Civil Engineering, Construction Concentration

2023-2024 Bachelor of Science Requirements with
a Minor in Business for Engineering Technologies – 137 Credit Hours*

Freshman Year

Fall Semester		Credits		Spring Semester		Credits	
XXXX 193	First Year Seminar[1]	3	____	ENSC 205	Statics	3	___
CHEM 101	General Chemistry I	3	____	CENG 225	Engineering Geology	3	___
CHEM 101L	General Chemistry I Lab	1	____	MATH 258	Calculus & Analytical Geometry II	4	___
MATH 157	Calculus & Analytical Geometry I	4	____	PHYS 121	Physics I	4	___
PHIL 101	Reasoning	3	____	PHYS 121L	Physics I Lab	1	___
COMM 100	Communication & Speech	3	____	PHIL 201	Human Nature	3	___
	Total Credits	**17**			**Total Credits**	**18**	

Sophomore Year

Fall Semester		Credits		Spring Semester		Credits	
CENG 252	Civil Fluid Mechanics	3	___	ENSC 301	Mechanics of Materials I	3	___
CENG 261	Introduction to Geomatics	2	___	ENSC 306	Dynamics	3	___
CENG 261L	Introduction to Geomatics Lab	1	___	MATH 260	Ordinary Differential Equations	3	___
MATH 259	Calculus & Analytic Geometry III	4	___	MATH 321	Statistics for Experimentalists	3	___
ENGL 101	Writing (WE)	3	___	RELI xxx	Christianity & Catholic Traditions[1]	3	___
ECON 200	Economic Analysis[2]	3	___	PHIL 301	Ethics *or* RELI Ethics[1]	3	___
	Total Credits	**16**			**Total Credits**	**18**	

Junior Year

Fall Semester		Credits		Spring Semester		Credits	
CENG 301	Structural Analysis I	3	___	CENG 303	Environmental Engineering	3	___
CENG 380	Construction Materials & Engr	2	___	CENG 303L	Environmental Engineering Lab	1	___
CENG 380L	Construction Materials & Engr Lab	1	___	CENG 352	Water Resource Engineering	3	___
CENG 331	Soil Mechanics	3	___	CENG 352L	Water Resource Engineering Lab	1	___
CENG 331L	Soil Mechanics Lab	1	___	CENG 391	Civil Engineering Design & Practice	3	___
ACCT 263	Accounting Analysis	3	___	CENG 412	Concrete Design	3	___
XXXX xxx	Programming Elective[3]	3	___	RELI xxx	World/Comparative Religion (GS)[1]	3	___
	Total Credits	**16**			**Total Credits**	**17**	

Senior Year

Fall Semester		Credits		Spring Semester		Credits	
ENSC 491	Senior Design Project I	2	___	ENSC 492	Senior Design Project II (WE, FA)	3	___
CENG 404	Sustainable Systems (SJ, GS)	3	___	CENG 480	Construction Management	3	___
CENG 318	Transportation Engineering	3	___	1st	Business for Engineering Tech Elective[3]	3	___
CENG 411	Steel Dsg *or* 473 Foundation Dsg	3	___	2nd	Business for Engineering Tech Elective[3]	3	___
XXXX xxx	Broadening CORE Requirement[2]	3	___	BFIN 320	Principles of Finance	3	___
BUSN 283	Business Law	3	___	ENSC 400	Fundamentals of Eng Exam	0	___
	Total Credits	**17**		XXXX 432	CORE Integration Seminar[1]	3	___
					Total Credits	**18**	

[1] Refer to Gonzaga CORE requirements for options.

[2] ECON 200 counts as a Social/Behavioral Sciences course. Select one additional broadening course from History or Literature.

[3] See back for approved programming electives and Business for Engineering Technology electives.

Revised 8/25/2023

Programming Elective

- CPSC 121 Computer Science I (3 credits)
- CPSC 214 Intro to Programming with Python (3 credits)
- CPSC 222 Introduction to Data Science (3 credits)
- ENSC 244 Computer Methods for Engineers (3 credits)
- ENVS 384/L GIS & Ecological Techniques (4 credits)

*Programming course must be at least 2 credit hours – applies to transfer students only

Minor in Business for Engineering Technologies Electives

Choose two:

- BENT 490 Creativity, Innovation, and Entrepreneurship
- ECON 324 Economic of Environmental Protection
- ENSC 405 Engineering Project Management
- MGMT 350 Principles of Management
- MKTG 310 Principles of Marketing
- OPER 340 Operations Management