

## MA 355 PROBLEM SOLVING IN ACTUARIAL SCIENCE (SPRING 2014)

**Time and Place.** T,W,Th,F 12:30-1:50, E280

**Instructor.** Dr. Gabriela Sanchis, 384 G Esbenshade Hall, Office Phone: 361-1339

**E-mail.** sanchisgr@etown.edu

**Office Hours.** M: 9:30–10:30, 12:30-2; W: 9:30-11:00; Th: 3:00-4:30; and by appointment.

**Textbook.** ASM Study Manual for Exam P/Exam 1 (16th Edition) by Krzysztof Ostaszewski

**Prerequisites.** Ma 351 (Theory of Probability)

### Learning Outcomes.

- Students will be able to demonstrate knowledge of the topics of theory of probability and risk management according to the learning objectives described in the Society of Actuaries (SOA) Basic Education Catalog for Preliminary Actuarial Examination in Probability (P);
- Students will become independent learners who can successfully study for and pass actuarial exams.

**Attendance.** You are expected to attend all classes. Excessive amounts of absenteeism may result in a lower grade. If you do miss a class, it is your responsibility to obtain from a classmate any notes, assignments, handouts, or anything else you may have missed.

**Calculator.** The only calculators permitted in this course are the ones approved by the Society of Actuaries (SOA) in their catalog. SOA permits on their exams only the following calculators:

- the battery- or solar-powered Texas Instruments BA-35 model calculator,
- the BA II Plus, the BA II Plus Professional,
- the TI-30Xa or TI-30X II (IIS solar or IIB battery),
- the TI-30XS Multiview or the TI-30XB Multiview.

For this course you are welcome to use any and all of these calculators. You should bring your approved calculator(s) to the tests, quizzes, and the final exam.

**WebWorK.** Some assignments will be available through WebWorK, at <https://courses1.webwork.maa.org/webwork2/etown-ma355/>. To log in, use your network user id for your username, and your student id number for your password. You should change your password as soon as possible.

**Course Schedule.** The course is divided into two very different parts, one followed by the other.

First, we will start with a quick review of the theory, divided roughly into four big topics. For each topic, we will discuss problems from the ASM manual during class and you will complete a WebWorK assignment for homework. Following each topic there will be an in-class test.

Following Test 4, we switch gears and begin an intensive preparation for the P exam by going through several of the practice exams in the ASM manual. We will have four three-class blocks; during the first and second lecture of each block, we will review questions from one of the practice exams from the text. For homework, you will be working out your own individualized versions of the questions on these exams by completing a WebWorK assignment. During the third class of the block, you will complete a quiz consisting of 15 multiple-choice questions randomly chosen from the practice exam (with the numbers changed). Only the answers are checked, no partial credit is given.

The following table gives the test dates and topics:

Test	Date	Topic
Test 1	Friday, January 17	General Probability
Test 2	Tuesday, January 28	Random Variables and Probability Distributions
Test 3	Wednesday, February 5	Multivariate Distributions
Test 4	Wednesday, February 12	Risk Management and Insurance
Quiz 1	Tuesday, February 18	ASM Practice Test 1
Quiz 2	Friday, February 21	ASM Practice Test 2
Quiz 3	Thursday, February 27	ASM Practice Test 3
Quiz 4	Tuesday, March 12	ASM Practice Test 4

**Final Exam.** In addition to the four exams and four quizzes mentioned above, there will be a comprehensive final exam on WEDNESDAY, MARCH 19, 11:00 a.m. to 2:00 p.m.

**Academic Integrity.** All work must be one's own and must comply with the Standards of Academic Integrity defined in the Elizabethtown College Catalog (see <http://catalog.etown.edu/> and then click on **Academic Policies** in the menu on the left, and then on **Academic Judicial System**). More specifically, you may (and are encouraged to) help each other on the WebWork homework assignments, but you must type and submit your own work. No collaboration is allowed on tests or quizzes. All the tests, quizzes, as well as the final are closed-book, and no notes, written or electronic, are allowed.

**Grading.** Your final grade will be calculated in the following way:

- 40% of the grade comes from the four in-class tests,
- 20% of the grade comes from the four quizzes,
- 20% of the grade comes from the WebWork assignments,
- 20% of the grade comes from the Final Exam.

Course grades will be calculated according to the following weighting:

94-100 A; 90-93 A-; 87-89 B+; 83-86 B; 80-82 B-; 77-79 C+; 73-76 C; 70-72 C-; 67-69 D+; 63-66 D; 60-62 D-; below 60 F

**P Exam.** The P Exam is given several times a year. The next opportunity to take it is during the period March 14 - March 25, and the registration deadline is January 30. **Anyone who passes the P exam in March will receive an automatic A for the course. Bring me a copy of your official grade notification as soon as you receive it so that I can change your grade if necessary.** If you are unsuccessful or do not attempt the exam in March, you should register to take it in May (May 15 - May 26). The registration deadline for this sitting is April 3.

**Disability.** Elizabethtown College welcomes otherwise qualified students with disabilities to participate in all of its courses, programs, services, and activities. If you have a documented disability and would like to request accommodations in order to access course material, activities, or requirements, please contact the Director of Disability Services, Lynne Davies, by phone (361-1227) or e-mail [daviesl@etown.edu](mailto:daviesl@etown.edu). If your documentation meets the colleges documentation guidelines, you will be given a letter from Disability Services for each of your professors. Students experiencing certain documented temporary conditions, such as post-concussive symptoms, may also qualify for temporary academic accommodations and adjustments. As early as possible in the semester, set up an appointment to meet with me, the instructor, to discuss the academic adjustments specified in your accommodations letter as they pertain to my class.