


 ACTEX Learning & a/s/m

# ACTUARIAL Exam Tactics

**Learn More, Study Less** | **2<sup>nd</sup> Edition**

By Mike Jennings, FSA, CERA  
& Roy Ju, FSA, CERA



Proven tactics for  
achieving exam success  
from the youngest FSA ever.

PLAN

STUDY

PRACTICE

PASS

FELLOWSHIP

For SOA Exam Candidates

**Actuarial Exam Tactics:**  
**Learn More, Study Less**

*Second Edition*

Mike Jennings, FSA, CERA

and

Roy Ju, FSA, CERA

Copyright © 2019, ACTEX Learning, a division of SRBooks Inc.  
All rights reserved. No portion of this book may be reproduced in any form  
or by any means without the prior written permission of the copyright owner.

Request for permission should be addressed to:  
ACTEX Learning  
PO Box 715  
New Hartford CT 06057

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

Cover Design by Jeff Melaragno

Interior Graphics by Kang Quan Heng

ISBN: 978-1-63588-890-4

**Legal Disclaimers:**

The information provided within this book is strictly for informational purposes. While the authors strive to keep the information up-to-date and accurate, there are no representations or warranties, express or implied, about the completeness, accuracy, reliability, suitability or availability with respect to the information, products, services, or related graphics contained in this book for any purpose. Any use of this information is at your own risk. The contents of this book merely portray the opinions and recommendations of the authors.

The methods described within this book are the authors' personal thoughts. They are not intended to be a definitive set of instructions. You may discover there are alternative methods and materials that better serve you to accomplish the same result.

Although the author and publisher have made every effort to ensure the accuracy of this book's information at press time, the author and publisher do not assume and hereby disclaim any liability to any party for any loss, damage, or disruption caused by errors or omissions, whether such errors or omissions result from negligence, accident, or any other cause.



# Table of Contents

Foreword.....	vii
Foreword to the Second Edition .....	ix
Acknowledgments .....	xi
About the Authors .....	xiii
Chapter 1 — Introduction.....	1
Chapter 2 — Overview .....	7
Part I — Effectiveness: How to Pass the Exams.....	9
Chapter 3 — Focus on Fundamental Concepts.....	13
Chapter 4 — Productive Review Sessions .....	31
Part II — Efficiency: How to Study in Less Time.....	39
Chapter 5 — Restructuring Your Study Sessions .....	41
Chapter 6 — Train Your Capacity for Efficiency.....	47
Part III — Adherence .....	57
Chapter 7 — Putting It into Practice: Sample Schedule.....	59
Chapter 8 — Sticking to Your Plan .....	67
Chapter 9 — Conclusion .....	77
Appendix: What to Do If You Fail an Exam.....	81
Recommended Study Materials and Additional Content.....	85
Bibliography.....	87
Notes .....	89



# Foreword

Actuarial exam candidates have an abundance of choices in test-prep manuals that summarize what to study for a particular exam, while providing ample sources for extra practice problems. However, there remains scant literature on the specifics of how to study for actuarial exams in general. This new book by two recently credentialed actuaries of the Society of Actuaries (SOA) provides a detailed overview on both how to maximize one's probability of passing an actuarial exam and how to significantly reduce the prep time required to achieve success.

Roy Ju and Mike Jennings are two of the best students I have had the privilege of teaching during my 8+ years at Drake University. You may have heard of Roy before, as he was recently recognized by the SOA as the youngest Fellow in their history, achieving the FSA designation at the tender age of 20. Michael's perspective, though, is equally valuable, since he mastered Roy's study methods during their time together at Drake and made quick adjustments to become ASA (& CERA) within a year of receiving his undergraduate degree.

Roy and Mike believe that the optimal pathway to passing actuarial exams is to learn successful study methods and to faithfully implement them over time. This text is meant to teach the aspiring actuarial exam candidate about these methods so that the reader will not have to struggle for several exams (or years) before achieving their goals. In the authors' words: "As students begin the actuarial exam process, they are cast into uncharted territory with no tools to help them navigate...one can go through the entire exam process fumbling to reinvent the wheel



regarding which study methods work best.” The primary benefit of this text is to teach students the right way to process the large amount of both quantitative and conceptual information that ultimately appears on actuarial exams.

*Actuarial Exam Tactics: Learn More, Study Less* is organized into three compact sections. Part I focuses on effectiveness, or how to learn the material well enough to pass, while keying in on fundamental concepts and mandatory review sessions. Part II emphasizes efficiency, or how to learn the material at an acceptable level albeit with fewer study hours. Finally, Part III discusses the essential step of how to adhere to the principles learned in Parts I and II in an organized and disciplined manner, while staying current with one’s original study schedule. A very helpful benefit to the reader at the end each chapter is a “Cheat Sheet” summary of chapter highlights, along with a terse summary of the take-home message.

Roy and Mike’s goal in writing this text is to “produce significant growth in the ability to master the exam process (both understanding the material and doing it in a shorter time).” After reading through this exciting perspective on how to foster exam success, I am confident that other readers, especially those at a more junior stage in their actuarial careers, will attain the “significant growth” that Roy and Mike intend. Furthermore, if these readers adhere over time to the same principles that worked for Roy and Mike, they have an excellent opportunity, in the not-too-distant future, to enjoy lucrative professional careers in actuarial science.

