The graduate degree programs in Del E. Webb School of Construction (DEWSC) offer opportunities for study beyond the bachelor’s degree while focusing on one of two areas: construction management or facility management. Studies may lead to the degrees of Master of Science (MS) and Doctor of Philosophy (PhD).

Graduate study, particularly that leading to the PhD, has as a goal of ensuring independent scholarship, originality, and competence in research. Research opportunities are available in a broad spectrum of subjects encompassing traditional as well as new specialties. The DEWSC faculty is engaged in significant research in the following areas:

- Alternative project delivery methods
- Front end planning
- Asset management
- Cleanroom construction
- Computer applications in construction
- Concrete construction
- Leadership and management
- Trenchless construction methods
- Performance information procurement systems
- Productivity
- Residential construction
- Safety and risk
- Sustainable development

Construction Management Faculty
- Samuel Ariaratnam, Professor
- William Badger, Professor
- Howard Bashford, Associate Professor
- Allan Chasey, Associate Professor
- Mounir El Asmar, Assistant Professor
- James Ernzen, Associate Professor
- G. Edward Gibson, Professor and Program Chairman
- Dean Kashiwagi, Professor
- Kristen Parrish, Assistant Professor
- Pingbo Tang, Assistant Professor
- Kenneth Sullivan, Assistant Professor (Faculty Graduate Coordinator)
- Avi Wiezel, Associate Professor

Currently, students can choose a concentration in one of two areas: Construction Management and Facility Management. The Construction Management concentration allows students seeking upper level management positions in various sectors of the construction industry to improve their competency in project, program, and company management. The Facility Management concentration supports the needs of the student desiring a career in the maintenance, operation, renovation, or decommissioning of existing facilities. It is the responsibility of each student to understand and observe all procedures and requirements specified by the Graduate College and the faculty in DEWSC. The faculty and graduate advisor provide academic advice and assistance; however, the ultimate responsibility for meeting degree requirements remains with the student.
LIST OF COURSES
The graduate core courses (taught in CON, with the exception of a few, approved out-of-department research methods courses), as well as some of the elective courses in Construction Management, are listed below.

M.S. Core Courses
CON 501 (Research Methods)
Students can also take COE 502, PAF 501, PUP 524, or STP 535

CON 540 Construction Productivity
CON 545 Construction Project Management
CON 589 Construction Company Financial Control

Ph.D. Core Courses
All students must successfully complete 13 credit hours of DEWSC PhD core courses:
CON 680 Teaching Practicum (1 credit)
CON 700 Transdisciplinary Research Methods

Three of the following four courses:
CON 730 Construction Informatics
CON 740 Sustainable Infrastructure
CON 750 Facility Delivery in the Global Environment
CON 760 Quantitative Analysis for Project Delivery

Graduate Elective Courses
CON 551 Alternative Project Delivery Methods
CON 554 Trenchless Construction Methods
CON 563 Facility Management Fundamentals
CON 565 Information Measurement Theory I
CON 567 Advanced Procurement Systems
CON 570 Introduction to Advanced Technology Facilities
CON 571 Construction of Advanced Technology Facilities
CON 575 Information Technology in Construction
CON 598 Construction Marketing
CON 598 Development Feasibility Reports
CON 598 Information Measurement Theory II
CON 598 Operations and Maintenance
CON 598 Project Management Methodologies
CON 598 Principles of Leadership and Management
CON 598 Residential Construction Business Practices
CON 598 Sustainability in Construction

Students may take relevant courses in other departments with the approval of their faculty chair. PhD students must take at least two elective courses (500-level and above) outside of DEWSC.

M.S. PROGRAM (non-thesis option)
The Graduate Supervisory Committee (GSC) shall consist of three DEWSC tenure-track faculty. The advisor shall serve as the chair of the GSC.

