

EAC ABET Outcomes and Performance Indicators (EE)

SO	Performance Indicator	Tools for Direct Assessment
ABET 1 an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	1.1 Ability to identify relevant engineering problems to be solved.	Senior Design Final Report
	1.2 Ability to formulate problems through mathematical or engineering analysis.	Senior Design Final Report
	1.3 An ability to apply math, science and engineering principles to solve complex engineering problems.	Senior Design Final Report
	1.4 Ability to use modern engineering tools in problem solving.	Two 3000-level Core courses – term projects, lab reports (EE 3450, EE 3810).
ABET 2 an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	2.1 Ability to identify requirements and constraints for an engineering design (taking into consideration public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors)	Senior Design: Final Report (SD-R)
	2.2 Ability to synthesize design solutions within project constraints.	Senior Design: Final Report (SD-R)
	2.3 Ability to select an appropriate design to meet the project goals.	Senior Design: Final Report (SD-R)
	2.4 Ability to implement the design solutions.	Senior Design: Final Report (SD-R)
	2.5 Ability to test and evaluate a design solution.	Senior Design: Final Presentation (SD-P)
ABET 3 an ability to communicate effectively with a range of audiences	3.1 (technical Writing) Ability to produce quality technical report.	Senior Design: Final Report (SD-R)
	3.2 (Oral) Ability to present a technical design to a broad audience.	Senior Design: Final Presentation (SD-P)
	3.3 Effective presentation of data (this can apply to either written or oral communication)	Senior Design: Final Presentation (SD-P)
	3.4 (Written) Ability to communicate in writing to a general audience.	ENGR Ethics essay
ABET 4 an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic,	4.1 Knowledge of <u>ethical and professional responsibilities</u> .	ENGR3010 Quiz
	4.2 Ability to apply ethical reasoning in scenarios in engineering design or professional practice.	ENGR3010 Essay
	4.3 Ability to make informed judgements that consider the impact of an engineering solution in global, economic, environmental and societal contexts. (Senior design)	Senior Design: Final Report (SD-R)
	4.4 Ability to adhere to professional responsibilities in engineering situations.	reconsider

environmental, and societal contexts		
ABET 5 an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	5.1 Ability to individually contribute to meet team objectives.	Senior Design: Adviser Monthly review
	5.2 Ability of team members to provide leadership according to their roles.	
	5.3 Ability to foster collaborative and inclusive team environment	
	5.4 Ability to establish goals and plan tasks to meet the goals.	
ABET 6 an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	6.1 Ability to <u>develop</u> experiments with proper measurements.	UD Lab
	6.2 Ability to <u>conduct</u> experiments with proper instrumentations.	
	6.3 Ability to <u>analyze and interpret</u> experimental data.	
	6.4 Ability to <u>draw proper conclusions</u> based on experimental results and engineering judgement.	
ABET 7 an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	7.1 Ability to identify needed information.	Senior Design: Adviser Monthly review
	7.2 Ability to use appropriate sources to acquire information.	
	7.3 Ability to apply acquired information	