

Civil Engineering

FACULTY

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<http://www.bates.ctc.edu/CivilEngineering>

Students prepare for careers as civil engineering technicians who typically work under the direct supervision of a project engineer. The program environment emulates a civil engineering/surveying firm, giving students practice in many aspects of the profession, including defining project requirements, conducting survey/field work, field engineering, construction staking, designing, estimating, modeling and client presentations. Instruction includes computer-aided design, the preparation of engineering calculations, and coordinate systems which include lengths, directions, slopes, bearings areas, volumes, weights densities, moments, forces, reactions, flows, and loads. Students learn to use a variety of computer software application packages, including, but not limited to Word, Excel, CadreLite, Hydrocad, Civil 3D and GIS.

Associate of Technology Degree: 94 credits

Civil Engineering

	<u>Credits/Hours</u>
Completion Range: 14-23 Months	
ENGC 091 Occupational Human Relations	3/50
ENGC 092 Occupational Communications	3/50
ENGC 093 Occupational Math	3/50
ENGCV 095 Engineering Math I	28/450
ENGCV 099 Engineering Math II	24/400
ENGCV 101 Engineering Drafting I	8/130
ENGCV 102 Engineering Drafting II	5/80
ENGCV 106 Estimating Construction Projects	9/140
ENGCV 107 Surveying	13/210
ENGCV 205 Design Drafting, Computer Aided Drafting	15/244
ENGCV 207 Advanced Surveying	13.5/220
ENGCV 209 Designing Highways & Subdivisions	16/265
ENGCV 222 Independent Projects	7/120
Multiple levels Any CMPL, EMATH or SURV courses	6/100

General Education Requirements

	<u>Credits</u>
100-level or> Human Relations – HREL, PSYCH, SOC or CMST	5
100-level or> Communications – ENGL or CMST	5
100-level or> Mathematics – MATH	5

Certificate of Competency: 87 credits

Engineering Aide

	<u>Credits/Hours</u>
Completion Range: 13-22 Months	
ENGC 091 Occupational Human Relations	3/50
ENGC 092 Occupational Communications	3/50
ENGC 093 Occupational Math	3/50
ENGCV 095 Engineering Math I	28/450
ENGCV 101 Engineering Drafting I	8/130
ENGCV 102 Engineering Drafting II	5/80
ENGCV 107 Surveying	13/210
ENGCV 205 Design Drafting, Computer Aided Drafting	15/244

General Education Requirements

	<u>Credits</u>
90-level or> Human Relations – HREL, PSYCH, SOC or CMST	3
90-level or> Communications – ENGL or CMST	3
90-level or> Mathematics – MATH	3

90-level credit units apply toward meeting certificate requirements, but do not apply toward degree requirements.