NED UNIVERSITY OF ENGINEERING & TECHNOLOGY
CLOs of MT Courses

MT-100 Introduction to Mathematics

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1	**Identify** functions and sketch their graphs using tools of calculus in relevant engineering problems.	1	C1
2	**Discuss** the concept of differential and integral calculus.	2	C2
3	**Describe** counting techniques and binomial theorem.	2	C2

MT-114 Calculus

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1	**Identify** functions and define real and complex numbers	1	C1
2	**Apply** differential and integral calculus to engineering problems.	2	C3
3	**Discuss** the behavior of sequence and series.	2	C2

MT-171 Differential & Integral Calculus

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1	**Identify** functions and define real and complex numbers	1	C1
2	**Apply** differential, integral and vector calculus to engineering problems.	2	C3

MT-173 Calculus

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1	**Identify** functions and define real and complex numbers	1	C1
2	**Apply** differential, integral and vector calculus to engineering problems.	2	C3

MT-215 DIFFERENTIAL EQUATIONS & COMPLEX VARIABLE

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of differential equations to explain physical situations	1	C2
2.	**APPLY** appropriate methods to solve differential equations and complex integrals of relevant engineering problems.	2	C3

MT-221 LINEAR ALGEBRA & ORDINARY DIFFERENTIAL EQUATIONS

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of differential equations and system of linear equations to explain physical situations	1	C2
2.	**APPLY** appropriate methods to solve differential equations and system of linear equations of relevant engineering problems.	2	C3

MT-222 LINEAR ALGEBRA & ORDINARY DIFFERENTIAL EQUATIONS

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of differential equations and system of linear equations to explain physical situations	1	C2
2.	**APPLY** appropriate methods to solve differential equations and system of linear equations of relevant engineering problems.	2	C3

MT-223 ORDINARY DIFFERENTIAL EQUATIONS & FOURIER SERIES

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of differential equations to explain physical situations	1	C2
2.	**Apply** appropriate methods to solve differential equations of relevant engineering problems.	2	C3

MT-224 Complex Variable & Fourier Series

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Apply** techniques of Laplace and Fourier series in relevant engineering problems.	1	C3
2.	**Discuss** the Infinite series and complex integrals.	2	C2

MT-225 LINEAR ALGEBRA & ORDINARY DIFFERENTIAL EQUATIONS

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of differential equations and system of linear equations to explain physical situations	1	C2
2.	**APPLY** appropriate methods to solve differential equations and system of linear equations of relevant engineering problems.	2	C3

MT-226 Multivariable Calculus

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** multivariable calculus to explain physical situations.	1	C2
2.	**Use** Vector calculus and curve linear coordinate system to solve relevant engineering problems.	2	C3

MT-227 DIFFERENTIAL EQUATIONS

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of differential equations to explain physical situations.	1	C2
2.	**Apply** appropriate methods to solve differential equations and use Laplace transform in relevant engineering problems.	2	C3

MT-228 COMPLEX VARIABLE & FOURIER TRANSFORMS

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Discuss** the Fourier transform, infinite series and complex variable.	2	C2
2.	**Apply** Fourier transformation and complex variable in relevant engineering problems.	1	C3

MT-252 Introduction to Probability & Statistics

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive
1	**Discuss** the fundamental concepts in Probability and Statistics	1	C2
2	**Identify** the rules and algorithms of Probability and Statistics	2	C1
3	**Perform** statistical analysis on data through computer software.	2	P3

MT-271 ORDINARY DIFFERENTIAL EQUATIONS & COMPLEX VARIABLE

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of differential equations to explain physical situations.	1	C2
2.	**APPLY** appropriate methods to solve differential equations and complex integrals in relevant engineering problems.	2	C3

MT-272 LINEAR ALGEBRA & GEOMETRY

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of system of linear equations and solid geometry to explain physical situations.	1	C2
2.	**APPLY** appropriate methods to solve system of linear equations in relevant engineering problems.	2	C3

MT-273 DIFFERENTIAL EQUATIONS & LINEAR ALGEBRA

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of differential equations and system of linear equations to explain physical situations	1	C2
2.	**APPLY** appropriate methods to solve differential equations and system of linear equations of relevant engineering problems.	2	C3

MT-315 MATHEMATICAL METHODS

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of system of linear equations and solid geometry to explain physical situations.	1	C2
2.	**APPLY** appropriate methods to solve system of linear equations and vector calculus in relevant engineering problems.	2	C3

MT-330 Applied Probability & Statistics

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive
1	**Discuss** the fundamental concepts in Probability and Statistics	1	C2
2	**Analyze** data to produce mathematical or probabilistic models in relevant engineering problems.	2	C4
3	**Perform** statistical analysis on data through computer software.	2	P3

MT-331 Probability & Statistics

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive
1	**Discuss** the fundamental concepts in Probability and Statistics	1	C2
2	**Analyze** data to produce mathematical or probabilistic models in relevant engineering problems.	2	C4

MT-332 ADVANCED CALCULUS & LINEAR ALGEBRA

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of system of linear equations and vector calculus to explain physical situations.	1	C2
2.	**APPLY** appropriate methods to solve system of linear equations in relevant engineering problems.	2	C3
3.	**Use** of vector calculus in relevant engineering problems.	2	C3

MT-333 ADVANCED CALCULUS & FOURIER ANALYSIS

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Describe** formation of partial differential equation and calculus to explain physical situations.	1	C2
2.	**APPLY** appropriate methods to solve partial differential equations in relevant engineering problems.	2	C3
3.	**Use** Fourier series in relevant engineering problems.	2	C3

MT-335 Probability & Statistics

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive
1	**Understanding** the fundamental concepts in Probability and Statistics	1	C2
2	**Analyze** on data & produce mathematical or probabilistic models in relevant engineering problems and to interpret the results.	2	C4

MT-441 Advanced Mathematical Techniques

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Discuss** numerical differentiation, numerical integration, and complex variable.	2	C2
2.	**Apply** Elliptic integral and complex variable in relevant engineering problems.	1	C3
3.	**Apply** numerical differentiation and numerical integration in relevant engineering problems.	2	C3

MT-442 Numerical Methods

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Explain** numerical method to solve system of linear equations and non-linear equation.	1	C2
2.	**Apply** numerical method to solve system of linear equation and non-linear equations in relevant engineering problems.	1	C3
3.	**Apply** numerical differentiation and numerical integration in relevant engineering problems.	2	C3

MT-443 Numerical Analysis

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Explain** numerical method to solve system of linear equations and non-linear equation.	1	C2
2.	**Apply** numerical method to solve system of linear equation and non-linear equations in relevant engineering problems.	1	C3
3.	**Apply** numerical differentiation and numerical integration in relevant engineering problems.	2	C3

MT-471 Applied Numerical Methods

CLO	Description	Mapping with PLOs	Taxonomy-Cognitive (Maximum Level)
1.	**Explain** numerical method to solve system of linear equations and non-linear equation.	2	C2
2.	**Apply** numerical differentiation and numerical integration in relevant engineering problems.	1	C3
3.	**Perform** computer algorithm of numerical methods to solve relevant engineering problems.	2	P3