Department of Computer & Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus

1. Course title/number, number of credit hours	
Probability in Everyday Life/EGN 1932	3 credit hours

2. Course prerequisites, corequisites, and where the course fits in the program of study
Prerequisites: Admission to the University Honors Program, no formal course prerequisites Satisfies the Intellectual Foundations Category: Foundations of Mathematics and Quantitative Reasoning

3. Course logistics
Term: Spring 2014 This is a classroom lecture course. *Class location and time*:   ED 124, MW 2:00-3:20

4. Instructor contact information	
Instructor's name *Office address* *Office Hours* *Contact telephone number* *Email address*	Dr. Robert B. Cooper, Professor Engineering East (EE 96), Room 427 MW 3:30-5:30 or by appointment 561-297-3673 bob@cse.fau.edu

5. TA contact information	
TA's name	No TA for this course

6. Course description
This Seminar will focus on understanding the properties of randomness. It is an amazing fact that random phenomena, which by definition are unpredictable, can actually be predicted (in the long run). We will study this apparent paradox by using mathematical models (theory) to describe randomness, and we will compare their predictions with the results of computer simulations (experiment). The examples we study will come from everyday life, like lotteries, cards, dice, sports, natural disasters, political polls, and, especially, queues (waiting lines), which are simple and ubiquitous, yet will reveal many subtle and surprising effects. The prerequisites are feeling comfortable with mathematical reasoning, ability to understand simple computer programs (written in BASIC, a computer language often taught in middle school), and intellectual curiosity.

7. Course objectives/student learning outcomes/program outcomes	
Course objectives	Gain an understanding of the physical phenomenon of randomness, via mathematical modeling (theory) and computer simulation (experiment).
Student learning outcomes & relationship to ABET objectives	Not relevant to ABET (this is not a CEECS course).

8. Course evaluation method	
Class participation: 50% Homework assignments: 40% Final exam: 10%	

9. Course grading scale
A: 90%-100%

B: 80%-89%
C: 70%-79%
D: 60%-69%
F: below 60%

10. Policy on makeup tests, late work, and incompletes

All decisions regarding exceptions to the stated rules will be made by the instructor based on the merits of the individual case.

11. Special course requirements

None

12. Classroom etiquette policy

University policy requires that in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular phones and laptops, are to be disabled in class sessions.

13. Disability policy statement

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) located in Boca Raton campus, SU 133 (561) 297-3880 and follow all OSD procedures.

14. Honor code policy

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and place high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. See University Regulation 4.001 at
www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf

15. Required texts/reading

Tijms, H., Understanding Probability, 3rd ed., Cambridge, 2012 . ISBN 978-1-107-65856-1 paperback

16. Supplementary/recommended readings

Kahneman, D., Thinking, Fast and Slow. Farrar, Strauss and Giroux, 2011. ISBN 978-0-374-27563-1

Levitt, S.D. and S.J. Dubner, Super Freakonomics, HarperCollins, 2009. ISBN 978-0-060-88957-9

Silver, N., The Signal and the Noise: Why So Many Predictions Fail- but Some Don't. The Penguin Press, 2012. ISBN 978-1-594-20411-1

17. Course topical outline, including dates for exams/quizzes, papers, completion of reading

Course description, all assignments posted on course website: www.cse.fau.edu/~bob/courses

Assignments will be discussed in class, and due dates will be determined as class discussion indicates appropriate student understanding of the concepts addressed in the assignments.