



# TECHNICAL TEACHING CERTIFICATE

## PROGRAM OVERVIEW

The Technical Teaching Certificate in Architecture is a program that focuses on well-integrated teaching that seamlessly combines design and technical subjects in architecture: environmental building systems, construction methods and materials, enclosure and structural systems. The certificate is available to graduate students interested in teaching during their architectural careers and can be acquired as they pursue a Master of Architecture, Master of Science, or Master of Interior Architecture degree programs at the University of Oregon. Participating students are challenged to develop an area of experience in one or more of these subject areas in curriculum, understand critical principles and concepts, issues of sustainability within the discipline, curricular innovation, as well as how theoretical and pragmatic issues are carried into practice.

The Department of Architecture in the School of Architecture & Environment at the University of Oregon, has a national reputation for the teaching of sustainable design and as a leader in environmentally sensitive design. Numerous alumni from the University of Oregon are currently teaching in the technology areas in schools of architecture nationally and internationally. Recognizing the need for training to produce qualified design teachers, the Technical Teaching Certificate program was developed by Emeritus Professors John Reynolds and Edward Allen.

## LEARNING OUTCOMES

Students completing the Technical Teaching Certificate will have:

- an understanding of the principles and concepts in one or more of the technical areas in architecture: environmental building systems, construction methods and materials, enclosure and structural systems.
- an experience in teaching in an integrated, collaborative approach to the design of buildings in studio and lecture courses (see Technical Teaching core courses)
- an understanding about teaching technical subjects and general handling of teaching issues related teaching and learning (see Technical Teaching core courses)

## THE PROGRAM

In order to fulfill the obligations of this Program and receive the Technical Teaching Certificate you must:

- **Information Sheet:** complete the Technical Teaching Certificate information sheet.
- **Study Plan:** Develop a Study Plan in consultation with the Department Academic Advisor or Certificate Director (see "Certificate Requirements")
- **Advising Meeting:** You may have an advising meeting with the Certificate Director or Advisor to review the information sheet and develop a study plan with you. It will be placed your file. This step is an *internal process* to the Department of Architecture.
- **Work towards completion:** complete coursework as described in your Study Plan.
- **Final Review Meeting and Approval:** complete course work from your initial Study Plan. Schedule a Final Review meeting with Department Academic Advisor and the Certificate Director (review your UO degree audit, transcript; and Study Plan) in the term prior to graduation.
- **Graduation:** By Friday of Week 2 in the term of graduation, you must complete the **Graduate Certificate Declaration Form** and submit it to the University of Oregon Graduate School with the Advisor or Certificate Director's signature: <http://gradschool.uoregon.edu/policies-procedures/graduate-certificates>. Note: it is possible to apply for the Certificate prior to applying for the master's degree. It is not possible, however, to submit the Certificate after receiving your master's degree.

## **CERTIFICATE REQUIREMENTS**

Students in the Technical Teaching Certificate program must complete a minimum of 24 approved credits in teaching and advanced technical subjects, with proficiency in at least one technical subject area (e.g. environmental, materials, construction, structural systems). Twelve credits must be selected from the Core Technical Teaching courses. Required core courses for the Master's degree do not satisfy Certificate requirements (with the exception of a pre-approved, intermediate design studio emphasizing building technology). In the normal track of obtaining the Technical Teaching Certificate, students should take 12 credits beyond those required for the degree and will need to carefully plan to take a full load each term and/or enroll in summer classes. Students with advanced standing (through exceptions as transfer credits or waived courses) may be able complete the Certificate requirements within the same timeframe and the required credits for their M.Arch., M.S., or M.IArch. degree (the Certificate Director will review and approve such exceptions).

Students with architectural experience and practice, but not enrolled in an Architecture degree program (e.g. in landscape or historic preservation) must complete a minimum of 18 credits in advanced technology and technical teaching courses taught in Department of Architecture at the University of Oregon. The student can receive up to 6 credits (with documentation) for courses taught at a home institution. These credits may be counted toward the 18 credits for the certificate, with review and approval from the Certificate Director. Non-architecture students interested in the Certificate Program should discuss specific details and coursework with the Certificate Director or Academic Advisor.

### **Technical Teaching Core Requirements (minimum 12 credits)**

These individualized courses are designed to allow the student to initiate a program of self-directed study focusing on particular technical topics. To register for these courses, students should first develop a course of study with an appropriate instructor and signature and complete the department individualized study form. The form is submitted to department academic advisor who will clear the student to register for the course.

