Department of ... Software and Informatics Engineering

College of … Engineering
Salahaddin University – Erbil
Subject: Mathematics II

Course Book –Year 1

Lecturer's name: Nawroz Ibrahim Hamadamen

Academic Year: 2018 -2019

Course Book

1. Course name	**Mathematics II**
2. Lecturer in charge	**Nawroz Ibrahim**
3. Department/ College	**Software and Informatics / Engineering**
4. Contact	**Nawroz.hamadamen@su.edu.krd** **Tel. 07507884014**
5. Time (hr. / week)	**4 per Group**
6. Office hours	**3 per Week**

7. Course overview:

Continuous Mathematics-1 is a one-semester course taken by all departments of Engineering. This course aims to indicate where and how mathematical techniques are used from the exercises and examples.

- All handouts and homework assignments are ONLINE.
- It is your responsibility to download assignments.

8. Course Objective:

- Understand how engineers solve problems step by step and properly.
- Be aware of the weak points and errors they expect during the mathematical solutions before starting their program.
- Be familiar with the major rules, geometries, equations, functions, & graphs
- Understand the role of mathematics and how the development of technology has been related to the development of mathematics.

9. Students' Obligation

- Regular attendance is required according to the university rules.
- The use of mobile phones during class is prohibited.
- Only the students who are officially enrolled can attend the class; guests and children are not admitted.
- Daily participation and conducting assignments are required.

10. Forms of Teaching:

The subject will be given theoretically in the class, depending on the PPT. Slides were given to the students before lecture day; whiteboard and pen were mostly used and frequently cleared the subject step by step. Homework is normally given throughout the academic year. We also have (an hour to 2 Hours) **tutorial** part of the lecture has daily activity marks on it; this defines calculating exercises and examples of different ideas on the white board. There will be Quizzes also on a pointed day.

11. Assessment Scheme:

Exam	Mark
Mid Term	20%
Course Activities	20%
Final Course Exam	60%
Total	100%

12. Course Reading List:

1- Thomas Calculus 11th edition 2005
2- Thomas Calculus by "George B.Thomas" 12th edition 2010
3- Schaum's outlines Matrix Operations 2nd edition 1989
4- Discrete mathematics "P.K. Mittal" 1st edition 2004

26 Weeks: From the 15th of October to 15th of May	
1st Week	Integrals Involving Inverse Trigonometric Functions
2nd Week	Integration Methods Integration by Parts
3nd Week	The Substitution t = tan(x)
4rd Week	The Substitution $t = \tan\frac{x}{2}$
5th Week	Integration Applications (Volumes of Revolutions) The Disk Method

6th Week	Revolution About a Line That is Not a Coordinate Axis
7th Week	The Shell Method
8th Week	Techniques of Integration: Partial fractions Decomposition
9thWeek	Definitions of Hyperbolic Functions
10th Week	Graphs of Hyperbolic Functions
11th Week	Differentiation of Hyperbolic Functions
12th Week	Integration of Hyperbolic Functions
13th Week	Inverse Hyperbolic Functions
14th Week	**Writing** *** 3.17 Real-time writing 3.18 Learning new writing skills 3.19 Grammar for writing
15th, 16th, 17th, 18th, 19th, 20th, 21th, 22st, 23nd,	Polar Coordinate System Polar Equation of Lines and Circles Area Enclosed by Polar Curves
24rd, 25th, 26th, 27thWeeks	Review & Skill