The University of Akorn

Department of Statistics – Actuarial Science Program

Becoming an Actuary

Quick Overview

The University of Akron

What does an Actuary Do?

- Underwriter for Various Insurance Company
- Models and Measures Risk, Determines the price of various insurance products.
- Roll are expanding into non-traditional risk managements.

How to become an Actuary

- Bachelor's Degree in AS, Statistics, Math, Finance, etc.
- Passing Exams P and FM will make you very marketable.
  (If you don't you still can find jobs)
- Internships are important
- http://BeAnActuary.com/

SOA – 5 prelim exams to be an Associate

To Become an Associate of SOA	
Exam P – Probability	VEE Economics*
Exam FM – Financial Mathematics	VEE Corporate Finance*
Exam MFE – Models for Financial Economics	VEE Applied Statistics*
Exam MLC – Models for Life Contingencies	FAP e-learning course
Exam C – Construction and Evaluation of Actuarial Models	APC course

* All VEE courses can be taken at UA

SOA – to be Fellow

(Takes 6-10 years to complete after graduation)

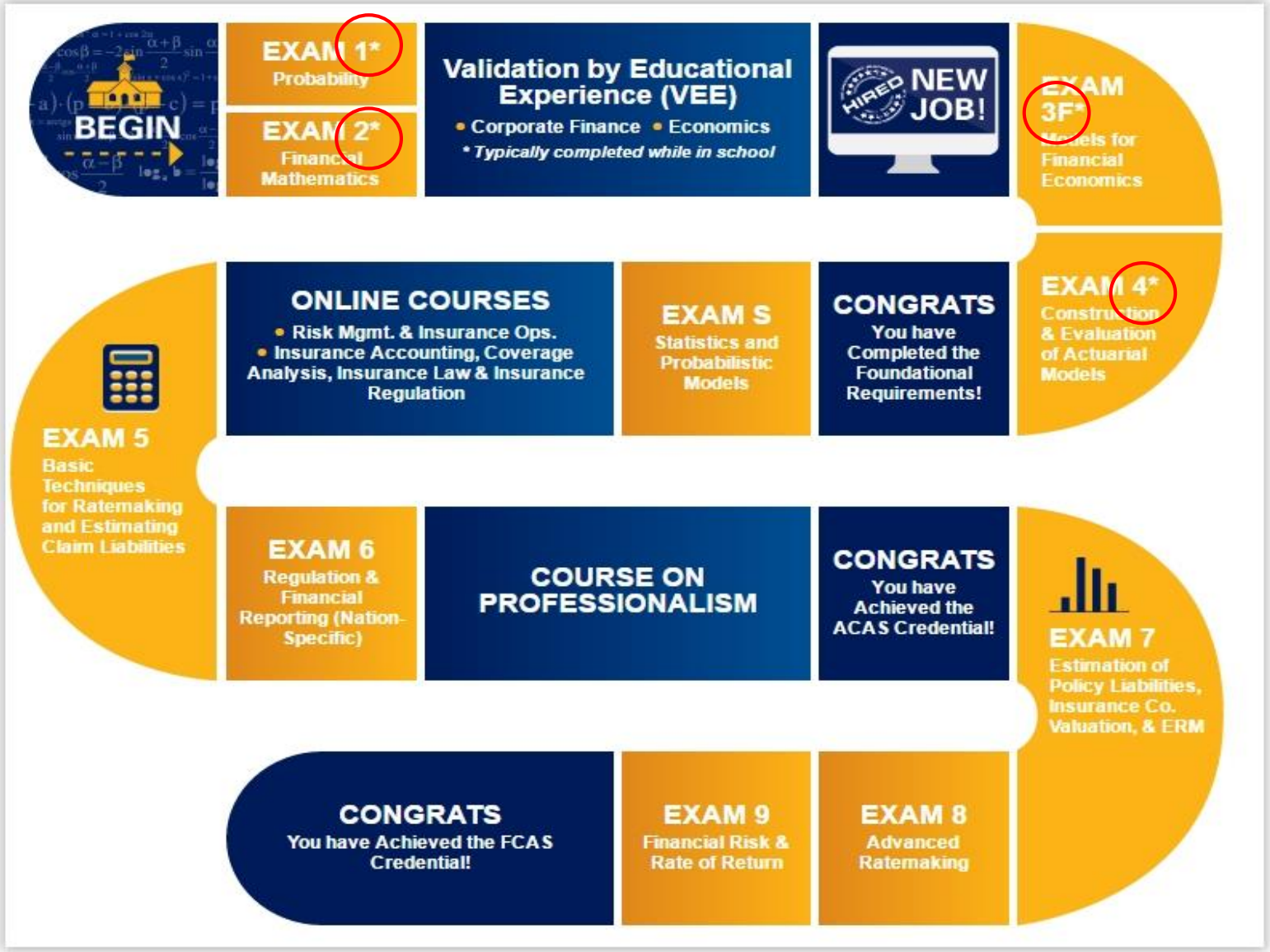
Every track requires

- Decision Making and Communication (DMAC) Module
- Fellowship Admissions Course (FAC)