ARCH 580 Supervised Design Teaching	1-3 Credits (Repeatable)
ARCH 602 Supervised College Teaching	1-6 Credits (Repeatable)
Arch 609 Student Teaching Practicum	3-6 Credits (Repeatable)
Arch 610 History and Theory of Building Technology	3 Credits
Arch 619 Terminal Project	3 Credits
Arch 661 Teaching Technical Subjects in Architecture	1-6 Credits (Repeatable)
Arch 690 Teaching Technology in Architectural Design	3 Credits

Individualized study courses (ARCH/IARC 601: Research; ARCH/IARC 605: Reading and Conference, ARCH/IARC 606: Special Problems, ARCH 619/IARC 611: Terminal Project, and ARCH 620/678: Research Methods in Sustainable Design) may count toward the technical teaching core credits with review and approval by the certificate director of the teaching content.

## CORE COURSES IN TECHNICAL TEACHING

Technical teaching courses are individualized study courses designed to allow the student to initiate a program of self-directed study focusing on particular technical topics. A minimum of 12 credits must be taken from this list and are counted toward the Technical Teaching core credits. To register for these courses, students should first develop a course of study with an appropriate instructor and signature and complete the department Individualized Study Form. The form is submitted to department Academic Advisor who will clear the student to register for the course.

**Arch 580. Teaching Assistants for ARCH 283/4 (1-3 cr repeatable).** An individualized seminar directly linked to teaching in design studio. Students may participate in design studio discussions, desk and class reviews, technical workshops, and help prepare teaching material.

**Arch 602. Supervised College Teaching (1-6 cr repeatable).** Students may earn credits in a variety of ways: e.g. 1 credit per lecture given in technical courses that address environmental control systems, building construction and materials, structures, and enclosures; 2 credits for workshops, tutoring, or advising with design studios or large lecture courses.

**Arch 661. Teaching Technical Subjects in Architecture (1-2 cr repeatable).** Covers techniques for effective teaching, pedagogical and curricular issues, teaching technical topics, critique and development of course assignments. Other topics might include: development of innovative curricular exercises, review of textbooks for courses, development of a technical newsletter. ARCH 661 is often offered as a workshop course during the term.

Other individualized study courses not listed above (ARCH or IARC 601 Research; 605 Reading, 606 Special Problems, ARCH 619/IARC 611 Terminal Project, and ARCH 620/678 Research Methods) may count toward the Technical Teaching core credits with review and approval by the Certificate Director of the teaching content.

## ADVANCED ELECTIVES IN TECHNOLOGY

A variety of elective courses are offered during the year, which may be counted toward the 12 advanced technology credits for the Certificate. Seminar topics and experimental courses (507 and 510) may change and it is recognized that while some of the courses indicated as electives below may not be offered every year, other relevant courses may be offered.

ARCH/IARC 507	Advanced Technology seminars, High Performance Buildings, Case Studies in Sustainable Design, Green Building Technology: In Detail, Ecology of Building Materials
ARCH/IARC 510	Advanced Technology courses, Green Design and Build for Residential Interiors, Oregon BILDS: Sustainable Construction at the Building Site, Passive Heating, Passive Cooling
ARCH 524	Advanced Design Development Media
IARC 573	Working Drawings in Interior Architecture
ARCH 574	Preservation and Restoration Technology
ARCH/IARC 584	Architectural Design (with building technology emphasis) or IARC 586 Custom Cabinet and Furniture Design
IARC 592	Electric Lighting
ARCH 595	Daylighting
ARCH 596	The Window
ARCH 598	Energy Scheming
ARCH 606	Special Topics (individualized study with a faculty advisor)
ARCH 633	History of Sustainable Architecture

## GE POSITIONS

The Certificate program is open to all interested students and is not linked to GE appointments. Participation in this Certificate program does not guarantee that student will be awarded a GE position. Students holding GE appointments are encouraged to link their studies in technology teaching to their GE assignment. Certificate credits can only be earned through activities that are completed in addition to the requirements of their GE appointment.

# TECHNICAL TEACHING CERTIFICATE STUDY PLAN

Department of Architecture, School of Architecture & Environment, University of Oregon

NAME \_\_\_\_\_ Date \_\_\_\_\_

MASTERS PROGRAM \_\_\_\_\_

ANTICIPATED DATE OF GRADUATION \_\_\_\_\_

**REQUIREMENTS:** 24 credits, at least 12 of these credits must be earned in the advanced technical electives category and 12 credits within the core Technical Teaching courses. This Study Plan is used to develop a roadmap of coursework. This form may be used for the Final Study Plan and approval.

# Course Title	Term	Instructor	24 Credits <i>minimum</i>	
			advanced Tech electives 12 credits	core TT courses 12 credits
<b>TOTALS:</b> <i>12 credits min each column</i>				

Notes if applicable:

\_\_\_\_\_  
Signature Date

Alison Kwok, Director, Technical Teaching Certificate or Academic Advisor, School of Architecture & Environment