# **CONSTRUCTION MANAGEMENT - B.S.**

College of Architecture and Environmental Design www.kent.edu/caed

## **About This Program**

Build your future with the Construction Management bachelor's degree program. Our program prepares graduates for leadership in the increasingly complex, sophisticated and rewarding field of construction management through access to advanced technologies, leading experts, hands-on training and industry insights that prepare you to lead in a variety of construction management roles. Read more...

#### **Contact Information**

- Program Director: Suat Gunhan, Ph.D. | sgunhan@kent.edu | 330-672-2917
- · Speak with an Advisor
- · Chat with an Admissions Counselor

## **Program Delivery**

- · Delivery:
  - · In person
- · Location:
  - · Kent Campus

## Examples of Possible Careers and Salaries\*

#### **Construction managers**

- 8.5% much faster than the average
- · 476,700 number of jobs
- \$97,180 potential earnings

#### **Accreditation**

The B.S. degree in Construction Management is accredited by the American Council for Construction Education (ACCE).

\* Source of occupation titles and labor data comes from the U.S. Bureau of Labor Statistics' Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

## **Admission Requirements**

The university affirmatively strives to provide educational opportunities and access to students with varied backgrounds, those with special talents and adult students who graduated from high school three or more years ago.

**First-Year Students on the Kent Campus:** First-year admission policy on the Kent Campus is selective. Admission decisions are based upon cumulative grade point average, strength of high school college preparatory curriculum and grade trends. Students not admissible to the Kent Campus may be administratively referred to one of the

seven regional campuses to begin their college coursework. For more information, visit the admissions website for first-year students.

First-Year Students on the Regional Campuses: First-year admission to Kent State's campuses at Ashtabula, East Liverpool, Geauga, Salem, Stark, Trumbull and Tuscarawas, as well as the Twinsburg Academic Center, is open to anyone with a high school diploma or its equivalent. For more information on admissions, contact the Regional Campuses admissions offices.

**International Students:** All international students must provide proof of English language proficiency unless they meet specific exceptions. For more information, visit the admissions website for international students.

**Transfer Students:** Students who have attended any other educational institution after graduating from high school must apply as undergraduate transfer students. For more information, visit the admissions website for transfer students.

Former Students: Former Kent State students or graduates who have not attended another college or university since Kent State may complete the reenrollment or reinstatement form on the University Registrar's website.

Admission policies for undergraduate students may be found in the University Catalog.

Some programs may require that students meet certain requirements before progressing through the program. For programs with progression requirements, the information is shown on the Coursework tab.

## **Program Requirements**

#### **Major Requirements**

Code	Title	Credit Hours
Major Requirements (	courses count in major GPA)	
ARCH 10001	UNDERSTANDING ARCHITECTURE (KFA)	3
CMGT 10001	INTRODUCTION TO CONSTRUCTION MANAGEMENT	3
CMGT 11044	CONSTRUCTION SAFETY	3
CMGT 11071	CONSTRUCTION MATERIALS AND METHODS I	3
CMGT 21071	CONSTRUCTION MATERIALS AND METHODS II	3
CMGT 22200	CONSTRUCTION DOCUMENT READING <sup>1</sup>	3
CMGT 27210	SUSTAINABILITY IN THE BUILT ENVIRONMENT	3
CMGT 31023	CONSTRUCTION SURVEYING	3
CMGT 31033	MECHANICAL SYSTEMS	3
CMGT 31040	ELECTRICAL SYSTEMS FOR CONSTRUCTION MANAGERS	3
CMGT 33092	CONSTRUCTION MANAGEMENT INTERNSHIP (ELR) (WIC) <sup>2</sup>	3
CMGT 33111	INTRODUCTION TO BUILDING STRUCTURES	3
CMGT 41040	CONSTRUCTION ESTIMATING I	3
CMGT 41041	CONSTRUCTION ESTIMATING II	3
CMGT 42030	BUILDING INFORMATION MODELING FOR CONSTRUCTION MANAGEMENT	3
CMGT 42105	CONSTRUCTION CONTRACTS AND LAW	3
CMGT 42107	CONSTRUCTION SCHEDULING	3
CMGT 43099	CONSTRUCTION MANAGEMENT CAPSTONE (ELR)	3
Additional Requireme	nts (courses do not count in major GPA)	
ACCT 23020	INTRODUCTION TO FINANCIAL ACCOUNTING	3
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3

ECON 22061	PRINCIPLES OF MACROECONOMICS (KSS)	3
ENG 20002	INTRODUCTION TO TECHNICAL WRITING	3
FIN 26074	LEGAL ENVIRONMENT OF BUSINESS	3
MATH 11012	INTUITIVE CALCULUS (KMCR)	3
MATH 11022	TRIGONOMETRY (KMCR)	3
MGMT 24163	PRINCIPLES OF MANAGEMENT	3
MKTG 25010	PRINCIPLES OF MARKETING	3
PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
UC 10001	FLASHES 101	1
Kent Core Compos	ition	6
Kent Core Humanities and Fine Arts (minimum one course from each)		6
Kent Core Social Sciences (must be from two disciplines)		3
Kent Core Basic So for this major)	ciences (total credit hours in this category must be 8	3
,	otal credit hours depends on earning 120 credit 9 upper-division credit hours)	3
<b>Additional Require</b>	ments or Concentrations	
Choose from the fo	ollowing:	12
Additional Requ Concentration	uirements for Students Not Declaring a	
Civil Manageme	ent Concentration	
Mechanical and	d Electrical Management Concentration	
Safety Manager	ment Concentration	
Minimum Total Credit Hours:		120

Students declaring a dual degree program with the B.A. in Architectural Studies major may substitute AED 10102 for CMGT 22200.

