Course Syllabus
Fall 2020, (First Semester – 1440/1441)
MW 9:30-10:50 AM   TU   S 14:00-14:50

Course Code	Course Name	Credits	Contact Hours
EEN303	Signals and Systems	2	3

Instructor/Coordinator:

Name	Email	Office Hours
Dr. Abdullah Ali Alshehri	ashehri@kau.edu.sa	M T 11-12:30

Textbook:

Title	Signals and Systems Using MATLAB" 2nd edition, Elsevier, 2014.
Author/Year	Luis F. Chaparro, 2015

Supplemental Materials:

Reference Material	
Title	Signals, Systems and Transforms, 4th Ed., Prentice Hall Pearson Edu. Inc.
Author/Year	Charles L. Phillips, John M. Parr, Eve A. Riskin, 2012.
Title	MATLAB for Engineering Applications
Author/Year	Abdullah Alshehri, 2014
Electronic Materials (e.g. Websites, Social Media, Blackboard, etc.)	
Websites	ashehri.kau.edu.sa

Specific Course Information:

a.   Brief Description of the Content of the Course (Catalog Description)
Continuous-Time Signals and Systems, Continuous-Time Linear Time-Invariant Systems, Fourier Series, The Fourier Transform, Applications Of The Fourier Transform, The Laplace Transform, State Variables For Continuous-Time Systems, Discrete-Time Signals And Systems, Discrete-Time Linear Time-Invariant Systems, Z-Transform, Fourier Transforms Of Discrete-Time Signals.
b.   Pre-requisites (P) or Co-requisites (C)
MATH 204
c.   Course Type (Required or Elective)
Required

Specific Goals:

a.   Specific Outcomes of Instruction
By the end of this course, the student should be able to: - apply mathematical transformations to solve signals and systems applications - define both the continuous and discrete systems and signals - analyze the systems and obtain its transfer functions and frequency response - determine the system/signal frequency response. - simulate systems and signals using MATLAB to get: (poles, zeros, frequency response, spectral, phase, unit circle, FFT...etc.). -write and present (written and oral) a small project effectively.

b. Student Outcomes Addressed by the Course

1	2	3	4	5	6	7	ABET SOs
x		x					

Brief List of Topics to be covered:

List of Topics	No. of Weeks	Contact Hours
Introduction (continuous and discrete signals, complex numbers, rules and theorems used	1	4
Continuous-Time Signals	2	4
Continuous-Time Linear Time-Invariant Systems	3-4	8
The Laplace Transform	5-6	8
The Fourier series	7-8	8
The Fourier Transform	8-9	8
Sampling Theory	10	4
Discrete-Time Signals And Systems	11-12	8
The Z-Transform	13	4
Fourier Transforms Of Discrete-Time Signals FFT	14	4

Grade distribution:

Assessment	%
Home works	15
Quizzes	15
Midterm Exam	15
Project	15
Final Exam	40

Grading System

Letter Grade	Numerical	Point
A+	95-100	5.0
A	90-less than 95	4.75
B+	85-less than 90	4.5
B	80-less than 85	4.0
C+	75-less than 80	3.5
C	70-less than 75	3.0
D+	65-less than 70	2.5
D	60-less than 65	2.0
F	Below 60	1.0