COURSE CALENDAR DESCRIPTION

Introduces fundamental principles underlying design and analysis of digital communication systems. Develops mathematical/physical understanding from the information source through the transmitter, channel, receiver, and information sink. Topics include baseband transmission, matched filtering, modulation, channel coding, and spread spectrum. Prerequisites: cumulative GPA of 4.50 or better over all major EECS courses (without second digit "5"); LE/EECS 3213 3.00; One of SC/MATH 2030 3.00 or SC/MATH 2930 3.00; One of LE/EECS 3451 4.00, LE/EECS 3602 4.00, LE/ESSE 4020 3.00, SC/MATH 4830 3.00, SC/PHYS 4060 3.00 or SC/PHYS 4250 3.00. Previously offered as: LE/CSE 4214 4.00. PRIOR TO SUMMER 2013: course credit exclusion: SC/CSE 4214 4.00.

INSTRUCTOR(S)

<table>
<thead>
<tr>
<th>Name</th>
<th>Section / Format / Term</th>
<th>Contact Email</th>
<th>Contact Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tabassum, Hina</td>
<td>Sec. E / LECT / F</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ADDITIONAL INFORMATION

COURSE LEARNING OUTCOMES (CLOS)

Upon completion of the course, students are expected to
1. Express and manipulate random signals in terms of probabilities and statistical averages.
2. Understand and quantify the performance of key pulse code modulation systems.
3. Understand and apply the theory of optimum detectors and filters for pulse amplitude modulation systems.
4. Explain the operation of sequence detection methods.
5. Describe the theory and operation of bandpass modulation and detection systems.
6. Design and build system components capable of enabling optimum digital communication.

TEXTBOOK

- Simon Haykin, Digital Communications, John Wiley & Sons.

GRADING SCHEME

5 Home Assignments - 10% (2% each)
5 Labs - 15% (3% each)
Quiz 1 - 6%
Quiz 2 - 6%
Mid-term - 20%
Class Participation - 3%
Final Exam - 40%
ACADEMIC INTEGRITY LINKS
• Senate Policy on Academic Honesty - http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
• Academic Integrity - http://lassonde.yorku.ca/academic-integrity

STUDENT LINKS
• Student Rights and Responsibilities - http://oscr.students.uit.yorku.ca/student-conduct
• Religious Observance - https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs
• Academic Accommodation for Students with Disabilities - http://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-with-disabilities-policy/
• Student Accessibility Services (SAS) - https://accessibility.students.yorku.ca/
• York University’s Policies on Sexual Violence - http://secretariat-policies.info.yorku.ca/policies/sexual-violence-policy-on/
• York University’s Policies on Gender/LGBTQ*/Positive Space - http://rights.info.yorku.ca/lgbtq/

LAND ACKNOWLEDGEMENT
• We acknowledge our presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, the Huron-Wendat, and the Métis. It is now home to many Indigenous Peoples. We acknowledge the current treaty holders, the Mississaugas of the New Credit First Nation. This territory is subject of the Dish With One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.
• The Indigenous Framework for York University: A Guide to Action can be found here: http://indigenous.info.yorku.ca/
• Meaning of a land acknowledgement: http://healthydebate.ca/opinions/indigenous-land-acknowledgements

Many courses utilize Moodle, York University’s course website system. If your course is using Moodle, click here to access it.
Moodle @ York University