

Course Plan

1. Course Data

Course Title	Mathematics III	Code: Math 201
Department	2 nd year - Communications Engineering	
Academic Year / Semester	2019 / 2020	First Semester
No. of Hours per week	Lecture: 4	Tutorial: 2 Total: 6
Course Instructor	Dr. Mohamed Hussein Eid	

2. Course Objectives

- 2.1 Provide the students the basic concepts of vector spaces, linear transformations.
- 2.2 Provide the students the fundamentals of functions of complex variable.
- 2.3 Teach students methods of solution of systems of linear equations.
- 2.4 Provide the students the basic concepts of linear programming and its application.

3. Course Contents and Lectures

Week	Topic	Hours	Exercises	Hours	Total
1	Introduction, Linear systems	4	Solving exercises	2	6
2	Methods of solutions of Linear systems	4	Solving exercises	2	6
3	Linear programming, Graphical method	4	Solving exercises	2	6
4	Simplex method	4	Solving exercises	2	6
5	Vector spaces	4	Solving exercises	2	6
6	Basis and Subspaces	4	Solving exercises	2	6
7	Linear transformations	4	Solving exercises	2	6
8	Mid-Term Exam			1	
9	Functions of complex variable	4	Solving exercises	2	6
10	Image of region under complex function.	4	Solving exercises	2	6
11	Analytic functions, Conformal mapping, Bilinear transformation	4	Solving exercises	2	6
12	Zeros and poles of complex functions	4	Solving exercises	2	6
13	Complex integrals	4	Solving exercises	2	6
14	Complex integrals and real integrals	4	Solving exercises	2	6
15	Final Exam			3	

4. Assessment Details

Methods of Assessment	Marks	Weighting %	Outline Details
Quizzes	5	4 %	Before mid-term
Assignments	5	4 %	Weeks: 3, 10
Mid-Term Exam	30	25 %	Week 8: 1 hour
Final Exam	80	67 %	Week 15: 3 hours

5. References

Course Notes : Lectures PDF, Dr. Mohamed Husien Eid

Books : 1- Advanced Engineering Mathematics, C.R.Wylie and L.C.Barrett, McGraw- Hill International Book Co., London 1982.

2- Advanced Engineering Mathematics, E.Kreyszig, John Wiley & Sons Inc, New York , 1999.