Assessment Plan

Program: Engineering Technology

Degree: Associate in Applied Science

Program Learning Outcomes:

We expect that upon graduation, students in the Engineering Technology program at Bismarck State College will be able to:

1. Utilize principles, hardware, and software to produce drawings, reports, quantity estimates, and other documents related to engineering
2. Conduct standardized field and laboratory tests related to engineering and construction
3. Utilize individual or collaborate surveying methods appropriate for land measurement and/or construction layout
4. Apply fundamental computational methods and elementary analytical techniques in sub-disciplines related to civil engineering
5. Demonstrate understanding of the basic concepts and processes related to construction project management, water utilities and infrastructure, surveying, and materials testing
6. Demonstrate professionalism, timeliness, excellence, teamwork, respect for diversity, and the ability to continuously improve while working in a diverse and dynamic technology field

Assessment Cycle:

	AY 2018-2019	AY 2019-2020	AY 2020-2021	AY 2021-2022
Outcome #1	A	R	A	R
Outcome #2	R	A	R	A
Outcome #3	R	A	R	A
Outcome #4	A	R	A	R
Outcome #5	A	R	A	R
Outcome #6	R	A	R	A
IELO – Problem Solving	A	R	A	R

A = Assessment evidence collected
R = Reflect on data, action plan devised, prep year

	PROGRAM LEARNING OUTCOMES						IELO
	#1	**#2**	**#3**	**#4**	**#5**	**#6**	**Problem Solving**
ENGR 101	X, A						
CAD 211	X, A					A	
CAD 212	X, A						
CAD 213	X, A						
CT 228					X, A		
CT 232				X, A	X, A		
CT 250				X, A		A	X
CT 250L							A
CT 251				X, A			
CT 251L	X, A	X, A					
CT 252	X, A			X, A	X, A	X, A	
ENGR 204					X, A		
ENGR 204L			X, A				
ENGR 205					X, A		
ENGR 205L			X, A				
(after 2018-2019 PYSC 100)						X, A	

X = Material introduced, reinforced, and/or opportunity to practice
A = Assessment evidence collected (e.g., lab activity, exam, paper, assignment, etc.)

Program Learning Outcomes \ ABET General Criterion 3 Matrix

Program Learning Outcomes	**Outcome a:** an ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities;	**Outcome b:** an ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge	**Outcome c:** an ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments	**Outcome d:** an ability to function effectively as a member of a technical team	**Outcome e:** an ability to identify, analyze, and solve narrowly defined engineering technology problems	**Outcome f:** an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature	**Outcome g:** an understanding of the need for and an ability to engage in self-directed continuing professional development	**Outcome h:** an understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity	**Outcome i:** a commitment to quality, timeliness, and continuous improvement
Outcome #1: Utilize principles, hardware, and software to produce drawings, reports, quantity estimates, and other documents related to engineering	X	X				X			
Outcome #2: Conduct standardized field and laboratory tests related to engineering and construction	X		X	X		X			
Outcome #3: Utilize individual or collaborative surveying methods appropriate for land measurement and/or construction layout	X		X	X					
Outcome #4: Apply fundamental computational methods and elementary analytical techniques in sub-disciplines related to civil engineering	X	X			X				
Outcome #5: Demonstrate understanding of the basic concepts and processes related to construction project management, water utilities and infrastructure, surveying, and materials testing		X							
Outcome #6: Demonstrate professionalism, timeliness, excellence, teamwork, respect for diversity, and the ability to continuously improve while working in a diverse and dynamic technology field				X			X	X	X