

**Coaching Actuaries**  
**VEE Mathematical Statistics Syllabus**  
Updated on 11/27/2018

**To ensure course success, read the syllabus and its instructions completely. Failure to abide by course requirements may result in course failure.**

**Course Instructor & Coaches**

- Mike Carmody, FSA, CFA, MAAA (Instructor)
- Tong Khon Teh, FSA, CFA (Coach)
- Terence Chow, ASA, CFA (Coach)
- Jonathan Lai, M.S. (Coach)

Students can ask questions on the VEE discussion forum or email a coach at [vee\\_stats@coachingactuaries.com](mailto:vee_stats@coachingactuaries.com). A coach will respond to student emails Monday - Friday.

**Course Objectives & Components**

As a prerequisite, knowledge of Exam P topics is expected. The course addresses statistical concepts developed from a probabilistic framework. It introduces methods that aim to provide statistical inference regarding aspects of a population via sampling. These methods include point estimation, interval estimation, and hypothesis testing. Upon successful completion of this course, candidates are eligible for VEE Mathematical Statistics credit.

Due to the 120-day self-paced nature of this course, we must be stringent with our requirements:

- The course begins at the time of purchase and assignments and the final exam must be completed within 120 days, unless a course is put on hold for a \$25 fee (contact [support@coachingactuaries.com](mailto:support@coachingactuaries.com)).
- You are required to complete all assignments before the final exam.
- The final exam must be scheduled and proctored. See “Proctor for Final Exam” below.

**Course Grade Composition**

The course grade is composed of the following:

- 4 graded assignments: 50%
  - Assignment 1: 8% (8 questions)
  - Assignment 2: 15% (10 questions)
  - Assignment 3: 12% (8 questions)
  - Assignment 4: 15% (10 questions)
  - Once you begin an assignment, you will have 24 hours on a timer to complete it (you have the ability to pause and resume the timer as you would like).
  - You have **two attempts** per assignment and the **higher score of the two attempts** will be weighted toward your final grade.
  - For extra practice, you can take each assignment as many times as you like (submissions beyond the second attempt do not count toward your final grade).
- One 2-hour final exam, 20 questions (proctored): 50%

Letter grades are: A: 85 - 100%, B: 75 - 84%. *Students need at least a B to pass the course.*

Coaching Actuaries (CA) emails grade slips to candidates and SOA/CAS on the 1st and 15th of every month. If you pass the course(s), CA will submit your grade and name to the SOA directly. You need to apply for VEE credits online with SOA but you do *NOT* need to send the grade slip to the SOA. To apply for credit visit: <https://www.soa.org/Education/Exam-Req/edu-vee.aspx>.

## Course Structure

- The course is partitioned into suggested weekly units, but you can complete the course at your own pace. For each unit read the online manual, watch the instructional video(s), and complete the assignments. To prepare for the assignments, we recommend solving the examples in the online manual on your own.
- Adapt Exam Engine generates assignments and the final exam, which recreates the CBT testing style of SOA **multiple-choice** exams.

Unit	Topic
1	1.1 Random Sampling 1.2 Sampling Distributions
	<b>Assignment 1 covers Unit 1.</b>
2	2.1 Moment and Percentile Matching Estimations
3	2.2 Maximum Likelihood Estimation
4	2.3 Estimators
	<b>Assignment 2 covers Units 2 to 4.</b>
5	3.1 Confidence Intervals for Means
6	3.2 Confidence Intervals for Other Parameters
	<b>Assignment 3 covers Units 5 to 6.</b>
7	4.1 Intro to Hypothesis Testing
8	4.2 Common Tests
	<b>Assignment 4 covers Units 7 to 8.</b>
	<b>Final Exam covers all units above.</b>

Before the final exam, review all the assignments and watch the corresponding videos or read the corresponding sections of the manual for the topics that you are weak in. *Note: the course does not provide additional practice problems beyond the ones in the assignments.*

## Proctor for Final Exam and Final Exam Details

Schedule your final exam **two weeks** in advance by emailing [proctoring@coachingactuaries.com](mailto:proctoring@coachingactuaries.com).

*You have two options to select a proctor:*

1. CA offers free proctoring services using Zoom technology from **8:30 am - 4:00 pm Central Time** on Mondays-Fridays. State your preferred date and time in your email.
  - Saturday hours are **8:00 am - 12:00 pm Central Time** for a small [\\$25 weekend fee](#).
  - If you need to reschedule, you will be charged a fee of \$25.
2. Schedule the exam **by emailing your proctor's name and email address to [proctoring@coachingactuaries.com](mailto:proctoring@coachingactuaries.com)**. The exam link will be provided to the proctor.
  - A student-chosen proctor must be: *an FSA (in good standing). If an FSA is not available, other acceptable designations would be: FCAS, FCIA, FFA, FIA, FIAA, FSPA, CFA, ASA, ACAS. If no Fellow/Associate is available, a high-ranking member of management who is not able to sit for exams, such as Vice President of Human Resources, or a university professor may also serve. The proctor may not be a relative of the candidate.*

## Exam Procedures:

1. The exam is closed-note. A calculator, writing device, and blank scratch paper are allowed.
2. Prior to the exam your proctor will check:
  - Photo identification with name printed in Latin alphabet letters (passport, driver's license, or identification card)

- Calculator is cleared of memory, scratch paper is blank, workspace is clear of notes/books
  - Do **NOT use Internet Explorer** due to submission errors. Any other browser is fine.
3. Proctor will provide the exam link to student; the exam will generate once link is accessed.
  4. When finished click 'Submit and Score'. Final exam results will be displayed.

If you do not pass the course, your original purchase comes with a one-time Pass Guarantee. You will retake the course assignments and final exam free of charge. Please contact [support@coachingactuaries.com](mailto:support@coachingactuaries.com) for assistance in this process.