Welcome to my classes, USF students!  
You're taking a "web-only" class from me. That means you won't see me live; you'll watch lectures I taped in the past, on the course materials. I will be available in my office for consultation a few hours per week, and I'll always answer your emails promptly.

Think about this: you're taking a course from a professor whom you'll hardly ever see. So you don't have much chance for an "A" unless you  
(1) read the textbook and  
(2) follow the web procedures precisely.  
Be sure to read this long-winded syllabus entirely. Then print it out and stick it in the back of your textbook for future reference.

You may have misgivings about non-live lectures. Let me relate a few observations that I have made over the past years with this process.
First of all, this procedure has proved quite successful - to my surprise. I was leery about it at first, but I soon found out that the average student performance on tests was slightly better than it had been before, when I was lecturing live. I think the reasons for this are as follows:  
1. You will never need to miss a lecture due to illness, conflicting appointments, being out of town, or simply being tired. The lectures are at  
http://netcast.usf.edu/browse.php?page=Classes/engineering/snider/eel6545  
all semester long, 24/7.  
2. You can re-watch any lecture, or part of a lecture, as many times as you need.  
3. If you need to take a break (no student has ever fallen asleep during my lectures, of course!!!), you can stop the playback and resume when you return.

The lectures may be numbered, or dated according to the year they were taped, so you will have to figure out the right pace to get you through them during the time allotted in your current semester. If you can't do this, please drop my class and re-take MTH 101, paying particular attention to the lessons on ratio and proportion.

Consult your email and my.usf.edu frequently for updates from me on assignments, test dates, and procedures in general. Don't take any administrative instructions that I give in the lectures seriously - they are out of date. I will keep you informed about test procedures, etc. by email as the semester progresses.

Description:  
Review of probability, functions of random variables, joint Gaussian distribution, autocorrelation, power spectra, ARMA modeling, Wiener and Kalman filters, Wiener/Poisson/Markov Processes.

Course Prerequisites: EGN 3443 or equivalent first course in statistics (laws of probability, Bayes's theorem, probability density function, moments)

Text:  
Introduction to Random Processes, available at ProCopy

Author:  
A D Snider
It is recommended that you have a basic book on statistics covering the multivariate Gaussian distribution. If you don't own one I recommend

*Probability and Stochastic Processes*

Author:  R. Yates, D. Goodman
Publisher: Wiley
**Course Prerequisites:** EGN 3443 or equivalent first course in statistics (laws of probability, Bayes's theorem, probability density function, moments). If you can't solve the following self-diagnostic test with confidence (that is, if you need to ask me for the answers), do not take this course. **This test is for your benefit only; do not turn it in.**

The pdf of the random variable $x$ is displayed in the figure above.

1. What is the mean of $x$?  
2. What is the standard deviation of $x$?  
3. What is the mean square of $x$?  
4. State and derive the equation relating the mean square, the squared mean, and the standard deviation.

5. A random variable $X$ has 5 possible outcomes: $X=-2,-1,0,1,2$. Each is equally probable.
   
a. What is the probability that $X$ is odd?  
b. What are the expected values of $X$ and $X^2$?  
c. What is the standard deviation of $X$?  
d. If two values $X_1$ and $X_2$ are generated independently, what is the probability that their sum is 1?  
e. If two values $X_1$ and $X_2$ are generated independently, what is the probability that their sum is 1, given that the first number is $-1$?  
f. If 3 values $X_1,X_2,$ and $X_3$ are generated independently, what is the probability that their sum is 1, given that the first number is 1?

6. What are the mean and standard deviation of the following probability density function?
my.usf.edu Downloads
Lecture notes, documenting everything that is written on the blackboard during the lectures, can be downloaded from my.usf.edu. Also the file Homework.pdf contains many suggested problems for practice, including copies of old tests; they are not to be handed in. Solutions to these problems are in HomeworkSolutions.pdf. Read Accurate Computations before you attempt the take-homes.

Requirements and Assessment:

1. Most communications between instructor and students are accessed through email or https://my.usf.edu. Follow the directions. The site contains class announcements, documents, pointers to old exams and lecture notes, etc.

2. Each student must email Prof. Snider with the following data: Last name: ______ First name: _______ Class: EEL 6545, by Aug. 30. I will not acknowledge these emails individually. Around Sept. 5 you will receive an acknowledgement, by email, from Dr. Snider that you are in his class email address list; if you do not receive this acknowledgement, email me again – until I acknowledge receipt. Thereafter each student is liable for all email notices concerning the class from Prof. Snider. Students who wish to use different email boxes should email this data from each box. Do not use one email box to request mail to a different box.

3. Each student must sign a copy of the final page of this syllabus as indicated below and submit it to Dr. Snider. You are not officially enrolled in the class until you have turned in a signed syllabus. Postal-mail a hard copy to Dr. A D Snider, Dept. of Electrical Engineering, University of South Florida, 4202 East Fowler Avenue ENB 118, Tampa FL 33620; or put a copy in his EE Department mailbox. Email is not acceptable. I will not acknowledge receipt of these syllabi individually. They can be regenerated later in the semester if a problem arises.

4. Certain assigned problems will be identified as graded homework.

5. Other homework problems will be recommended to the students, but not graded. You should regard the old tests as a prime source of homework problems; work them during the semester as the particular topic is covered in the lectures.

6. Take home diagnostic, midterm, and final examinations will be given. The takehome tests are heavily computational and will be computer graded with no partial credit, but you will be allowed three attempts at each test (with, however, different numerical parameters each time). You will submit your answers by email to me (snider@usf.edu) or my TA (see Blackboard Announcements), and I will shortly respond with your score, a tabulation of your incorrect answers, and the correct answers for the parameters you used. Your first attempt is assessed at (only) 5%, the second at 60%, and the third at 35%. Each attempt has a deadline. (See Blackboard Announcements)

If you miss a deadline, your subsequent submission will also count as the missed submission. If you are satisfied with your score you may stop submitting at any time, and your last submission will count for the subsequent ones. The take home tests will be available at my.usf.edu, and they contain more detailed instructions.

The three tests are weighted 20%, 40%, and 40% respectively; however, you must get at least 2 A's and 1 B on these exams to get an A in the class. An "incomplete" grade will be awarded if either the email, syllabus signoff, or any exam are not submitted. Check with USF administration for policy details. Retaking a graded test, however, requires reenrollment.
You must get an A on the diagnostic to get an A in the class.

7. The email, syllabus signoff, and exams and assignments are required for the student to get a grade.

A final note: I am a retiree, and I do not plan to be at USF except for my posted office hours. If you foresee some difficulties with adhering to my schedule of tests and assignments this semester, please take my course some other time, and enroll in courses with fulltime faculty members who can better accommodate your circumstances.
Please print this page, sign, and return hard copy to Dr. Snider as directed above.

**Academic Dishonesty** - It is not acceptable to copy, plagiarize or otherwise make use of the work of others in completing homework, project, exam or other course assignments. The minimum penalty for doing so is an automatic zero on the assignment and an "F" in the course. If there are any questions regarding this policy they should be directed to the EE graduate program coordinator.

I have read the syllabus for EEL 6545, Fall 2010, and I agree to the schedule and procedures stated therein.

Print name:__________________________  (Signed) __________________

Student ID U:______________  Date: _____