Civil Engineering Technology Program

Overview of the Program:

The Civil Engineering Technology program at Fairmont State University prepares graduates to participate in the planning, analysis, design, construction, operation and maintenance of roadways, airports, tunnels, bridges, water supply and distribution systems and waste collection and treatment systems.

The curriculum is a highly flexible 2 + 2 curriculum. Once the two-year degree is earned, graduates may choose to enter the workforce or continue their education with two years at the baccalaureate level.

The Associate of Science degree in Civil Engineering Technology provides technical courses in the fundamentals of engineering technology, surveying, construction materials and methods, computer graphics, civil engineering graphics, construction estimating, structures, and environmental engineering technology. Most of the technical courses provide a combination of lecture and laboratory experiences. In addition, technical courses are underpinned with instruction in mathematics and science, written and oral communication skills, which are utilized subsequently in the technical courses.

The Bachelor of Science degree provides students a greater emphasis on analysis and design with specialized classes in hydraulics and hydrology, soil mechanics and foundation design, structural analysis and design, water and wastewater systems, and construction management, coupled with additional classes in science and mathematics, and attributes in Fine Arts, Health & well being, citizenship & social sciences.

Employment Opportunities:

Graduates with the Associate of Science degree are qualified for entry-level technical positions in construction, surveying, engineering and architectural firms; local, state and national government, environmental and public health agencies; state

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www.fairmontstate.edu/collegeofscitech
departments of transportation and highways; and private business and industry. Specific job titles include materials technician (soils, concrete, and aggregate), surveying crew chief assistant, drafter/detaller, construction or field inspector, office technician, CAD operator, construction technician or estimator.

Graduates with the Bachelor of Science degree are qualified for an entry-level position as a Civil Engineering Technologist in construction, surveying, engineering, and architectural firms; local, state, and national government, environmental and public health agencies; state departments of transportation and highways; and private business and industry. Specific job titles include transportation technologist, highway technologist, engineer-in-training, materials supervisor, surveying crew chief, civil engineering detailer/designer, office engineer, construction estimator or planner, engineering assistant, project engineer, and assistant project manager. Baccalaureate graduates are eligible to sit for the Fundamentals of Engineering Exam (FE) in West Virginia, the first step in becoming a registered professional engineer (PE).

The annual median wage of a Civil Engineer is $71,710.00.

### ASCE Student Chapter:

FSU had received a national award for their overall activities as a chapter every year since 2001 and has ranked in the top one third of all student chapters internationally, they also were runner up to the top award, “The Ridgeway Award” twice and received the Zone IV governors award twice, which covers 13 states. In addition, they have placed first in the Regional Concrete Canoe Competition the last ten consecutive years, competing against all Engineering and Engineering Tech. programs in WV, VA, and Washington D.C. (14 universities). Winning regions makes us eligible to participate in the National Concrete Canoe Competition (NCCC) which is held in June each year. During this time the chapter has traveled across the U.S. for the NCCC to compete against the top ranked schools in the country. Some of these venues included: Seattle, WA; San Luis Obispo, CA; Reno, NV; Stillwater, Oklahoma; Clemson, SC; Montreal Quebec, Canada and many more.

Info on student chapter Tia Como, PE, Professor: tia.como@fairmontstate.edu

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### BACHELOR OF SCIENCE IN CIVIL ENGINEERING TECHNOLOGY: MODEL SCHEDULE

**FRESHMAN FIRST SEMESTER**
- CIVL 2210 LIGHT CONSTRUCTION ..............................................4
- MATH 1101 APPLIED TECHNICAL MATH I ....................................3
- CIVL 1100 INTRO TO CIVIL ENGINEERING TECH ........................1
- TECH 1108 ENGINEERING GRAPHICS .......................................3
- ENGL 1104 WRITTEN ENGLISH I .............................................3

**TOTAL** 14

**FRESHMAN SECOND SEMESTER**
- CIVL 2220 INTRODUCTION TO SURVEYING .................................3
- ENGL 1108 WRITTEN ENGLISH II ...........................................3
- MATH 1102 APPLIED TECHNICAL MATH II .................................3
- CIVL 2220 CONSTRUCTION MATERIALS ....................................4
- MECH 1100 STATICS ..................................................................3

**TOTAL** 16

**SOPHOMORE FIRST SEMESTER**
- CIVL 2240 LAND & ROUTE SURVEYING .....................................3
- CHEM 1101 GENERAL CHEMISTRY I ...........................................4
- TECH 2290 ENGINEERING ANALYSIS I .....................................4
- MECH 2200 STRENGTH OF MATERIALS .....................................4

**TOTAL** 15

**SOPHOMORE SECOND SEMESTER**
- CIVL 2230 CONSTRUCTION ESTIMATING .....................................3
- CIVL 2280 ENVIRONMENTAL ENGINEERING TECHNOLOGY I ........3
- CIVL 2290 INTRODUCTION TO STRUCTURES ..............................3
- CIVL 2275 CIVIL ENGINEERING GRAPHICS ................................3
- COMM 2200 COMMUNICATION IN THE WORLD OF WORK ............3

**TOTAL** 15

**JUNIOR FIRST SEMESTER**
- CIVL 3305 HYDRAULICS & HYDROLOGY ......................................3
- TECH 3300 ENGINEERING ANALYSIS II ......................................4
- PHYS 1101 INTRODUCTION TO PHYSICS I ..................................4
- CIVL 3340 SOIL MECHANICS ....................................................4

**TOTAL** 15

**JUNIOR SECOND SEMESTER**
- CIVL 4470 ADV. SOILS/FOUNDATIONS ......................................3
- CIVL 4440 STRUCTURAL DESIGN .............................................3
- CHEM 1102 GENERAL CHEMISTRY II ........................................4
- ECON 2200 ECONOMICS .........................................................3
- TECH 3300 ENGINEERING ANALYSIS II ......................................4

**TOTAL** 16

**SENIOR FIRST SEMESTER**
- CIVL 4410 ADVANCED STRUCTURAL ANALYSIS .........................3
- CIVL 4460 ENVIRONMENTAL ENGINEERING TECHNOLOGY II ....3
- GEOG 2210 INTRO TO GEOGRAPHY ..........................................3
- GENERAL STUDIES – FINE ARTS ELECTIVE .................................3
- MECH 3320 DYNAMICS ............................................................3

**TOTAL** 15

**SENIOR SECOND SEMESTER**
- CIVL 4420 CONSTRUCTION PLANNING & ADMISTRATION ..........3
- HEALTH AND WELL BEING ELECTIVE ......................................2
- HIST 1107 US HISTORY I .......................................................3
- CIVL 4400 HIGHWAY DESIGN AND TRANSPORTATION ..............4
- FREE ELECTIVE ........................................................................2

**TOTAL** 14

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