#### **Additional Requirements for Students Not Declaring a** Concentration

Code	Title	Credit Hours
Additional Red	quirements (courses do not count in major GPA)	
Construction 40000 level) 1	Management (CMGT) Upper-Division Electives (30000 or	9
College of Arc	hitecture and Environmental Design Elective, choose wing: <sup>2</sup>	3
Any Archite	ectural Studies (ARCS) course	
Any Archite	ecture (ARCH) course	
Any Archite	ecture and Environmental Design (AED) course	
Any Consti	ruction Management (CMGT) course <sup>1</sup>	
Any Interio	r Design (ID) course	

Maximum 6 credit hours of CMGT 33092 may be applied toward the

#### **Civil Management Concentration Requirements**

Code	Title	Credit Hours
Concentration Requi	irements (courses count in major GPA)	
CMGT 42053	SUBCONTRACTOR LEADERSHIP AND PRACTICES	3
CMGT 42054	CIVIL ESTIMATING	3
CMGT 42055	CIVIL UTILITY SYSTEMS	3
CMGT 42056	SOILS AND MATERIALS	3
Minimum Total Credit Hours:		12

#### **Mechanical and Electrical Management Concentration** Requirements

Code	Title	Credit Hours
Concentration Req	uirements (courses count in major GPA)	
CMGT 42030	BUILDING INFORMATION MODELING FOR CONSTRUCTION MANAGEMENT	3
CMGT 42051	ALTERNATIVE ENERGY SYSTEMS IN BUILDING DESIGN	3
CMGT 42052	MECHANICAL AND ELECTRICAL ESTIMATING	3
CMGT 42053	SUBCONTRACTOR LEADERSHIP AND PRACTICES	3
Minimum Total Credit Hours:		12

#### **Safety Management Concentration Requirements**

Code	Title	Credit Hours
Concentration Requi	rements (courses count in major GPA)	
Concentration Election	ves, choose from the following:	12
CMGT 31044	ADVANCED CONSTRUCTION SAFETY AND MANAGEMENT	
CMGT 31045	CONSTRUCTION RISK MANAGEMENT	
CMGT 31046	INTRODUCTION TO INSURANCE AND WORKER'S COMPENSATION	
CMGT 41047	FUNDAMENTALS OF INDUSTRIAL AND CONSTRUCTION HYGIENE	
CMGT 41048	OCCUPATIONAL SAFETY AND HEALTH LAW	

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## **Graduation Requirements**

Minimum Major GPA	Minimum Overall GPA
2.250	2.000

## **Roadmap**

**Minimum Total Credit Hours:** 

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Semester One		Credits
ARCH 10001	UNDERSTANDING ARCHITECTURE (KFA)	3
CMGT 10001	INTRODUCTION TO CONSTRUCTION MANAGEMENT	3
MATH 11022	TRIGONOMETRY (KMCR)	3
UC 10001	FLASHES 101	1
Kent Core Requirement		3
Kent Core Requirement		3
	Credit Hours	16

Minimum Total Credit Hours:

A minimum C grade must be earned to fulfill the writing-intensive requirement.

Special approval is required to take elective courses in the following subjects: Architectural Studies (ARCS), Architecture (ARCH), Architecture and Environmental Design (AED) and Interior Design (ID).

