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.

Learning Objectives: 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.

Instructor: Aziz S. Inan, Ph.D.
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Phone#: 503-943-7429, Fax#: 503-943-7316
E-mail: ainan@up.edu
Personal website: http://faculty.up.edu/ainan/

Office Hours: M 13:30-15:30; T 12:30-13:30; W 14:30-15:30; & F 13:30-14:30

“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 124)


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)
**Prequisite:**  
EE 261.

**Grading Policy:**  
The total numerical grade 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 final letter grade 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 numerical average of the total numerical grades is assigned to about a B^- grade.

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

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm #1</td>
<td>Friday, February 20, 2015</td>
</tr>
<tr>
<td>Midterm #2</td>
<td>Friday, April 10, 2015</td>
</tr>
<tr>
<td>Final Exam*</td>
<td>Thursday, April 30, 2015, 8:00-10:00</td>
</tr>
</tbody>
</table>
*Comprehensive and mandatory for all the students.

**No-Class Dates:**  Monday-Friday, March 9 through 13, 2015 (Spring Break)  
Friday & Monday, April 3 & 6, 2015 (Easter Break)  
Tuesday, April 14, 2015 (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 on time to qualify for consideration to receive a passing grade in the course.

Sorry, but, no late homeworks will be accepted!!
Therefore, no late homeworks will be expected!!

**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 2014-2015 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 Accommodation 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.

Saturday, January 17, 2015 marks Benjamin Franklin’s 309th birthday!

What is special about my 309th birthday, to occur in 2015?

Answer: If my birthday January 17, 2015 is expressed as 01-17-2015, these digits add up to 17. Note that number 17 holds a very special place in my life. Why?