

# Construction Management

*College of Science, Engineering & Technology  
Department of Interior Design & Construction  
Management*

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www.mnsu.edu/dept/idcm

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The mission of the Department of Interior Design and Construction Management is to provide preparation for diverse employment opportunities following completion of the degree program. It provides graduates with the essential tools and competency levels for design, construction, planning, or restoration managerial careers.

The Construction Management Emphases provide students with opportunities to gain applied skills and knowledge in the areas of design, construction, planning, and management, allowing them to successfully pursue careers in small and large commercial, residential, and industrial environments.

It is the intent of the Department of Interior Design and Construction Management to offer two separate BS degrees: (1) a BS in Construction Management with a General Emphasis or an Emphasis in Facilities Planning and Management; and (2) a BS in Interior Design with a General Emphasis or an Emphasis in Historic Restoration or Interior Design. The program division into two majors is currently pending MnSCU approval. Please contact the Department for information about courses required for the degree and Emphasis in which you are interested.

Admission to Major is granted by the College of Science, Engineering and Technology. Minimum University admission requirements are:

- A minimum of 32 earned semester credit hours.

- A minimum cumulative GPA of 2.00

Contact the CSET Advising Center for application procedures.

## CONSTRUCTION MANAGEMENT BS

### Core (46 credits):

IDCM 111	Intro to Design and Construction Management (2)
IDCM 212	Surveying and Site Planning (2)
IDCM 215	Fundamentals of Estimating (3)
IDCM 216	Construction Methods (3)
IDCM 248	Contract Documents (2)
IDCM 250	Mechanical and Electrical Systems (3)
IDCM 280	Fundamentals of Interior Design (4)
IDCM 281	Architectural Graphics (4)

IDCM 413	Cost Estimating and Bidding (3)
IDCM 414	Computerized Estimating and Bidding (3)
IDCM 445	Construction Systems Management (3)

ACCT 200	Financial Accounting (3)
ACCT 210	Managerial Accounting (3)
BLAW 476	Construction and Design Law (3)
COMS 101	Introduction to Microcomputers (3)
MET 424	Industrial & Construction Safety (2)

### Recommended General Education:

BIOL 201	Ecology and Human Society (3)
ENG 101	Composition (4)
GEOG 100	Elements of Geography (3)
PHIL 120	Introduction to Ethics (3)
SOC 101	Introduction to Sociology (3)
SPEE 100	Fundamentals of Speech Communication (3)

URBS 100	Introduction to the City (3)
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Completion of these General Education Courses does not entirely fulfill the GE requirements

**Choose one of the following two Emphases, either GENERAL or FACILITIES PLANNING AND MANAGEMENT:**

### CONSTRUCTION MANAGEMENT GENERAL EMPHASIS

#### Required for Construction Management General Emphasis (14 credits):

IDCM 106	Construction Experience (1)
IDCM 311	Equipment Management (2)
IDCM 312	Found. & Conc. Structures (3)
IDCM 497	Internship (8)

#### Required Support Courses (25 credits):

BLAW 200	Legal, Political and Regulatory Environment of Business (3)
ECON 201	Principles of Macroeconomics (3)
ECON 202	Principles of Microeconomics (3)
MATH 115	Precalculus (4)
MGMT 200	Introduction to MIS (3)
MGMT 330	Principles of Management (3)
BED 345	Business Communications (3)

#### Select one of the following:

MGMT 440	Human Resource Management (3)
MGMT 482	Business, Society and Ethics (3)
FINA 362	Business Finance (3)

#### Required General Education (10 credits):

MATH 115	Pre-Calculus (4)
ECON 201	Principles of Macroeconomics (3)
ECON 202	Principles of Microeconomics (3)

Completion of the above General Education courses does not completely satisfy General Education Requirements.

### FACILITIES PLANNING AND MANAGEMENT EMPHASIS

This emphasis currently exceeds the minimum 128 credits required for graduation. Please contact an

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advisor for assistance with course selection.

**Required for Facilities Planning and Management Emphasis (35 credits):**

IDCM 282	Interior Design Portraiture (4)
IDCM 283	Interior Design Lighting and Color (4)
IDCM 362	History of the Decorative Arts II (4)
IDCM 372	Interior Design Resources (4)
IDCM 480	Topics: I.D. Product Development (4)
IDCM 481	Interior Design Studio III (4)
IDCM 482	Interior Design Studio IV (4)
IDCM 483	Procedures and Practices in I.D. (4)
IDCM 497	Internship (3)

**Required Support Courses (7-8 credits):**

FINA 477	Real Estate (3)
MET 423	Ergonomics and Work Measure (2)

**Select one of the following:**

MET 407	Facility Planning (2)
RPLS 379	Mgmt. of Parks and Rec. Facilities (3)

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**POLICIES/INFORMATION**

**GPA Policy.** A minimum grade of "C" is required in all courses.

**P/N Grading Policy.** All courses in the major must be taken for letter grade except where P/N is the only option.

For interior design students, the department reserves the right of acquisition and exhibition of work completed in the studios under the guidance of the interior design faculty.

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**COURSE DESCRIPTIONS**

**IDCM 106 (1) Construction Experience**

Construction Experience consists of at least 15 weeks of work in the construction industry and must precede the internship program. This credit may be waived for experience acquired prior to enrolling at Minnesota State University, Mankato.

