Geomatics ABET Assessment 2017-2022

Table 4-4 Summary of Evaluation Process

ABET General Criteria Average across Courses	Average on a 1-4 scale / (# of students)				
	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
SLO1: An ability to identify, formulate and solve defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to the surveying and mapping discipline.	10 3.70	NR	6 3.36	7 3.49	6 3.43
SLO2: An ability to formulate or design a system, process, procedure or program to meet desired needs.	6 3.38	NR	3 2.82	9 3.23	4 3.45
SLO3: An ability to develop and conduct experiments or test hypothesis, analyze and interpret data and use scientific judgement to draw conclusions.	3 3.58	NR	5 2.35	7 3.14	4 3.52
SLO4: An ability to communicate effectively with a range of audiences.	5 3.49	NR	5 3.57	5 3.28	5 3.70
SLO5: An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific	3 3.80	NR	4 3.36	4 3.36	5 3.57

solutions in a global, economic, environmental and societal contexts.					
SLO6: An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.	3 3.8	NR	3 3.8	3 3.86	2 4.0

NR= No Report for this Academic Year

TABLE 4-4.1 Summary of Individual Courses
(Note-Some missing data exist for separating DL versus Main student
(some classes indicate no change, but may be challenging courses by nature-advising and tutoring is often provided)

FALL 2017/Spring 2018

SLO 1

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
CM 214 (S18)	DL = 8 M = 0	3.17/4.0 N/A	63% (5 out of 8) N/A	Right Triangle	No Change	Fersner	Small number of students failing skew results
GEOM 205 (S18)	DL = 8 M = 0	1.96/4.0	38% (3 out of 8) N/A	Exam 1 Q19	Change	Fersner	Change Exam Time Length
GEOM 320 (S18)	DL = 9 M = 1	4.0/4.0 4.0/4.0	100% 100%	Flight Planning Assessment	No Change	Beni	No Change at this time
GEOM 340 (F17)	DL = 7 M = 1	3.08/4.0 0.0/4.0	100% 0%	Angle Project		Fersner	
GEOM 341 (S18)	DL = 4 M = 0	3.75/4.0 3.75/4.0	100% 100%	Final Project Exam Question	No Change	Fersner	No Change at this time
GEOM 366 (F17)	DL = 9 M = 1	3.80/4.0 0.0/4.0	100% 0%	Final Project	No Change	Fersner	No Change
GEOM 367 (S18)	DL = 6 M = 0	2.97/4.0 N/A	71% (5 out of 7) N/A	Exam 1 Design Storm	Change	Fersner	Give project earlier
GEOM 400 (S18)	DL = 3 M = 0	4.0/4.0 N/A	100% N/A	Exam	No Change	Nave	No Change
GEOM 420 (F17)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Assignment	No Change	Beni	No Change

GEOM 499 (S18)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Final Project Travere	No Change	Nave	No Change

FALL 2019/Spring 2020							
SLO 1							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 320 (S20)	DL = 2 M = 2	4.0/4.0 4.0/4.0	100% 100%	Problem 4.10	No Change	Beni	No Change at this time
GEOM 340 (F19)	DL = 12 M = 2	3.08/4.0 0.0/4.0	100% 0%	Angle Project		Fersner	
GEOM 341 (S20)	DL = 4 M = 1	3.75/4.0 3.75/4.0	100% 100%	Final Project Exam Question	No Change	Fersner	No Change at this time
GEOM 366 (F19)	DL = 14 M = 1	3.80/4.0 0.0/4.0	100% 0%	Final Project	No Change	Fersner	No Change
GEOM 367 (S20)	DL = 4 M = 1	3.35/4.0 3.35/4.0	100%) N/A	Exam 1 Design Storm	Change	Fersner	See FCAR
GEOM 400 (S20)	DL = 6 M = 0	3.0/4.0 N/A	100% N/A	Exam	No Change	Nave	No Change
GEOM 420 (F19)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Assignment	No Change	Beni	No Change
GEOM 499 (S20)	DL = 6 M = 0	3.8/4.0 N/A	100% N/A	Final Project Travere	No Change	Nave	No Change

