

ELECTIVES

Technical Electives (List 1)

COURSE	COURSE NAME	TERM	LEC	LAB	TUT	UNITS	CODE
CIVL 430	Reinforced Concrete Design	F	3	.25	.50	3.75	2863
CIVL 442	Geotechnical Design	F	3	0	.75	3.75	2935
CIVL 450	Municipal Hydraulics	F	3	0	.75	3.75	2869
CIVL 451	Lake, Reservoirs & Coastal Eng.	F	3	.50	.25	3.75	2888
CIVL 473	Water Resources Systems	F	3	0	.75	3.75	2891
CIVL 500	Civil Engineering Thesis	FW	K4	0	0	4	A-2893 B-3461
CIVL 431	Infrastructure Rehabilitation	W	3	.50	.50	4	3648
CIVL 436	Pre-stressed Concrete	W	3	0	1	4	3424
CIVL 443	Geoenvironmental Design	W	3	.50	.50	4	3428
CIVL 455	River Engineering	W	3	.50	.50	4	3432
CIVL 471	Subsurface Contamination	W	3	0	1	4	3438

Technical Electives (List 2)

COURSE	COURSE NAME	TERM	LEC	LAB	TUT	UNITS
CHEE 342	Environmental Biotechnology	F	3	0	.50	3.5
MECH 444	Computational Fluid Dynamics	F	3	0	.50	3.5
MINE 462	Occupational Health & Safety in Mining Practice	F	3	0	.50	3.5
APSC 480	Multi-Disciplinary Design Project	FW	2	6	1	9
APSC 381	Fundamentals of Design Eng.	W	3	0	.50	3.5
CHEE 484	Bioremediation	W	3	0	.50	3.5
MECH 333	Gender, Engineering & Technology	W	3	0	0	3
MECH 371	Fracture Mechanics & Dislocation Theory	W	3	0	.50	3.5
MECH 441	Fluid Mechanics III	W	3	0	.50	3.5
SURP 853	Environmental Services		3	0	0	3
SURP 856	Environmental Assessment		3	0	0	3

- Choose **6** courses from Technical Electives List 1
- Choose **1** course from Technical Electives List 1 OR List 2
- Choose **1** course from Technical Electives List 1 OR List 2 OR a 'Free Elective'

What is a Free Elective?

- **Must be approved by Undergraduate Chair, Dr. Fam Please email Dr. Fam for approval (amir.fam@queensu.ca) and copy the Undergraduate Assistant on the email (angelina.gencarelli@queensu.ca)**
- Any Applied Science course
- Any 100 level course in Arts & Science (min. 3 credits) with the following subject codes: ANAT, BCHM, BIOL, CDNS, CHEM, CISC, COGS, COMM, DEVS, GEOL, GIMS, GISC, GISQ, GPHY, HLTH, IDIS, INTS, ENSC, EPID, LING, MATH, MICR, PHAR, PHYS, PHGY, STSC, STAT, WRIT
- Any approved Complementary Studies course

- Any of the Graduate courses offered in Urban & Regional Planning