Toby A. White, FSA, Ph.D.  
Curriculum Chair for SOA Exam IFM  
Associate Professor of Finance & Actuarial Science  
Drake University, College of Business & Public Administration  
Des Moines, Iowa

## Foreword to the Second Edition

A lot has happened in the two years since we released *Actuarial Exam Tactics*. The book has sold thousands of copies; it has been reviewed in industry magazines; and it has been adopted as a go-to reference by several universities along with the Actuarial Society of South Africa.

Out of all the activities and excitement, our favorite part is interacting with readers. Your success stories of passing exams on the first attempt, spending more time with family, exploring new hobbies, and balancing the workload of a full-time student and actuary are inspirational. The goal of this book is not just to help you pass exams, but to enable you to live a balanced and fulfilled life.

Your curiosity, follow-up questions, and exam success guided this new edition. We added a completely new pillar to our exam approach: Effectiveness, Efficiency, and **Adherence**. Even the best strategy won't work if you don't stick to it, so the Adherence section bridges the gap between reading this book and implementing what you learn.

Thank you for your support and feedback on the first edition. We know that the second edition will get you even closer to achieving a balanced lifestyle and exam success. If you find this book useful, spread the word; don't keep it to yourself. Remember—*Study Smart, Pass Fast, Live Life!*



# Acknowledgments

## Mike

I'd like to thank my wife, Ashley, whose brilliance and compassion are endlessly inspiring, and whose encouragement and support made all of this possible.

I'd also like to thank my mom, who taught me the value of hard work and discipline. Thanks also go to my dad, who taught me the importance of enjoying the journey.

Finally, I'm grateful to my co-author Roy, who consistently motivates me to push the limits of possibility.

## Roy

I am very thankful to all of the students and actuaries who took the time to write me encouraging emails I have received since obtaining my FSA. I am especially thankful to those individuals who prompted me to share my study strategies and specifically write a book to guide aspiring actuaries. Without these supportive emails, this book would never have come about. I also owe a debt of gratitude to my great friend, Mike, who believed in this approach, flourished under it, and encouraged me to share it with the world. Finally, I owe a special thanks to my father for instilling in me a drive to continually think outside of the box.



## About the Authors



Roy Ju, FSA, CERA, is the Co-Founder & CEO of Rethink Studying and works as a Senior Actuary within Life & Annuity business lines. He holds a B.Sc. in Finance and Economics from Drake University. He enjoys playing tennis, soccer, and golf in addition to reading about business strategy, technology trends, financial services, and nutrition research.



Mike Jennings, FSA, CERA, is the Co-Founder & COO of Rethink Studying. He has four years of actuarial experience in a rotational program, working with group disability products and Hong Kong pension products. He holds a B.Sc. in Actuarial Science from Drake University.



# — Chapter 1 —

## Introduction

*“Give me six hours to chop down a tree  
and I will spend the first four sharpening the axe.”*

*—Abraham Lincoln*

### Mike’s Story

What most intrigued me about Roy becoming the youngest FSA was not his age—I figured this was achievable for anyone that started the exams early and wasted away their high school and college careers studying. What really caught my attention was *how* he studied for these exams.

My assumption that Roy spent all his time studying was quickly dismantled when I learned that he was one of the top-ranked tennis players in the state, played trombone at an all-state level, and volunteered 200 hours of his time all while passing his first three exams in high school. How could someone accomplish so much with the same 24 hours per day as me? Was Roy a natural prodigy, a workaholic or was there a method to his madness?

As I was entering my junior year at Drake University, Roy was entering as a freshman, and I was determined to learn about his study approach. We became friends throughout the year, and when I started



asking about studying, I quickly realized his approach was far from traditional. When I asked him how many practice tests he did before taking MLC (now LTAM) that fall, the answer was zero. I was beyond skeptical that his study methods had any use to the average, run-of-the-mill student like myself. I was doing fine with my own study method and having just passed my third preliminary exam that summer, I decided to ignore his study approach and continue along my way.

Shortly thereafter, I entered an exam drought. I failed MLC the next year and felt incredibly discouraged while contemplating the thousands of study hours ahead of me on the path to Fellowship. I was still skeptical of Roy's studying, but I was determined to do my own research into effective study techniques to get back onto a successful exam path. As I researched, I was shocked at the similarities between Roy's seemingly absurd methods and psychological learning principles. Around this same period, I learned of Roy's most impressive exam feat to-date. He passed two FSA exams in one sitting while taking seven university courses, working 25-30 hours per week at an actuarial internship, and serving as the President and Vice President of two campus organizations. I knew it was time for a second conversation with Roy to uncover the details of his approach.