FALL 2020/Spring 2021							
SLO 1							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
CM 214 (F20)	DL = 18 M = 0	2.83/4.0	61% (11 out of 18)	Right Triangle	No Change	Fersner	No Change
GEOM 205 (S21)	DL = 13 M = 2	2.76/4.0 1.0/4.0	62% (8 out of 15) 0%	Exam 1 Q 12	No Change	Fersner	No Change
GEOM 340 (F20)	DL = 12 M = 2	3.08/4.0 0.0/4.0	100% 0%	Angle Project	No Change	Fersner	No Change
GEOM 341 (S21)	DL = 9 M = 0	2.7/4.0 N/A	72% N/A	Least Squares	No Change	Fersner	No Change
GEOM 366 (F20)	DL = 10 M = 1	2.77/4.0 0.0/4.0	64% (7 out of 11) 0%	Assignment 9	Change	Fersner	See FCAR
GEOM 367 (S21)	DL = 4 M = 1	3.35/4.0 3.35/4.0	100%) N/A	Exam 1 Design Storm	Change	Fersner	See FCAR
GEOM 400 (S21)	DL = 6 M = 0	3.0/4.0 N/A	100% N/A	Exam	No Change	Nave	No Change
GEOM 499 (S21)	DL = 4 M = 0	2.87/4.0 N/A	75% (3 out of 4) N/A	Final Project Travere	No Change	Nave	1 out 4 failed to turn in assignment.

FALL 2021/Spring 2022

SLO 1

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
CM 214 (F21)	DL = 16 M = 0	3.63/4.0 N/A	88% (14 out of 16) N/A	Right Triangle	No Change	Fersner	No Change
GEOM 205	DL = 7 M = 0	4.0/4.0 N/A	100% N/A	Exam 1 Q12	No Change	Fersner	No Change
GEOM 340 (F21)	DL = 13 M = 0	3.97/4.0 03.97/4.0	100% 100%	Angle Project		Fersner	
GEOM 400 (S22)	DL = 6 M = 0	2.58/4.0 N/A	25% (2 out of 6) N/A	Exam	No Change	Nave	See FCAR
GEOM 420 (F21)	DL = 8 M = 0	4.0/4.0	100%	Assignments 3 & 4	No Change	Beni	See FCAR
GEOM 465 (S22)	DL = 4 M = 0	4.0/4.0	100%	Project	Change	Nave	See FCAR
GEOM 499 (S22)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Final Project Travere	No Change	Nave	No Change

FALL 2017/Spring 2018							
SLO 2							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 307/317 (S18)	DL = 3 M =1	3.56/4.0 3.56/4.0	100% 100%	Road Project	No Change	Nave	No Change
GEOM 366 (F17)	DL= 7 M = 1	2.93/4.0 3.10/4.0	71% (5 out of 7) 100%	Final Project	No Change	Fersner	No Change
GEOM 367 (S18)	DL= 6 M = 0	2.25/4.0 N/A	67% (4 out of 6)	Final Project	Change	Fersner	See FCAR
GEOM 496 (F17)	DL = 2 M = 0	4.0/4.0	100%	Final Project	No Change	Nave	No Change

FALL 2019/Spring 2020							
SLO 2							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 360 (S20)	DL = 2 M = 0	2.0/4.0 N/A	50% (1 out of 2) N/A	State Plane	No Change	Nave	See FCAR
GEOM 367 (S20)	DL = 4 M = 1	3.40/4.0 3.08/4.0	100% 100%	Final Project	No Change	Fersner	See FCAR
GEOM 420 (S20)	DL = 6 M = 0	Not Assessed				Beni	

FALL 2020/Spring 2021

SLO 2

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 307/317 (F20)	DL = 16 M = 0	3.2/4.0 N/A	73% (11 out of 15)	Project	No Change	Nave	No Change
GEOM 366 (F20)	DL =11 M = 0	3.44/4.0 N/A	100% N/A	Piping Network	No Change	Fersner	No Change
GEOM 496 (F20)	DL =4 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2021/Spring 2022

