COSC 620 Construction Company Operations  
Credits 3. 3 Lecture Hours.  
Running a construction company; strategic planning; business planning;  
organizational theory; competitor analysis; risk management; financial  
analysis; human resources; management information systems;  
leadership; codes of ethics; best practices.

COSC 621 Advanced Project Management  
Credits 3. 3 Lecture Hours.  
Theoretical, practical, and strategic development in the management  
of contemporary construction projects; advanced techniques used in  
scheduling and evaluating progress in construction project control;  
exploration of state-of-the-art management principles and practices, and  
development of additional insights.  
Prerequisite: COSC 603 or COSC 475.

COSC 622 Construction Economics  
Credits 3. 3 Lecture Hours.  
Foundation in Life Cycle Cost Analysis computation within the context  
of current issues in environmental sustainability and evidence-based  
thinking; lean construction as a strategy to overcome the hurdle of first  
cost.

COSC 631 Advanced Productivity and Lean  
Credits 3. 3 Lecture Hours.  
Introduction to lean history, concepts and methods; deduction of basic  
training modules in lean project delivery; application of lean management  
in construction projects.

COSC 642 Construction Information Technology  
Credits 3. 3 Lecture Hours.  
Exploration of emerging technologies for the construction industry  
including hardware and software systems such as BIM, RFID, Wireless/  
Mobile, information systems, construction specific programs, and  
information strategy planning; using information strategy planning by  
owners and contractors to effectively enhance the management of  
business entities and projects in construction.

COSC 644 Advanced Construction Systems  
Credits 3. 3 Lecture Hours.  
Theoretical, practical, and strategic development in contemporary  
construction systems; exploration of state-of-the-art innovations in  
environmental control systems, structural principles and practices;  
integration of innovations with information technologies, and  
development of additional insights.

COSC 650 Advanced Construction Visualization  
Credits 3. 3 Lecture Hours.  
Introduction to the theory and application of 3-D computer models in the  
design/build construction process; creation, positioning in 3-D space, and  
linking of building components to a database record; creation of a wide  
range of construction related information useful in controlling project  
quality.

COSC 663 Sustainable Construction  
Credits 3. 3 Lecture Hours.  
Contribution of materials and methods to meeting the needs of the  
present without compromising the ability of future generations to meet  
their own needs; overview of international, national and local programs  
promoting sustainable construction; characteristics of the components  
of successful sustainable construction projects; theories and practices  
through case studies.

COSC 670 Facilities Asset Management  
Credits 3. 3 Lecture Hours.  
Fundamentals of facility asset management and property management  
including concepts, theories, and principles of design, construction,  
accounting, finance, and management of the built environment; an  
overview of a project throughout its entire life cycle from various  
perspectives including the owner, users, designers, constructors and  
facility management personnel.

COSC 681 Seminar  
Credit 1. 1 Lecture Hour.  
Discussion and review of degree requirements, career opportunities, and  
current research activities in construction management.  
Prerequisite: Graduate classification.

COSC 684 Professional Internship  
Credits 3 to 6. 3 to 3 Other Hours.  
Approximately 400-600 hours with a construction or construction-related  
company that exposes the student to construction-related activities;  
an initial report, monthly progress reports, a final report, and a final  
completion letter are required.  
Prerequisites: Graduate classification; approval of graduate coordinator;  
approval of internship coordinator.

COSC 685 Directed Studies  
Credits 1 to 6. 1 to 6 Other Hours.  
Individual problems in the area of building construction involving the  
application of theory and practice.  
Prerequisite: Approval of instructor.

COSC 689 Special Topics in...  
Credits 1 to 4. 1 to 4 Lecture Hours.  
Selected topics in an identified field of construction management. May  
be repeated for credit.  
Prerequisite: Approval of instructor.

COSC 690 Theory of Research in Construction Management  
Credits 3. 3 Lecture Hours.  
Introduction to research, research tools, proposal writing and research  
reports; emphasis on research planning and design, conducting a  
comprehensive review of literature, quantitative and qualitative research  
methodologies, defining research problems in construction science, and  
the development of research proposals.  
Prerequisite: STAT 651 or concurrent enrollment.

COSC 691 Research  
Credits 1 to 23. 1 to 23 Other Hours.  
Research for thesis.  
Prerequisites: COSC 690 or concurrent enrollment; approval of graduate  
coordinator.
COSC 693 Professional Study
Credits 1 to 6. 1 to 6 Other Hours.
Approved professional study of project undertaken as terminal requirement for Master of Science, non-thesis option. Preparation of a record of study summarizing the rationale, procedure and results of the completed study. May be repeated for credit.

Prerequisite: COSC 690 or concurrent enrollment; approval of graduate coordinator.