ABOUT THE DEPARTMENT AND MAJORS

CONSTRUCTION MANAGEMENT

Construction management is an interdisciplinary field of study that focuses on the management of construction projects. The curriculum concentrates on the application of critical concepts using hands-on laboratories and high impact learning practices. The Bachelor of Science in Construction Management has two emphases:

- The Construction Management Emphasis prepares graduates to enter managerial positions in construction as project managers, estimators, schedulers and supervisors of labor.
- The Construction Safety Management Emphasis prepares students to enter construction as safety directors, safety managers, safety trainers and safety consultants.

The student learning outcomes for this program were designed to educate graduates with the knowledge and skills necessary to be successful construction managers. Therefore, upon completion of the program, graduates will possess the ability to:

- Estimate the cost of construction;
- Plan and execute a construction schedule;
- Evaluate and plan for HVAC, electrical and plumbing using various schematic drawings;
- Demonstrate safe operation of construction tools and equipment, recognize and address common safety challenges and promote a culture of safety; and
- Identify advantages and disadvantages of construction materials for specific situations.

Furthermore, graduates completing of the building construction management emphasis will:

- Demonstrate proficiency using computer graphics and construction management software;
- Perform various surveying techniques in plotting for construction; and
- Demonstrate various aspects of construction administration.

Likewise, graduates completing the construction safety and risk control management emphasis will be prepared to:

- Interpret government regulations and policies as they pertain to construction safety;
- Develop and implement construction safety plans, recognize safe practices and make corrections for unsafe conditions at job sites;
- Conduct job safety analyses and inspections of construction sites; and
- Evaluate hazards inherent to construction activities, identify current safety regulations and develop strategies and plans of action for improvement.

Additionally, students will have the opportunity to complete various technical certificates in construction management and construction safety and risk control management upon graduation.

INDUSTRIAL TECHNOLOGY MANAGEMENT

The Industrial Technology Management programs are accredited by the Association of Technology, Management, and Applied Engineering. Industrial Technology Management is a hands-on, applied engineering, management degree. Students are required to select at least one emphasis as a part of this major:

- The Manufacturing Technology Management Emphasis prepares graduates to enter industry in technical, engineering, managerial and staff positions in the areas of production, manufacturing, design, technical sales and services, and quality assurance. Coursework In the Metals Processing Technology Minor is certified by the Foundry Educational Foundation, one of twenty-five certified schools in the nation.
- The Occupational Safety Management Emphasis prepares graduates to enter manufacturing, construction, business, consulting agencies, insurance companies and government agencies in management and engineering positions.

COOPERATIVE EDUCATION AND INTERNSHIPS

A cooperative education and internship program is administered by the department. Through a supervised work experience with approved employers, students gain the advantage of up-to-date knowledge and practical experience related to their major and area of specialization. Students wishing to complete an industrial internship must meet the following requirements:
1. The following general education requirements must be completed before a student will be and permitted to enroll in an industrial studies internship: ENGLISH 1130 and ENGLISH 1230, SPEECH 1010 and mathematics (three credits);
2. Be in good academic standing and be classified as a junior (minimum 60 credits);
3. Be approved and registered for the credits prior to the internship or cooperative education experience;
4. Have completed 18 credits of industrial studies coursework (INDUSTDY) to include INDUSTDY 1010. Three credits in INDUSTDY 4990 are required; however, a maximum of eight credits may be counted towards a student's degree.

TECHNOLOGY EDUCATION
Technology education prepares students to teach in elementary, middle level and secondary school systems. A student completing this major receives Department of Public Instruction certification to teach technology education (220 license). The strength of the program is in the collaboration between professional education course requirements and technology course requirements. Technology education majors learn hands-on approaches to illustrate the effects of technology on modern life.

GENERAL REQUIREMENTS

BACHELOR OF SCIENCE DEGREE

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<td>Total for graduation</td>
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<tr>
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<td>44-58</td>
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<td>Major studies</td>
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MISSION STATEMENTS AND STUDENT LEARNING OUTCOMES FOR THE DEPARTMENT AND MAJORS/EMPHASES

The mission of the UW-Platteville Department of Industrial Studies is to provide exceptional quality education and practical experiences for students. The instruction provided will emphasize theoretical and practical studies, internships, applied research and the relationship of management and technology toward the preparation of competent leaders for a global society.

CONSTRUCTION MANAGEMENT EMPHASIS MISSION STATEMENTS AND STUDENT LEARNING OUTCOMES

1. The mission of the Construction Management Emphasis is to prepare competent professional leaders who understand the interrelationships between management and construction technology and apply their skills to solve real-world problems in a global society. Construction Management student learning outcomes are:
   a. Students will be able to estimate the cost of construction.
   b. Students will be able to plan and execute a schedule of construction.
   c. Students will be able to demonstrate proficiency in using computer graphics and management software programs.
   d. Students will be able to evaluate and plan for HVAC, electrical and plumbing using various schematic drawings.
   e. Students will be able to identify advantages and disadvantages of various construction materials for specific situations.
   f. While on the job site, students will be able to demonstrate safe operation of construction tools and equipment.
   g. Students will be able to develop and implement construction safety plans, recognize safe practices and also make corrections for unsafe conditions at the job site.
   h. Students will be able to perform various surveying techniques in plotting for construction.
   i. Students will be able to demonstrate various aspects of construction administration.