	Credit Hours	15
	·	
Additional or Co	ncentration Requirements	12
CMGT 43099	CONSTRUCTION MANAGEMENT CAPSTONE (ELR)	3
Semester Eight		
	Credit Hours	15
MGMT 24163	PRINCIPLES OF MANAGEMENT	3
FIN 26074	LEGAL ENVIRONMENT OF BUSINESS	3
ECON 22061	PRINCIPLES OF MACROECONOMICS (KSS)	3
CMGT 42107	(ELR) (WIC) CONSTRUCTION SCHEDULING	3
CMGT 33092	CONSTRUCTION MANAGEMENT INTERNSHIP	3
Semester Sever		10
WK1G 25010	Credit Hours	15
CMGT 42105 MKTG 25010	CONSTRUCTION CONTRACTS AND LAW PRINCIPLES OF MARKETING	3
CMGT 41041	CONSTRUCTION CONTRACTS AND LAW	3
CMGT 33111	INTRODUCTION TO BUILDING STRUCTURES	3
	MANAGERS	
Semester Six CMGT 31040	ELECTRICAL SYSTEMS FOR CONSTRUCTION	3
	Credit Hours	15
General Elective		3
CMGT 41040	CONSTRUCTION ESTIMATING I	3
CMGT 31033	MECHANICAL SYSTEMS	3
CMGT 31023	CONSTRUCTION SURVEYING	3
Semester Five ACCT 23020	INTRODUCTION TO FINANCIAL ACCOUNTING	3
0	Credit Hours	14
Kent Core Requ		3
	(KBS) (KLAB)	
PHY 13001 PHY 13021	GENERAL COLLEGE PHYSICS I (RBS)	1
PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
Semester Four CMGT 21071	CONSTRUCTION MATERIALS AND METHODS II	3
Compoter Farm	Credit Hours	15
Kent Core Requi		3
Kent Core Requi		3
ENG 20002	INTRODUCTION TO TECHNICAL WRITING	3
CMGT 42030	BUILDING INFORMATION MODELING FOR CONSTRUCTION MANAGEMENT	3
CMGT 27210	SUSTAINABILITY IN THE BUILT ENVIRONMENT	3
Semester Three		
	Credit Hours	15
Kent Core Requi	irement	3
MATH 11012	INTUITIVE CALCULUS (KMCR)	3
CMGT 22200	CONSTRUCTION DOCUMENT READING	3
CMGT 11071	CONSTRUCTION MATERIALS AND METHODS I	3
CMGT 11044	CONSTRUCTION SAFETY	3

## **University Requirements**

All students in a bachelor's degree program at Kent State University must complete the following university requirements for graduation.

**NOTE:** University requirements may be fulfilled in this program by specific course requirements. Please see Program Requirements for details.

Flashes 101 (UC 10001)	1 credit hour
Course is not required for students with 30+ transfer credits (excluding College Credit Plus) or age 21+ at time of admission.	
Diversity Domestic/Global (DIVD/DIVG)	2 courses
Students must successfully complete one domestic and one global course, of which one must be from the Kent Core.	
Experiential Learning Requirement (ELR)	varies
Students must successfully complete one course or approved experience.	
Kent Core (see table below)	36-37 credit hours
Writing-Intensive Course (WIC)	1 course
Students must earn a minimum C grade in the course.	
Upper-Division Requirement	39 credit hours
Students must successfully complete 39 upper-division (numbered 30000 to 49999) credit hours to graduate.	
Total Credit Hour Requirement	120 credit hours
<b>Kent Core Requirements</b>	
Kent Core Composition (KCMP)	6
Kent Core Mathematics and Critical Reasoning (KMCR)	3
Kent Core Humanities and Fine Arts (KHUM/KFA) (min one course each)	9

## **Program Learning Outcomes**

Kent Core Social Sciences (KSS) (must be from two disciplines)
Kent Core Basic Sciences (KBS/KLAB) (must include one laboratory)

Graduates of this program will be able to:

Kent Core Additional (KADL)

**Total Credit Hours:** 

- 1. Understand construction materials, methods and processes.
- Competently read and understand construction drawings and specifications.
- 3. Control and manage the scope of work for a construction jobsite.
- 4. Maintain a safe work environment.
- 5. Quantify takeoffs and cost estimates.
- 6. Understand the scheduling process and use computer software to create construction schedules.
- 7. Uphold ethical and professional standards.
- 8. Use critical thinking and problem solving skills to analyze and perform functions within construction projects.
- Communicate effectively to operate effectively in a construction management environment.
- 10. Understand construction laws, codes and regulations.

## **Full Description**

The Bachelor of Science degree in Construction Management employs a professional-service approach that applies effective management techniques and oversight to the building and management of construction projects. Students learn the business of construction

6-7

6

36-37

4

from inception to completion of a project—including emphasis on construction materials and methods—that will enable them to estimate costs, schedule work, oversee construction worksite activities and manage projects.

The Construction Management major includes the following optional concentrations:

- The Civil Management concentration offers students an opportunity
  to further explore civil construction estimating functions, utility
  systems, soils and subcontractor leadership. Focusing on the critical
  systems that are needed on all projects, this concentration provides
  construction managers with the tools to navigate civil construction
  on any project.
- The Mechanical and Electrical Management concentration offers students expertise in mechanical systems. By exposing students to sustainable building technologies, specific mechanical and electrical estimating, BIM and leadership, this concentration sets students apart in knowledge base and experience. Construction managers are more effective with an in-depth understanding of critical MEP systems.
- The Safety Management concentration is for those wishing to pursue
  a career in safety and/or construction managers looking to expand
  their knowledge in safety related to construction. Students take
  advanced OSHA and safety courses while exposing themselves to
  insurance and workers' compensation laws and procedures. Safety is
  the #1 priority of project management teams, and this concentration
  looks to provide future leaders with the tools to lead a safe job site.

Cooperative education opportunities are available to students in construction companies and architect/engineering firms in the region. In addition, students have an opportunity to pursue a dual degree with the B.A. degree in Architectural Studies.