INEL 6078 Estimation, Detection and Stochastic Processes
Fall Semester 2018

Professor: Shawn Hunt
Office: S-502. Office Hours: MW 1:30-4:30pm
Email: shawn@ece.uprm.edu
Web page: http://ece.uprm.edu/~hunt
Textbook: L.C. Ludeman, **Random Processes: Filtering, Estimation, and Detection**, John Wiley & Sons, 2003.

Description
Fundamentals of detection, estimation, and random process theory for signal processing, communications, and control. Random processes and sequences. Linear systems driven by random processes. Bayesian and nonrandom parameter estimation. Signal detection and estimation from waveform observations.

Exams:
There will be 3 partial exams and 1 Final Exam.
MAKE UP EXAMS WILL BE GIVEN ONLY FOR MEDICAL EXCUSES.
If there is a medical reason for missing an exam, you must certify this in order to request a make up. The document from the physician must be submitted the first day the student is able to return to study.

Homework:
Homework problems: Homework problems will be given during class periods. The problems given on Monday, Wednesday and Friday of one week will be due the following Monday.

Grading:
Your Final Grade will be computed as a percentage of 550 total points: 100 points for each of the partial exams, 50 points for homework, and 200 points for the final exam.
> A - 90%-100%
> B - 80%-89%
> C - 70%-79%
> D - 60%-69%
> F - below 60%

Your grade depends on attendance and class participation.

Description	Lectures	Reference
1. Probability review	6	Ch. 1 &2
2. Vector random variables	3	Ch. 2
3. Estimation of random and non-random variables	9	Ch. 3
4. Random processes	12	Ch. 4 & 5
5. Hypothesis testing and detection theory	12	Ch. 9 & 10
6. Exams	3	