The Plan of Study (POS) must be in accordance with Graduate College and DEWSC requirements. The candidate must complete at least 30 semester hours of approved course work distributed as follows:

1) twelve (12) hours of graduate core courses
2) eighteen (18) hours of graduate electives

(a) a maximum of six (6) hours of 400-level courses can be included on a POS with approval from the student’s faculty advisor (Construction deficiency courses – CON 495 and CON 496 – cannot be used on a student’s POS)
(b) MS students cannot receive internship credit as part of their POS

The written comprehensive exam, normally about three hours long, will be given about two weeks before Reading Day in the semester in which a student completes his/her coursework. The written examination covers the core courses and all other courses in the student’s approved Plan of Study (POS). Deficiency courses identified at the time of the student’s admission to the MS program are not part of the comprehensive examination.

The exam will have two parts: the first part – 50 minutes – is closed book. Students will be given a 10 minute break and will then complete a two hour section consisting of open material (books, notes, and computer). No collaboration is allowed during any part of the exam. The first part (50 minutes closed book) will test the understanding of advanced construction terms. Students will be asked to provide their own definitions for various significant terms they have encountered in the POS. The second part will consist of two out of four broader topics randomly chosen from the courses in the student’s POS. In other words, students will be presented with four broad topics from their POS, each taking about 40 minutes to answer. The students will have to choose only two of the four topics. Thus, each student will have a different comprehensive exam, based on his or her individual POS. Pass/Fail grades will be e-mailed to all students who took the exam within one week from the completion of the exam. Students must sign up for the exam by the Graduation Filing Deadline by sending an email to the graduate advisor.
Ph.D. PROGRAM
The PhD degree program in Construction Management is designed to capitalize on our current leadership in U.S. construction education programs and the current needs in the industry and in education. The program will prepare research scholars, new faculty, and professionals for positions in industry, universities, and government, as well as facilitate a higher level of investigation and knowledge creation through the professor-PhD student dynamic. The Construction Management program is distinctively positioned to provide students with an interdisciplinary educational and research experience at the PhD level, which will provide value in construction education, research, and industry programs, private construction research facilities, and in high level management positions in the construction industry. The Plan of Study (POS) must be in accordance with Graduate College and DEWSC requirements. The candidate must complete at least 54 credit hours post-master’s degree:

1) 13 credit hours of core courses.
2) 17 credit hours of elective courses.
   (a) A minimum of six credits of elective coursework must be taken outside of DEWSC (500-level and above).
   (b) 400-level courses cannot be used on a PhD POS.
3) 12 research hours (CON 792).
4) 12 dissertation hours (CON 799).

Qualifying Examination
The purposes of the qualifying examination are to assess if the student is qualified to continue in a Construction Management doctoral program and to detect deficiencies in the student's background that can be corrected by appropriate coursework and/or individual study. With this understanding, the qualifying examination is to be taken by the student early in his or her residence, but no later than the second semester of residence. Students with an M.S. degree from ASU may be exempted from taking this exam at the discretion of the DEWSC faculty. Examination content will include relevant topics from first year graduate course work, designated by the DEWSC faculty, who shall participate in formulating, grading, and reviewing the exam. The exam will normally be administered once per year.

Dissertation and Program Committee
The Graduate Supervisory Committee (GSC) shall consist of at least three tenure track ASU faculty as follows:

1) Advisor (GSC Chair).
2) At least one additional member from the DEWSC faculty.
3) Additional members may be chosen from approved DEWSC graduate faculty.
Additional, suitably qualified, members from outside of ASU may be included in the committee at the discretion of the GSC and the Graduate Program Chair. Additional paperwork must be processed with the Graduate College to add a committee member from outside of ASU.

Comprehensive Exam (including Prospectus Defense)
The comprehensive exam shall consist of two parts:

1) An examination of the student's competency in his/her major areas of study.
2) A written and oral report on the student's proposed research.
The format of the exam is established by the GSC and includes both written and oral components. The student will be required to present to the GSC a brief written description of the proposed research, anticipated approaches, expected results, and projected research contributions.
The candidate will also be required to give an oral presentation of the proposed research and to defend the research topic to the GSC. If the student fails the exam, he/she may petition to retake the exam one more time no earlier than 4 months following the exam.

Final Oral Exam (Dissertation Defense)
If the student fails the dissertation defense, he/she may petition to defend one more time no earlier than 4 months following the exam.