

SMQ3023 NUMERICAL METHODS (A241) [COURSEWORK ASSESSMENTS]

QUIZZES (20%) MOOC Platform [20 marks : 5 marks each]		Assignment 1 (Individual) (20%) MOOC Platform [40 Marks]		Assignment 2 (Group) (20%) Article Writing MOOC Platform [40 marks]		Final Assessment (40%)	
Title	Due Date	Title	Due Date	Topic	Due Date	Topic	Due Date
Quiz 1	Before Week 3	Activity 1	20 October 2024 -Week 2	1. Nonlinear System	5 January 2025 Week 12 (end of the week)	1. Nonlinear System	Week 16/ Week 17
Quiz 2	Before Week 6	Activity 2	3 November 2024- Week 3	2. Interpolating Polynomial		2. Interpolating Polynomial	
Quiz 3	Before Week 9	Activity 3	17 November 2024 – Week 5	3. Numerical Differentiation		3. Numerical Differentiation	
Quiz 4	Before Week 12	Activity 4	1 st December 2024 – Week 7	4. Numerical Integration		4. Numerical Integration	
		Activity 5	22 December – Week 10	5. Linear System		5. Linear System	
		<i>CLO1: Solve nonlinear, system of differential equations, interpolating polynomial, numerical differentiation and numerical integration by using suitable numerical methods.</i>		<i>CLO3: Apply appropriate numerical techniques to solve mathematics problems.</i>		<i>CLO2: Compare the numerical errors obtained for nonlinear equations, system of linear equations, interpolating polynomial, numerical differentiation and numerical integration using programming.</i>	
Instructions: 1. This is individual Quiz. 2. Everyone must answer this quiz in MOOC platform. 3. Please follow the given dateline. 4. Each quiz is worth 5%		Instructions: 1. This is individual submission but you may work in pair. 2. Everyone need to submit this at the MOOC platform 3. Please make sure you have front cover, name and the name of the Activity. 4. Please follow the given dateline. 5. Submit full working. Provide Scilab Coding when necessary.		Instructions: 1. Work in a group of THREE (3) members. 2. Choose any ONE (1) Topic listed above. Investigate the performance of some numerical methods in solving the problem. 3. Use the given template https://shorturl.at/3Y1oa 4. You need to consider the followings: a) The equation to solve <i>Example: polynomial equation, nonlinear system, differentiation, integration etc. Choose only one type of problem based on the TOPIC.</i> b) Numerical Methods <i>Example: Comparison between Lagrange, NDD and Vandermonde.</i> c) The problem <i>Example: Population problem, velocity, area of building, etc</i> d) The solution: <i>Example: The most efficient method.</i>		Will be given in Week 16/17	