**IDCM 111 (2) Introduction to Interior Design & Construction Management**

Overview of academic preparation and career opportunities in the fields of: Construction Management; Facilities Planning and Management; Historic Restoration and Preservation; and Interior Design.

**IDCM 212 (2) Surveying & Site Planning**

Basic surveying as related to the layout of construction work sites, focusing on measurement of distances, angles, and elevations, and making selected computations.

Pre: MATH 115

**IDCM 215 (3) Fundamentals of Estimating**

Covers principles of quantity takeoff including identification of symbols and trigonometric computations of materials from construction blueprints. Includes commercial and residential types of construction plans.

Pre or coreq: MATH 115, IDCM 111 and 281

**IDCM 216 (3) Construction Methods**

Processes utilized in material handling and installation are examined for their effect on managing design and construction projects. Scheduling concepts are studied for patterns to yield higher productivity in the project management process.

Pre or coreq: IDCM 111

**IDCM 248 (2) Contract Documents**

Basic understanding of the plans and specifications for construction projects. Emphasis on interpretation of bidding and contractual documents, conditions of the contract, technical specifications, quantity takeoffs, and the plans/working drawings.

Pre or coreq: IDCM 111 and 281

**IDCM 250 (3) Mechanical & Electrical Systems**

Design concepts of heating, plumbing, electrical and control systems are analyzed for attributes that effect the design and construction processes and the performance of completed structures.

Pre or coreq: IDCM 111

**IDCM 280 (4) Fundamentals of Interior Design**

Introduction to the elements and principles of design and their application within residential and commercial interior environments.

**IDCM 281 (4) Architectural Graphics**

For contractors and designers working in a collaborative process. Emphasis on plan design reading, introduction to architectural hand drafting, architectural symbols, vocabulary, lettering and three-dimensional illustration techniques.

**IDCM 282 (4) Interior Design Portraiture**

An introduction to the principles of interior portraiture including techniques for the creation of three-dimensional design illustrations, color illustration techniques, and presentation formats.

Pre: IDCM 280 and 281

**IDCM 283 (4) Interior Design Lighting & Color**

Study of lighting and color principles and theories as major tools in the design of human environments through research, study, and actual problem solving.

Pre: IDCM 280, 281, 282

**IDCM 291 (1) Lectures in Construction Management**

Seminars will be conducted by leaders in industry, government and business to learn how they function in their role of management and their relationship to the construction industry.

**IDCM 311 (2) Equipment Management**

Study of equipment used in the construction industry with emphasis on equipment selection and cost factors involved in owning and operating equipment.

Pre: IDCM 111 and 216

**IDCM 312 (3) Foundations & Concrete Structures**

Soil identification and testing methods are examined to identify design concepts and construction circumstances that can effect projects. Concrete

design and workmanship principles are studied for their effect on quality and durability of the built environment. Foundation design principles are examined for their effect on scheduling, equipment selection and project success.

Pre or coreq: IDCM 216

#### **IDCM 362 (4) History of the Decorative Arts II**

A history of the Decorative Arts including American Primitive through Victorian and Mid-19th century through current contemporary design developments, with appropriate historical architectural study.

#### **IDCM 372 (4) Interior Design Resources**

Methods and materials for the design of interior environments. Investigation of residential and commercial materials and product lines.

#### **IDCM 413 (3) Cost Estimating & Bidding**

Advanced application of procedures and theory in formulating estimates on highway, grading and utility projects. Study includes job selection, estimating production, compilation of costs, the final preparation of bids, and ethics in estimating and bidding.

Pre: IDCM 215, 216, 248 and 311 (Pre 311 waived for FR & M and HR & P)

#### **IDCM 414 (3) Computerized Estimating & Scheduling**

The process of construction estimating is extended by the use of computers together with specialized construction software packages to increase job productivity. Software utilized includes commonly used packages in the construction industry on workstations.

Pre: IDCM 311; COMS 101 or equivalent; ACCT 210 (Pre 311 waived for FP & M and HR & P)

#### **IDCM 445 (3) Construction Systems Management**

This course encompasses an overview of the operations of a firm relevant to strategic management. Identified and analyzed are the positions and roles of construction management personnel and their interrelationship with key individuals external to the company. Global issues impacting management are discussed.

Pre: IDCM 413 (or concurrently), ACCT 210

#### **IDCM 490 (1-4) Workshop: Interior Design & Construction Management**

Exploration of techniques, technology and theories relating to design and construction industries. Course may be repeated for credit as content changes.

#### **IDCM 491 (1-6) In-Service: Interior Design & Construction Management**

Advanced study into current developments in design and construction related industries, professional orientation, and affiliations. Course may be repeated for credit as topics change.

#### **IDCM 492 (1-4) Seminar: Interior Design & Construction Management**

#### **IDCM 497 (1-10) Internship:**

#### **IDCM 498 (1-6) Internship: Interior Design**

Supervised work experience in design or design related field within private business, industry or a government agency.

#### **IDCM 499 (1-4) Individual Study**

An in-depth study on a topic of particular interest to the student. Project must be approved by project supervisor and department chairperson.