Corporate Finance and ERM (CFE) Track	Quantitative Finance and Investment (QFI) Track	Individual Life and Annuities Track	Retirement Benefits Track	Group and Health Track	General Insurance Track
Enterprise Risk Management (ERM) Module*	Financial Modeling Module	Regulation & Taxation Module	Social Insurance Module	Financial Economics Module	Introduction to General Insurance Exam
ERM Exam	QFI Core Exam	Life Pricing Exam	Financial Economics Module**	Health Foundations Module or ERM Module*	Introduction to Ratemaking and Reserving Exam
Foundations of CFE Exam	QFI Advanced Exam	Life Finance and Valuation Exam	Funding and Regulation Exam (Canada only)	Group & Health Core Exam	Financial and Regulatory Environment Exam
Financial Reporting Module**	ERM Module*	ERM Module*	Enrolled Actuaries (EA) Exams (U.S. only)	Group & Health Advanced Exam	Financial Economics Module**
Strategic Decision Making Exam	Investment Risk Management Exam **or** ERM Exam	Life Risk Management Exam or ERM Exam	Design and Accounting Exam	Pricing, Reserving & Forecasting Module	ERM Module*
Advanced Topics in CFE Module	Financial Reporting Module***	Financial Economics Module***	ERM Module*	Group & Health Specialty Exam or ERM Exam	Applications of Statistical Techniques Module
			Retirement Plan Investment and Risk Management Exam or ERM Exam		Advanced Topics in General Insurance Exam or ERM Exam

CAS – 7 Prelim Exams to Become an Associate

◯ Same as SOA exam



Difference Between SOA and CAS

- Society of Actuary
  - Generally: Health, Life, Pension
- Casualty Actuarial Society
  - Generally: Property and Casualty
- i.e. Depends on your line of work as an actuary.
- First 4 exams are the same – you don't have to choose for now.

Actuarial Science Program at UA

- BS in Statistics – Actuarial Science Option
- Take as many Statistics course as you can
- Try to pass 2 Exams before the graduation
- Great Job Placement Rates

The University of Akron

Major in Statistics – Actuarial Science Option

- Knowledge of Stats are essential to be a good Actuary

- Gives you more career options later on

Take as many Stats courses as you can!

Typical Graduation Plan

Details at: http://www.uakron.edu/statistics/academics/academics-UG.dot

	Fall	Spring	Summer
Fr. and So.	Economics (244), Accounting (201), Finance (301) Calculus I, II, III and Computer Science (209) Applied Statistics (or Intro Stats I and II)		
Jr.	AS1 – (Exam P) Theo Stats 1 – (Exam FM) (Apply Internship)	AS2 – (Exam C) Theo Stats 2 – (Exam C) (Take Exam P and FM)	[Internship]
Sr.	Regression and ANOVA Stats Electives (Take Exam P and FM)	Time Series Stat Data Management	

VEE requirements

- Completing BS-Stats AS option will automatically fulfill all VEE requirements.
- Economics

- Corporate Finance

- Applied Statistics
  - Regression
  - Time Series

Exam P/1

- Probability
- 451/551 Theoretical Statistics I will cover it
- 3h – 30 multiple choice

Exam FM/2

- Financial Mathematics
- 471 Actuarial Science 1 will cover it
- 3h – 35 multiple choice
- Broverman: Mathematics of Investment 2ed
- McDonald: Derivative Markets 2ed (1-8)

Exam MFE/3

- Models of Financial Economics
- 471 Actuarial Science 1 will cover half of it
- Syllabus change in Summer 2017 – becomes easier
- 3h – 30 Multiple Choice
- McDonald: Derivative Markets 2e (Ch 9-24)

Exam C/4

- Construction and Evaluation of Actuarial Models

- 472 Actuarial Science 2 will cover most of it
- 452 Theoretical Statistics 2 will cover the rest

- 3.5 h – Multiple Choice

- Klugman: Loss Models: From Data to Decisions 3ed

Exam MLC

- Models for Life Contingencies
- 1.5h pen-and-paper exam
- Not honored by CAS.
- Cunningham: Models for Quantifying Risk 5ed

Almni works at places like:

- Key Bank
- Huntington
- Progressive
- Erie Insurance
- Charles Schwab

Core Stats Course Requirements

- 3450:221,2,3 Calc I, II and III
- 3460:209 Computer Science I
- 461 App Stat (or Intro Stats I and II 261/262)
- 451,452 Theoretical Stat I, II
- 462 App Regression and ANOVA (Spring)
- 480 Data Management (Fall)
- 495 Statistical Consulting

AS Option Requirements

- 3250:244 Intro to Econ or (Macro and Micro 201/202)(VEE:econ)
- 6200:201 Accounting Principles I (VEE)
- 6400:301 Principles of Finance (VEE)
- 6400: one of
  - 414 Risk Management: Property,
  - 415 Risk Management: Life,
  - 343 Investments
- 471 Actuarial Science I, II
- 477 Time Series (Spring) (VEE: stats)
- 4xx Stats elective

AS option Course Flow