The result of that conversation (and many follow-ups) transformed the way I studied. After almost two years without passing an exam, I entered the most fruitful period of my exam career. In 15 months, I passed my last two preliminary exams, the FAP modules, the FSA modules, and Exam ERM. I was thrilled with the results of this new strategy, but one question still bothered me—**where were these study methods when I started taking the exams?**

As students begin the actuarial exam process, they are cast into uncharted territory with no tools to help them navigate. Sure, there are published study materials outlining *what* to study, but there is no guide on *how* to study. One can go through the entire exam process fumbling to reinvent the wheel on which study methods work best. Far too often, this leads to students settling for a mediocre study approach that worked for them in the past without any deliberate attempts to further improve that approach.

The goal of this book is not to serve as *the* definitive study approach for actuarial exams, but to serve as a compass to point your study efforts in the right direction. You don't have to settle for the conventional rule of 100 hours of study time per exam hour; you will be surprised at how much study time you can eliminate with a deliberate practice of improving your study skills. Ideally, future students will master this approach and push the entire field forward by creating even more effective methods. Before you dive into studying for your next exam, sharpen the axe and make an effort to improve your approach—you will not be disappointed with the results.

## Roy's Story

I began my exam journey in high school, though I did not initially intend to become an actuary. My parents wanted me to become a doctor, and I had strong interest in the high-pressure and challenging nature of surgery. However, every career inventory survey I did suggested “actuary” as my top recommended career, so I started to do some research. I was excited by the prospect of applying mathematical principles in a practical setting, so I started taking the exams and the rest was history.

When I began my first exam, I consulted Google to better understand how people were preparing for these exams. I was amazed when I learned how massive a time commitment these exams seemed to be! The study manuals were much thicker than expected when they arrived. I assumed that manuals of this size contained plenty of redundant information that wouldn't be necessary to pass a 30-question exam. As most of you can imagine, every conversation I had to understand which parts of the manual were most important ended in the realization that standard practice was to read through the entire manual from start to finish; most sources did not hint at prioritizing certain sections or concepts. Instead, most individuals tried their best to power through each manual, page by page. Through all of these searches, I also noted the numerous efforts of those who were in the same boat as me, asking themselves how to go about tackling these exams.

As I went through these exams, I came to learn that the ideal approach is not just following the crowd and trudging through the exam manuals from front to back. While the manuals were very useful resources for these exams, it dawned upon me that the goal should shift from *finishing* the manual to *understanding* the material. As you will find in this book, this seldom requires a linear approach of plowing through the appropriate study manual.

As I reflect upon my exam journey, I can recount numerous circumstances of studying while waiting for my friends to pick me up, studying while watching football, and studying while cooking. As a matter of fact, Sundays were always free days from dedicated study because I am an enthusiastic fantasy football competitor. There is no way that I could stay competitive in my league if I wasn't watching NFL football all Sunday, every Sunday! You will be hard pressed to find

anyone that would advise multitasking while studying, but stick with us, and you will learn about how to incorporate short and effective study sessions into your daily life.

People often ask about what drove me to obtain my FSA at such a young age. My motivation came as a result of enjoying the journey and approaching the exams in a way that worked well with my class/work/life balance. This naturally flows from integrating the actuarial exams into my life in a sustainable and unforced fashion. In the chapters ahead, you will learn more about how I approached the exams from a conceptual basis to put more intuition into actuarial calculations.

On a final note to my friends at Drake and at high school who “never” saw me study—those who wondered how I got anything productive done, given the amount of time I spent hanging out, watching sports, working out, and EATING. And to my parents, who never observed me hiding in the books, I hope that the contents of this book can help you better understand how I balanced exam study with all of my other life commitments.



## — Chapter 2 —

# Overview

By Mike Jennings

How do you define being “good” at passing actuarial exams? The obvious answer is that your exam score indicates your ability, but there is another missing dimension: time spent studying. If you score an eight on your exam with 150 hours of studying, it’s fair to say that you’re a better exam taker than someone who took 500 hours to obtain the same score. Thus, our two main areas of focus to improve exam performance will be effectiveness (learning the material well enough to pass) and efficiency (equal learning with fewer study hours). **Effectiveness is doing the right things; efficiency is doing things right.**

The sequencing of these two objectives is important; there is no sense in becoming more efficient at ineffective learning techniques. If you are trying to learn by hand-copying the textbook, you shouldn’t work on more efficient handwriting; you should start with a more effective method. Although it’s tempting to jump to the Efficiency section to cut down on study time, the best way to save time is by starting with the most effective strategies to learn the material. The basic principles introduced in this book can also be applied to improve your learning of almost *any* subject.

After learning about effective study methods, the Efficiency section will teach you how to implement those techniques in less time. This is how you go from passing with 100 study hours per exam hour to passing with 25-50 study hours per exam hour. These are the techniques that allowed Roy to take two FSA exams in one sitting while balancing a full work and school schedule with a rich personal life.

By working diligently to improve the effectiveness and efficiency of your study approach, you will find it much more manageable to maintain work/life balance throughout the exam process and enjoy yourself along the way.

Of course, none of these study methods will work if you can't implement them. The Adherence section will give examples of how to work these strategies into your study schedule along with advice on how to stick to that schedule.

At the end of each chapter, we include a "Cheat Sheet" to summarize key information. You may choose only a few strategies from this book to implement at a time, so these Cheat Sheets can serve as a quick reference guide when you are looking back for additional techniques to try in the future.