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NUMERICAL METHODS & OPTIMISATION

Project 2

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Project 2

By Raihana Edros

<http://ocw.ump.edu.my/course/view.php?id=608¬ifieditingon=1>

Chapter Description

- Aims
 - Apply numerical methods in solving engineering problem and optimisation
 - Defend ideas to solve the engineering problems using numerical methods
- Expected Outcomes
 - Construct a MATLAB program to solve engineering problem in Project 1
 - Defend the MATLAB program of the engineering problem
- References
 - Steven C. Chapra and Raymond P. Canale (2009), Numerical Methods for Engineers, McGraw-Hill, 6th Edition



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Project Milestone

- Week 9 : Distribution of Project Guidelines and selection of Problem (Part 1)
- Week 10 : Presentation 1
- Week 11-14 : Problem solving using manual calculation & MATLAB (Programming)
- Week 15 : Presentation 2 & Submission of Part 1 and 2



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Part 4: Programming (60 marks)

- The solution of problem (as presented in Project 1) would be evaluated based on:

Complexity of problem to be solved:		Acquired Marks
1. Simple	3 marks	
2. Intermediate	5 marks	
3. Complex	10 marks	
Solution using manual calculation	5 marks	
Relational and/or Logical Operators	4 marks	
Vector and/or Matrix and Array	4 marks	
Plots	4 marks	
Loops	4 marks	
Application of Error Analysis	5 marks	
Application of Method 1	7 marks	
Application of Method 2	7 marks	
Could the program solve the problem?	Yes: 5 marks; No: - 5 marks	
Does the output display the desired information?	Yes: 5 marks; No: -5 marks	
Plagiarism (between groups)	Minus 25 marks	
Animation	Extra 5 marks	
Comments in every function, loop etc used	Extra 2 marks	
Total marks	60 marks	



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Part 5: Presentation (10 marks)

- Students would have to present Part 4 to the class in Week 10.
- This will carry 10 of total marks.



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Part 6: Submission

- Students would have to submit the following items:
- Hard copy of Part 1 and Part 4 (source code & output)
- Soft copy of Part 1 and 4 (to Kalam)
- Soft copy of the presentation slides, Part 3 & 5 (to Kalam)
- Submission to Kalam must not be later than **Week 15**. Failure of doing so would cause 50% reduction of total marks.



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Main Reference

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