SLO 2

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 310 (S22)	DL = 19 M =0	2.93/4.0 N/A	45% (5 out of 11) N/A	Assignment	No Change	Etemaadia	No Change
GEOM 360 (F21)	DL = 11 M = 0	3.25/4.0	82% (9 out of 11)	Final Project	No Change	Nave	No Change
GEOM 465 (S22)	DL = 4 M = 0	4.0/4.0 N/A	100%	Project	Change	Nave	See FCAR
GEOM 496 (F21)	DL = 6 M = 0	4.0/4.0 N/A	100% 100%	Final Project	Change	Nave	No Change

FALL 2017/Spring 2018							
SLO 3							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 271 (S18)	DL = 12 N/A = 1	3.75/4.0 3.5/4.0	100% 100%	Legal Research	No Change	Nave	No Change
GEOM 350 (S18)	DL = 7 M = 2	3.85/4.0 3.85/4.0	100% 100%	Design	Change	Nave	See FCAR
GEOM 470 (F17)	DL = 5 M = 0	4.0/4.0 N/A	100% N/A	Boundary Prob	No Change	Nave	No Change
GEOM 496 (F17)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S18)	DL =2 M = 0	4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2019/Spring 2020							
SLO 3							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
CM 224 (S20)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Lab Exer.	No Change	Nave	No Change
GEOM 496 (F19)	DL = 4 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S20)	DL = 4 M = 0	3.7/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2020/Spring 2021

SLO 3

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
CM 224 (S21)	DL = 20 M = 0	4.0/4.0 N/A	100%	Lab Exer	No Change	Nave	No Change
GEOM 271 (S21)	DL = 14 M = 2	3.71/4.0 3.5/4.0	100% 100%	Assignment 4	No Change	Nave	No Change
GEOM 350 (S21)	DL = 7 M = 1	3.75/4.0 3.75/4.0	100% 100%	Project Research	No Change	Nave	No Change
GEOM 470 (F20)	DL = 6 M = 0	3.37/4.0	100%	Legal Research	No Change	Nave	No Change
GEOM 496 (F20)	DL = 4 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S21)	DL = 4 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2021/Spring 2022

SLO 3

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 271 (S22)	DL = 26 M = 0	3.38/4.0 N/A	100% N/A	Legal Issue	No Change	Nave	No Change
GEOM 340 (F21)	DL = 13 M = 0	2.3/4.0 N/A	50% (5 out of 10) N/A	Traverse Comp	Change	Fersner	See FCAR
GEOM 350 (S22)	DL = 6 M = 0	3.5/4.0 N/A	100% N/A	Project	No Change	Hippenstiel	No Change
GEOM 470 (F21)	DL = 8 M = 0	3.82/4.0 N/A	100% N/A	Court Analysis	No Change	Nave	No Change
GEOM 496 (F21)	DL = 6 M = 0	3.3/4.0 N/A	100% N/A	Field Survey	No Change	Nave	No Change
GEOM 499 (S22)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Project	No Change	Nave	No Change

FALL 2017/Spring 2018							
SLO 4							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 205 (S18)	DL = 8 M = 0	3.43/4.0 N/A	100%	Horizontal Curve	No Change	Fersner	No Change
GEOM 271 (S18)	DL = 12 M = 1	4.0/4.0 4.0/4.0	100% 100%	Comm of Professional	No Change	Nave	No Change
GEOM 320 (S18)	DL = 9 M = 1	4.0/4.0 4.0/4.0	100% 100%	Paper	No Change	Beni	No Change
GEOM 340 (F17)	DL = 9 M = 1	3.29/4.0 3.29/4.0	100% 100%	Angle Project	No Change	Fersner	No Change
GEOM 366 (F17)	DL = 9 M = 1	2.45/4.0 0.0/4.0	63% (5 out of 8) 0%	Project	Change	Fersner	See FCAR
GEOM 367 (S18)	DL = 6 M = 0	2.1/4.0 N/A	50% (3 out of 6) N/A	Final Project	No Change	Fersner	See FCAR
GEOM 496 (F17)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S18)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2019/Spring 2020							
SLO 4							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 271 (S20)	DL = 7 M = 2	3.34/4.0 3.34/4.0	100% 100%	Comm. Of Professional	No Change	Nave	No Change
GEOM 320 (S200	DL = 10 M = 0	3.50/4.0 N/A	100% N/A	Journal Paper	No Change	Beni	No Change
GEOM 367 (S20)	DL = 5 M = 1	3.46/4.0 2.7/4.0	100% 0%	Final Project	No Change	Fersner	No Change
GEOM 496 (F19)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S20)	DL = 7 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2020/Spring 2021