2. The mission statement of the Construction Safety Management Emphasis is to develop highly competent professionals and leaders in the fields of construction management and safety who understand the interrelationships between management, construction technologies and site safety. Construction Safety Management learning outcomes are as follows. Students will be able to:
   a. Estimate the cost of construction.
   b. Plan and execute a schedule of construction.
   c. Promote a safety culture.
   d. Interpret government regulations and policies as they pertain to construction safety.
   e. Conduct job safety analysis and safety inspections of construction sites.
   f. Evaluate construction drawings and specifications relative to the construction trades, including, but not limited to, plumbing, electrical and HVAC.
   g. Evaluate the safety requirements of construction activities and develop plans of action and safety procedures as needed.
   h. Identify advantages and disadvantages of various construction materials for specific situations.
   i. Students will have the opportunity to earn an OSHA 30-hour construction safety card.
INDUSTRIAL TECHNOLOGY MANAGEMENT EMPHASSES MISSION STATEMENTS AND STUDENT LEARNING OUTCOMES

1. The mission of the Manufacturing Technology Management Emphasis is to offer the best educational opportunities to prepare professional and technical leaders for manufacturing and service industries. These opportunities emphasize theoretical and practical experiences, internships and applied research. The program stresses the relationship of management and technology for the preparation of competent industrial leaders for a global manufacturing environment. Manufacturing Technology Management student learning outcomes are:
   a. Students will be able to identify advantages and limitations of industrial materials in the manufacturing of products.
   b. Students will be able to explain the basics of industrial processes.
   c. Students will be able to develop and execute a production plan for manufacturing and a plan for the procurement of equipment.
   d. Students will be able to assess in practical terms the elements of a quality system.
   e. Students will be able to assess the cost of delivering a product or service using various work measurements and cost analysis techniques.
   f. Students will be able to demonstrate their ability to lead others within the vision, values and ethics in the global economy and deal with personnel issues having an appreciation for cultural differences.
   g. Students will be able to demonstrate their ability to utilize computer technology through graphics, programming, machining and communication.
   h. Students will have the ability to adapt and modify to current needs.
   i. Students will have the ability to problem solve and identify root causes.
   j. Students will be able to understand research procedures through interpretation of data and through conducting research.
   k. Students will be able to develop and implement manufacturing safety plans.

2. The mission of the Occupational Safety Management Emphasis is to develop highly competent professionals and leaders in the field of safety and health through classroom preparation, laboratory activities and internships. These educational experiences emphasize safety policies, procedures, issues and incidents in the global workplace. Occupational Safety Management student learning outcomes are:
   a. Students will be able to interpret government laws and policies as they pertain to safety.
   b. Students will be able to conduct safety facility inspections at work sites.
   c. Students will be able to promote a safety culture.
   d. Students will be able to analyze work situations for ergonomic issues.
   e. Students will be able to develop emergency disaster preparedness plans.
   f. Students will be able to analyze the safe operation of equipment, machines and tools in the course of work.
   g. Students will be able to develop and deliver safety programs at the workplace.

TECHNOLOGY EDUCATION MISSION STATEMENT

The mission statement of the Technology Education program is to prepare the finest technology education teachers in the state of Wisconsin.

Competencies for Technology Education majors are elaborated under the 10 Wisconsin Standards for Teacher Development and Licensure. The WSTDL standards as they apply to technology education include:

WISCONSIN STANDARDS FOR TEACHER DEVELOPMENT AND LICENSURE

STANDARD # 1
The teacher understands the central concepts, tools of inquiry and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

STANDARD # 2
The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.

STANDARD # 3
The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

STANDARD # 4
The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem-solving and performance skills.

STANDARD # 5
The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning and self-motivation.

STANDARD # 6
The teacher uses knowledge of effective verbal, nonverbal and media communication techniques to foster active inquiry, collaboration and supportive interaction in the classroom.
STANDARD # 7
The teacher plans instruction based upon knowledge of subject matter, students, the community and curriculum goals.

STANDARD # 8
The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.

STANDARD # 9
The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

STANDARD # 10
The teacher fosters relationships with school colleagues, parents and agencies in the larger community to support students’ learning and well-being.

MAJORS
- Construction Management Major, B.S.
  - Construction Management Emphasis
  - Construction Safety Management Emphasis
  - Manufacturing Technology Management Emphasis
  - Occupational Safety Management Emphasis
- Technology Education Major, B.S. (http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/industrial-studies/technology-education-bs/)

TECHNICAL MINORS
- Construction Management (http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/industrial-studies/building-construction-management-minor/)
- Construction Safety (http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/industrial-studies/construction-safety-minor/)
- Industrial Control Systems Technology (http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/industrial-studies/industrial-control-systems-technology-minor/)
- Metals Processing Technology (http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/industrial-studies/metals-processing-technology-minor/)
- Occupational Safety (http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/industrial-studies/occupational-safety-minor/)
- Plastics Processing Technology (http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/industrial-studies/plastics-processing-technology-minor/)
- Production and Manufacturing Management (http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/industrial-studies/production-manufacturing-management-minor/)

FACULTY AND LECTURERS
Additional information about the Faculty and Lecturers below may be found in the Faculty and Academic Staff (http://catalog.uwplatt.edu/faculty-academic-staff/) section of this catalog.

Albers, Mark A.
Bockenhauer, Gretchen
Durst, Julie
Frear, Henry E.
Gamini, Bandara
Heimerdinger, David
Iskandar, Karim
Kaiser, Colleen R.
Lafay, John J.
Lee, Sangwook
Metzloff, Kyle E.
Miner, Mark
Rimel, Eric W.
Sossaman, Travis A.
Swan, Marshall S.
White, Martin