Supplementary Table 9. Credits of experiment/lab/engineering design courses.

Code	Experiment/ lab	Engineering design				Field practice/ internship
		Introduction	Element	Capstone	Total	
A	10	0	6	3	9	12
B	10	0	14	6	20	0
C	9	3	9	4	16	0
D	-	-	-	-	-	0
E	13	3	12	3	18	0
F	5	0	6	2	8	0
G	10	3	17	3	23	0
H	-	-	-	-	-	0
I	-	-	-	-	-	3
J	2	1	27.5	1	29.5	1
K	-	-	-	-	-	0
L	21	3	8	3	14	5
M	12	3	8	3	14	0
N	-	3	7	3	13	2
O	8	3	10	4	17	0

Supplementary Table 10. Number of prerequisite credits and the related courses.

Code	Subject	Credit	Ratio %	Detailed field
A	4	12	8.1	Water, **Air**, Solid waste
B	6	18	19.6	Water, Air, Energy, Eng. design
C	6	15	16.0	**Water**, Air, Solid waste, **Eng. design**
D	13	39	39.4	**Major base**, Water, Air, **Solid waste**, **Analysis lab**
E	6	18	18.8	Water, **Air**,, **Analysis lab**, Eng. design
F	16	27	20.9	**Major base, Water**, **Air**, Solid waste, Analysis lab
G	4	12	8.3	Water, Air, Solid waste
H	13	36	40.0	Major base, Water, Air, Solid waste
I	14	42	37.8	**Major base**, Water, Air, Solid waste
J	2	2	2.0	Engineering design
K	9	22	25.9	**Water**, Air, Solid waste, Eng. design
L	16	48	40.7	Major base, **Water**, **Air**, Solid waste **Energy**
M	10	25	25.8	**Water**, **Air**, Solid waste, Energy, **Eng. design**
N	0	0	0.0	-
O	11	39	52.0	Water, Air, Solid waste, Soil, Eng. design

Bold: Detailed field of studies with a high percentage of required credits