Course Plan

1. Course Data

Course Title	Mathematics IV	Code: Math301
Department	Communications Engineering	
Academic Year / Semester	2018 / 2019	First Semester
No. of Hours per week	Lecture: 3	Tutorial: 1 Total: 4
Course Instructor	Dr. Mohamed Hussein Eid	

2. Course Contents and Lectures

Week	Topic	Hours	Exercises	Hours	Total
1	Introduction, Gamma function	3	Solving exercises	1	4
2	Beta function	3	Solving exercises	1	4
3	First order partial differential equations	3	Solving exercises	1	4
4	Second order partial differential equations	3	Solving exercises	1	4
5	Second order partial differential equations	3	Solving exercises	1	4
6	Wave equation	3	Solving exercises	1	4
7	Bessel's functions	3	Solving exercises	1	4
8	Mid-Term Exam			1	
9	**Statistics:** Arithmetic mean, variance, Standard deviation	3	Solving exercises	1	4
10	Regression line, Correlation coefficient, Covariance	3	Solving exercises	1	4
11	Probability, Random variables	3	Solving exercises	1	4
12	Probability density function, Distribution function (discrete and continuous)	3	Solving exercises	1	4
13	Moments and moment generating function	3	Solving exercises	1	4
14	Binomial distribution, Normal distribution, Gamma distribution	3	Solving exercises	1	4
15	Final Exam			3	

3. Assessment Details

Methods of Assessment	Marks	Weighting %	Outline Details
Quizzes	5	6.25 %	Before mid-term
Assignments	5	6.25 %	Weeks: 3, 10
Mid-Term Exam	15	18.75 %	Week 8: 1 hour
Final Exam	55	68.75 %	Week 15: 3 hours

4. References

Course Notes :

- Lectures, Dr. Mohamed Husien Eid

Books :

- Advanced Engineering Mathematics, C.R.Wylie and L.C.Barrett, McGraw- Hill International Book Co., London 1982.
- Advanced Engineering Mathematics, E.Kreyszig, John Wiley & Sons Inc, New York , 1999.
- Statistics: Problems and Solutions, E. E. Bassett, **J.** M. Bremner, **I.** T. Jolliffee, B. Jones, B. J. T. Morgan, P. M. North, World Scientific Pub. Co., London, 2000.