University of Portland (UP)
School of Engineering

EE 262 – Signals and Systems – 3 cr. hrs.
Spring 2017
Tentative Course Outline Sheet

Course Purpose: The purpose of this course is to introduce the students to properties and principles of signals and systems. Some applications with specific emphasis encountered in electrical and/or electronic systems will also be covered.

**Student
Outcomes:**   At the successful completion of this course, the student is expected to gain the following skills:

- Become familiar with the properties of both continuous- and discrete-time signals;
- Become familiar with the properties of both continuous- and discrete-time systems;
- Understand Linear Time-Invariant (LTI) systems and their applications;
- Understand Laplace transform and its applications;
- Understand Fourier representations and their applications;
- Understand z-transform and its applications;
- Be able to utilize appropriate software packages (e.g., MATLAB) to analyze signals and systems

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> "*I prefer death to lassitude. I never tire of serving others,*"
> by Leonardo da Vinci (1452−1519)

Lecture Hours: MWF 9:15-10:10 (Location: Shiley Hall 101)

Textbook: *Engineering Signals and Systems in Continuous and Discrete Time* Second Edition by F. T. Ulaby & A. E. Yagle (National Technology and Science (NTS) Press, ISBN 978-1-934891-24-7-16-2, 2016)

Course Content: Signals (Chapter 1)
Linear Time-Invariant (LTI) Systems (Chapter 2)
Laplace Transform (Chapter 3)
Applications of Laplace Transform (Chapter 4)
Fourier Analysis Techniques (Chapter 5)
Applications of Fourier Transform (Chapter 6)

Discrete-Time Signals and Systems (Chapter 7)
Applications of Discrete-Time Signals and Systems (Chapter 8)

Prequisite: EE 261.

Grading Policy: The <u>total numerical grade</u> is computed based on the following percentages:
- 30% for homework
- 40% for the two midterm exams (20% each) and
- 30% for the final exam
  The <u>final letter grade</u> in the course is assigned based on the following total numerical grade intervals out of a total of 100 points:

90−100	A⁻-A	(Excellent Performance)
80−89	B⁻-B⁺	(Good Performance)
70−79	C⁻-C⁺	(Average Performance)
60−69	D⁻-D⁺	(Poor Performance)
<60	F	(Inadequate Performance)

  Typically, the <u>numerical average</u> of the total numerical grades is assigned to about a B⁻ grade.

Exam Dates: The exam dates are tentatively set as follows:

> <u>Midterm #1</u>–Wednesday, March 1, 2017
> <u>Midterm #2</u>–Friday, April 7, 2017
> <u>Final Exam*</u>–Thursday, May 4, 2017, 13:30-15:30
>   *Comprehensive and mandatory for all the students.

N☺-Class Dates: Monday-Friday, March 13 through 17, 2017 (Spring Break)
Friday & Monday, April 14 & 17, 2017 (Easter Break)
Tuesday, April 11, 2017 (Founder's Day Presentations*)
*Attendance expected.

Homework: Weekly homework will be assigned. Homework assignments are mandatory, that is, every student is expected to do the homework assignments <u>on time</u> to qualify for consideration to receive a passing grade in the course.

Sorry, but, <u>no late homeworks will be accepted</u>!!☹
Therefore, <u>no late homeworks will be expected</u>!!☺

UP's Code of Academic Integrity: Academic integrity is openness and honesty in all scholarly endeavors. The University of Portland is a scholarly community dedicated to the discovery, investigation, and dissemination of truth, and to the development of the whole person. Membership in this community is a privilege, requiring each person to practice academic integrity at its highest level, while expecting and promoting the same in others. Breaches of academic integrity will

not be tolerated and will be addressed by the community with all due gravity (taken from the University of Portland's Code of Academic Integrity).

The complete code may be found in the 2016-2017 University of Portland Student Handbook and as well the Guidelines for Implementation.   It is each student's responsibility to inform him or herself of the code and guidelines.

UP's Assessment
Disclosure: Student work products for this course may be used by the University for educational quality assurance purposes.

UP's Accomodation
for Disability: If you have a disability and require an accommodation to fully participate in this class, contact the Office for Students with Disability (OSWD), located in the University Health Center (503-943-7134), as soon as possible.

Diversity & Green
Dot Statement: All persons should be safe to express their opinions in my class, regardless of their race, religion, political philosophy, gender, sexual orientation, or disability. In addition, I encourage anyone to speak up on behalf of themselves or others, if the classroom environment becomes uncomfortable for any reason.

Tuesday, January 17, 2017 marks Benjamin Franklin's 311th birthday!

What is special about my 311th birthday in 2017?

Answer: If my 311th birthday expressed as 01-17-2017 is split as 0117 and 2017, 2017 is the 306th prime number where one-third of the reverse of half of 306 yields 0117! Further, half of 306 equals the Franklin number coined by A. Inan!