

## FALL 2023 : ELEC 7410: Stochastic Signal and System Analysis

T Th 9:30 am – 10:45 am Broun 113

**Instructor:** Prof. J.K. Tugnait 313 Broun, 4-1846, tugnajk@auburn.edu  
Office Hours: By appointment; please email.

**Textbook:** J.A. Gubner, *Probability and Random Processes for Electrical & Computer Engineers*.  
Cambridge U. Press, 2006.

**Refs.:** H. Pishro-Nik, *Introduction to Probability, Statistics, and Random Processes*,  
available at <https://www.probabilitycourse.com>, Kappa Research LLC, 2014.  
A. Papoulis and S.U. Pillai, *Probability, Random Variables, and Stochastic Processes*,  
fourth ed., McGraw-Hill, 2002.  
H. Stark & J.W. Woods, *Probability and Random Processes with Applications to Signal  
Processing*, third ed., Prentice-Hall, 2002.  
A. Leon-Garcia, *Probability and Random Processes for Electrical Engineering*,  
third ed., Addison-Wesley, 2008.

### Grading Basis:

Homework :	20 %	
Test I (in class & take-home) :	25 %	( Sept. 28, 2023 )
Test II (Take-home) :	25 %	( Nov. 16, 2023 )
Final :	30 %	( Take-home Nov. 30, 2023 )

## TEXT COVERAGE

Parts of chapters 1 through 5 (“undergraduate”), chapters 8,9,10, and parts of chapters 11 through 14 (“graduate”) of *Gubner*.

**ELEC 7410. Stochastic Signal and System Analysis (3).** Lec. 3. Pr., Departmental approval. Applications of probability, random variables and stochastic processes in electrical engineering.