SLO 4

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 205 (S21)	DL =16 M = 0	2.62/4.0 N/A	63% (10 out of 16) N/A	Resection	No Change	Fersner	See FCAR
GEOM 310 (S22)	DL = 19 M = 0	2.40/4.0 N/A	0% N/A	Assignment	Change	Etemaadia	Need Change
GEOM 496 (F20)	DL = 4 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S21)	DL = 4 M = 0	3.10/4.0 N/A	75% (3 out of 4) N?A	Final Project	No Change	Nave	No Change

FALL 2021/Spring 2022

SLO 4

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 271 (S22)	DL = 26 M = 0	3.46/4.0 N/A	100% N/A	Comm of Professional	No Change	Nave	No Change
GEOM 340 (F21)	DL = 10 M = 0	3.33/4.0 N/A	70% (7 out of 10) N/A	Traverse Project	No Change	Fersner	No Change
GEOM 496 (F21)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S22)	DL = 6 M = 0	4.0/4.0 N/A	4.0/4.0 N/A	Final Project	No Change	Nave	No Change

FALL 2017/Spring 2018							
SLO 5							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 420 (S18)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Collinearity	No Change	Beni	No Change
GEOM 470 (F17)	DL = 3 M = 0	4.0/4.0 N/A	100% N/A	Exam Ethics Ques.			
GEOM 496 (F17)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S18)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2019/Spring 2020							
SLO 5							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 320 (S200	DL = 10 M = 0	3.50/4.0 N/A	100% N/A	Journal Paper	No Change	Beni	No Change
GEOM 460 (F19)	DL = 5 M = 0	4.0/4.0 N/A	100% N/A	GNSS Regs	No Change	Nave	No Change
GEOM 471 F19	DL = 6 M = 0	3.40/4.0 N/A	100% N/A	Exam	No Change	Nave	No Change
GEOM 496 (F19)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S20)	DL = 7 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2020/Spring 2021

SLO 5

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 470 (F20)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Exam Ques 1	No Change	Nave	No Change
GEOM 496 (F20)	DL = 4 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S21)	DL = 4 M = 0	3.10/4.0 N/A	75% (3 out of 4) N?A	Final Project	No Change	Nave	No Change

FALL 2021/Spring 2022

SLO 5

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 107 (S22)	DL = 39 M = 0	2.5/4.0 N/A	52% (14 out of 27)	Discussion Board	No Change	Fersner	No Change
GEOM 460 (F21)	DL = 6 M = 0	3.25/4.0 N/A	100% N/A	GNSS Regs	No Change	Nave	No Change
GEOM 471 F21	DL = 9 M = 0	3.1/4.0 N/A	88% (7 out of 8) N/A	Exam	No Change	Nave	No Change
GEOM 496 (F21)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S22)	DL = 6 M = 0	4.0/4.0 N/A	4.0/4.0 N/A	Final Project	No Change	Nave	No Change

FALL 2017/Spring 2018

SLO 6

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
CM 224 (F17)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Level Exer	No Change	Nave	No Change
GEOM 496 (F17)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S18)	DL = 2 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2019/Spring 2020

SLO 6

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
CM 224 (S20)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Journal Paper	No Change	Nave	No Change
GEOM 496 (F19)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S20)	DL = 7 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change

FALL 2020/Spring 2021

SLO 6

Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
CM 224 (F20)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Exam Ques 1	No Change	Nave	No Change
GEOM 496 (F20)	DL = 4 M = 0	3.5/4.0	75% (3 out of 4)	Final Project	No Change	Nave	No Change
GEOM 499 (S21)	DL = 4 M = 0	3.5/4.0	75% (3 out of 4)	Final Project	No Change	Nave	No Change

FALL 2021/Spring 2022							
SLO 6							
Course	Total Students	Mean Score	% Achieve	Assessment Type	Recommendations Change/No Change	Instructor	Comments
GEOM 496 (F21)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change
GEOM 499 (S22)	DL = 6 M = 0	4.0/4.0 N/A	100% N/A	Final Project	No Change	Nave	No Change