

ASSESSMENT METHODS OF MATHEMATICAL ENGINEERING PROGRAM OUTCOMES **G**

DEPARTMENT OF MATHEMATICS

OUTCOMES	ACTIONS	ASSESSMENT METHODS	WHEN	HOW	WHO
1. demonstrate the ability of solving problems by using techniques from calculus, linear algebra, differential equations, probability and statistics,	MATH 101, 102, 142, 200, 201, 220, 230, 231, 232, 313; PHYS 101, 102.	Course examinations and grades ALES	At the end of every semester when the related course is offered At Graduation	Students take examinations in class [keep one per course (Best, Median, Worst)] by Inference	Instructor QAQ**
2. demonstrate knowledge of mathematics and mechanics to construct, analyze and interpret real world problems,	MATH 101, 102, 142, 200, 201, 212, 220, 231, 232, 252, 313, 321, 322, 323, 324, 343, 352, 427, 441, 451, 452, 462, 490; Departmental Electives.	Course examinations and grades ALES	At the end of every semester when the related course is offered At Graduation	Students take examinations in class [keep one per course (Best, Median, Worst)] by Inference	Instructor QAQ**
3. demonstrate the ability to apply mathematics to the solutions of problems,	MATH 101, 102, 142, 200, 201, 212, 214, 220, 230, 252, 302, 313, 321, 322, 323, 324, 343, 352, 427, 441,	Course examinations and grades	At the end of every semester when the	Students take examinations in class [keep one	Instructor

	451, 452, 462, 490; Departmental Electives.	ALES	related course is offered At Graduation	per course (Best, Median, Worst)] By Inference	QAQ**
4. have a basic knowledge of mechanics, information sciences and social sciences,	MATH 142, 451, 452; ECO101; IT101; Departmental Electives; Complementary courses; HSS electives.	Course examinations and grades	At the end of every semester when the related course is offered	Students take examinations in class [keep one per course (Best, Median, Worst)]	Instructor
5. have an ability to write computer programs and use algorithms for solving problems,	MATH 142, 200, 302, 427, 490; IT101; CSE 101, 201; Departmental Electives; Complementary courses.	Course examinations and grades	At the end of every semester when the related course is offered	Students take examinations in class [keep one per course (Best, Median, Worst)]	Instructor

6. have a basic knowledge of the main fields of mathematics and mechanics, including differential equations, elasticity theory, fluid mechanics,	MATH 101, 102, 142, 200, 201, 212, 214, 220, 230, 231, 232, 252, 302, 313, 321, 322, 323, 324, 343, 352, 441, 451, 452, 462, 490; Departmental Electives.	Course examinations and grades	At the end of every semester when the related course is offered	Students take examinations in class [keep one per course (Best, Median, Worst)]	Instructor
7. have an ability to function both independently and as a member of a multidisciplinary team,	MATH 101, 102, 142, 200, 201, 212, 230, 232, 252, 313, 441, 490; Free Electives; HSS Electives.	Course examinations and grades	At the end of every semester when the related course is offered	Students take examinations in class [keep one per course (Best, Median, Worst)]	Instructor
		Project Reports, Project Presentations	During and at the end of every semester when the related course is offered	All students present projects reports and make presentations	Instructor
8. communicate effectively both in written and oral formats,	MATH 441, 490; PHYS103, 104; TUR101, 102; HIST101, 102; ENG101, 102; HSS Electives; Free electives.	Course examinations and grades	At the end of every semester when the related course is offered	Students take examinations in class [keep one per course (Best, Median, Worst)]	Instructor
		Project Reports, Project	During and at the end of	All students present projects	Instructor

		Presentations	every semester when the related course is offered	reports and make presentations	
9. attain a recognition of the need for, and an ability to engage in life-long learning,	Free Electives; HSS Electives.	Course examinations and grades	At the end of every semester when the related course is offered	Students take examinations in class [keep one per course (Best, Median, Worst)]	Instructor
10. have an ability to recognize the importance of ethics in professional life,	MATH 441, 490; Free Electives; HSS Electives.	Course examinations and grades	At the end of every semester when the related course is offered	Students take examinations in class [keep one per course (Best, Median, Worst)]	Instructor
		Project Reports, Project	During and at the end of every semester when the related course is offered	All students present projects reports and make presentations	Instructor