources for graduate students is available on the [Office of Graduate and Postdoctoral Education](#) website.

### Student Well-Being

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A [comprehensive list of wellness-related resources](#) has been compiled by the Office of the Vice President for Student Engagement and Well-being.

### Library & Archives

Contact your Architecture Library subject specialist, Catherine Mancini ([catherine.mancini@library.gatech.edu](mailto:catherine.mancini@library.gatech.edu)), for research help and information on available resources.

Contact your Architecture Archives liaison, Jody Thompson ([jody.thompson@library.gatech.edu](mailto:jody.thompson@library.gatech.edu)), for assistance with archival research and collections.

Georgia Tech Library: <https://library.gatech.edu/> Georgia Tech Archives: <http://library.gatech.edu/archives>

## Approved Communication Platforms

[Georgia Tech Approved Communication Platforms](#)

## Georgia Tech Values Statement

At Georgia Tech, we see different backgrounds and perspectives as essential to learning, discovery, and creation. We strive to remove barriers to student success and to build a welcoming community where everyone has the opportunity to contribute to our mission. As outlined in our [strategic plan](#), we want to create an environment of holistic learning where all individuals can grow and learn to lead healthy, purposeful, impactful lives.

# SoA & College of Design Policies

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## Archiving

At the end of the semester, all students are required to submit physical and/or digital examples of their work to their instructors or administration for archiving no later than one week after the end of term. By enrolling, each student grants a license to reproduce and display their work online, in forthcoming print publications, and in public exhibitions.

## Ownership

For the purposes of continuous improvement efforts, such as accreditations and periodic program reviews, the School will select samples of student work submitted to satisfy course requirements. This includes digital files, papers, drawings, models, etc. Collected samples may be returned to students upon request.

## College of Design Facility Rules and Guidelines

Please consult the [Georgia Tech Student Handbook](#) regarding the use of facilities and all Institute policies. Aerosol sprays of any kind are strictly banned from the studio and surrounding areas. A spray painting booth is available in the College of Design shop on the ground floor of the East Architecture Building.

## Course Expectations & Guidelines

Per the [GT Catalog](#), all work produced in the College of Design as part of a degree program becomes the property of the College; it may be retained or returned at the discretion of the faculty. The faculty of the School of Architecture reserves the right to refuse credit for any project executed outside the precincts of the College or produced without proper coordination with the faculty.

## Emergencies

In case of emergency (e.g., fire, accident, or criminal act), please call the Georgia Tech Police at 404-894-2500. Perry Minyard, IT Support Administrator for the College of Design, is also a firefighter and EMT certified in performing CPR.

DATE: 04.11.2026