



Bachelor of Science in Design

Department of Technology Systems

College of Technology and Computer Science

East Carolina University



The purpose of our Design program is to prepare graduates for careers as design technologists—architectural and mechanical.

As a design technologist, you may work independently, or you may work as a member of a design team, or you may supervise a design team or manage a design project. Your academic preparation in design focuses on contemporary design practices found in the various engineering disciplines as well as in architecture. Extensive use of technology, including the Internet, is stressed. Opportunities to gain real-life, hands-on experiences are plentiful. These opportunities include but are not limited to part-time and temporary jobs and paying and non-paying co-op or internship positions.

We expect each graduate to possess knowledge and to demonstrate skills in applying design and drafting concepts and nationally recognized standards and practices to the solution of a broad and varied range of design problems.

Professional opportunities upon graduation are most commonly found among the various engineering disciplines and in the field of architecture. Accordingly, two program options are available.

The **Architectural Technology Concentration** prepares graduates for careers in architectural and engineering firms, site development, building construction, and related fields. Graduates develop plans, specifications, construction drawings and related architectural and construction documentation.

The **Mechanical Technology Concentration** prepares graduates for careers in application of machine and mechanical system principles to the development of automated systems and equipment. Graduates often work as a part of an engineering team engaged in the design and development phases of a wide variety of projects involving all aspects of mechanical systems.

Professional opportunities upon graduation are most commonly found among the various engineering disciplines and in the field of architecture. The following professional titles are representative of the positions our graduates hold: Designer/CAD Operator, Lecturer, Production Assistant, Designer III, Sales Representative, Site Manager/Network Analyst, Facilitator, Business Manager, Design Drafter, Project Engineer, Designer, Teacher, Project Scheduler, Engineer Assistant, Surveyor, CAD Operator, CNC programmer/draftsperson, Truss Designer, Project Coordinator, Technician, CAD Draftsman, Sourcing Specialist, Senior Engineer, Systems Engineer III, Design Engineer, Instructor, Principal, Project Scheduler, Foreman Estimator, Architectural Designer.

Our Design degree is accredited by the National Association of Industrial Technology. For more information on the Design program, please visit our website at www.tecs.ecu.edu/tsys. For more information about ECU admission, tuition, financial aid, housing, and campus tours, please visit ECU's website at www.ecu.edu.

Required Coursework

Design Core (48 semester hours):

- DESN 2034 Engineering Graphics I with Lab
- DESN 2036 Computer-Aided Design and Drafting with Lab
- DESN 3032 Engineering Graphics II with Lab
- DESN 4030 Descriptive Geometry with Lab
- IENG 2020 Materials and Processes Technology with Lab
- ITEC 2000 Apps of Comp Sys
- ITEC 2054 Electricity/Electronics Fundamentals with Lab
- ITEC 2080 Thermal Systems with Lab
- ITEC 2090 Electromechanical Systems with Lab
- ITEC 3200 Intro to Statistical Process Control
- ITEC 3290 Technical Writing
- ITEC 3292 Industrial Safety
- ITEC 3300 Technology Project Management
- ITEC 3800 Cost and Capital Project Analysis
- ITEC 4293 Industrial Supervision
- ITEC 4300 Quality Assurance Concepts

Concentrations – choose one (18 semester hours):

Architectural Technology Concentration:

- DESN 3030 Architectural Drafting with Lab
- DESN 3036 Architectural Design and Drafting with Lab
- DESN 3038 Sustainable Design with Lab
- PLAN 3021 Introduction to Planning Techniques
- PLAN 3051 Introduction to GIS in Planning
- PLAN 4003 Urban Form and Design

Mechanical Technology Concentration:

- DESN 3230 Rapid Prototyping with Lab
- DESN 3234 Jig and Fixture Design with Lab
- DESN 3236 Geometric Dimen. & Tolerancing with Lab
- IENG 2076 Introduction to CNC with Lab
- IENG 3020 Robotics in CIM with Lab
- IENG 3300 Plant Layout and Materials Handling

General Education and Cognates (60 semester hours):

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| English (6 hrs) | Humanities & Fine Arts (18 hrs) |
| ENGL 1100 Composition | At least one in Humanities |
| ENGL 1200 Composition | COMM 2410 or 2420 Speech |
| Science (8 hrs) | Hum/Fine Arts to total 10 hrs |
| PHYS 1250/51 General Physics I | Health & Exercise (3 hrs) |
| PHYS 1260/61 General Physics II | Math (3 hrs)—Also, see Cognates |
| Social Science (12 hrs) | MATH 1065 College Algebra |
| ECON 2113 Prin of Microecon | Cognates (5 hrs) |
| PSYC 1000 Intro to Psychology | FINA 2244 Legal Envir of Business |
| PSYC 3241 Industrial Psychology | MATH 1074 Applied Trigonometry |
| Social Science Elective | Free Electives (13 hrs) |

Contact us:

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