Name:

Fill in your class schedule, any regular work/ministry/exercise/activities, and when you plan to fit your study time in each week. I recommend that you commit to finding time between 7am and 11pm to complete your work and reserve 11pm to 7am as sleeping/bible study/etc. time.

Study times should be at least 45 minutes in length. Identify at least one hour that you will use for cumulative review each week. If you know that you will likely “miss” one of your study sessions each week, plan an extra 2+ hours for study.

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|  | Thursday | Friday | Saturday | Sunday | Monday | Tuesday | Wednesday |
| 7am |  |  |  |  |  |  |  |
| 8am |  |  |  |  |  |  |  |
| 9am |  |  |  |  |  |  |  |
| 10am |  |  |  |  |  |  |  |
| 11am |  |  |  |  |  |  |  |
| Noon |  |  |  |  |  |  |  |
| 1pm |  |  |  |  |  |  |  |
| 2pm |  |  |  |  |  |  |  |
| 3pm |  |  |  |  |  |  |  |
| 4pm |  |  |  |  |  |  |  |
| 5pm |  |  |  |  |  |  |  |
| 6pm |  |  |  |  |  |  |  |
| 7pm |  |  |  |  |  |  |  |
| 8pm |  |  |  |  |  |  |  |
| 9pm |  |  |  |  |  |  |  |
| 10pm |  |  |  |  |  |  |  |

Did you read the SOA Exam FAM syllabus?

Identify your approximate test date:

Identify when you want to be focusing on just practice exams:

Determine how you will assess your progress each week to see if you are on schedule to be ready for your exam:

Complete the following three pages. Evaluate your proposed timeline. Will your current study plan allow you to have enough time to spend on just practice exams prior to your exam date?

Estimate your current % of understanding for each topic. Estimate the number of additional hours you need to invest in the topic to get to A-level understanding. Use the number of additional hours needed to determine a target completion date for each topic.

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| Completion Date: | **1. Topic: Insurance and Reinsurance Coverages (7.5-12.5%)**  |
| **Learning Objectives**  |
| The Candidate will understand the key features of insurance and reinsurance coverages.  |
| **Learning Outcomes**  |
| %hours | The Candidate will be able to: 1. Define and apply the concept of insurable risk.
2. Identify different types of short-term insurance coverage including auto, homeowners, liability, health, disability, and workers compensation.
3. Identify the types of coverage modifications for short-term insurance.
4. Perform calculations assessing the impact of coverage modifications.
5. Perform calculations of the loss elimination ratio and the effect of inflation on losses.
6. Identify the operation of basic forms of proportional and excess of loss reinsurance and understand their impact on reserving and pricing.
7. Determine the allocation of claim amounts paid by the insurer and reinsurer under various forms of reinsurance.
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| Completion Date: | **2. Topic: Severity, Frequency, and Aggregate Models (12.5-15%)**  |
| **Learning Objectives**  |
| The Candidate will understand the characteristics of and uses for commonly used severity, frequency, and aggregate models.  |
| **Learning Outcomes**  |
| %hours | The Candidate will be able to, for severity models: 1. Calculate moments and percentiles.
2. Identify the role of scale and shape parameters in continuous models.
3. Recognize classes of distributions and their relationships.
4. Characterize distributions by existence of moments.

The Candidate will be able to, for frequency models: 1. Identify the role of parameters for the (a,b,0) and (a,b,1) classes of distributions.
2. Recognize the (a,b,0) and (a,b,1) classes of distributions and their relationships.
3. Perform calculations for the (a,b,0) and (a,b,1) classes of distributions.
4. Identify appropriate distributions for a given application.

The Candidate will be able to, for aggregate risk models: 1. Define collective and individual risk models and calculate their mean and variance.
2. Use the log-normal or normal approximation to approximate the aggregate distribution.
3. Calculate probabilities using the convolution method.
4. Calculate the expected payment for stop-loss insurance.

The candidate will be able to: 1. Calculate Value at Risk and Tail Value at Risk.
2. Determine whether a given risk measure has certain desirable properties.
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| Completion Date: | **3. Topic: Parametric and Non-Parametric Estimation (5-10%)**  |
| **Learning Objectives**  |
| The Candidate will understand and be able to estimate parameters for parametric models.  |
| **Learning Outcomes**  |
| %hours | The Candidate will be able to: 1. Estimate the parameters for severity and frequency distributions using Maximum Likelihood Estimation for:
* Complete, individual data
* Complete, grouped data
* Truncated or censored data
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| Completion Date: | **4. Topic: Introduction to Credibility (2.5-5%)**  |
| **Learning Objectives**  |
| The Candidate will understand the concepts of credibility and be able to apply certain types of credibility in some practical settings.  |
| **Learning Outcomes**  |
| %hours | The Candidate will be able to: 1. Understand the concept of credibility.
2. Perform calculations using limited fluctuation (classical) credibility.
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| Completion Date: | **5. Topic: Pricing and Reserving for Short-Term Insurance Coverages (7.5-12.5%)**  |
| **Learning Objectives**  |
| The Candidate will be able to use basic methods to calculate premiums and reserves for short-term insurance coverages.  |
| **Learning Outcomes**  |
| %hours | The Candidate will be able to: 1. Describe and apply techniques for estimating outstanding claims, using the following methods: • Expected Loss Ratio
* Chain-Ladder
* Bornhuetter-Ferguson
1. Understand the objectives of ratemaking and the data used for ratemaking.
2. Calculate the adjustments to ratemaking data, including development, trend and adjusting premium to current rate levels.
3. Understand how expenses and the profit and contingencies loading are used in ratemaking.
4. Calculate overall average rates and rate changes using the loss cost and loss ratio methods.
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| Completion Date: | **6. Topic: Option Pricing Fundamentals (2.5-7.5%)**  |
| **Learning Objectives**  |
| The Candidate will be able to value simple options and derivatives using risk neutral expected present values, under the binomial and Black-Scholes models.  |
| **Learning Outcomes**  |
| %hours | The Candidate will be able to: 1. Identify the cash flows and characteristics of puts and calls.
2. Apply the binomial option pricing model to calculate the price of a simple European-style derivative on a single non-dividend paying asset.
3. Apply the Black-Scholes formula to calculate the price and delta hedge of a simple European- style derivative on a single non-dividend paying asset.
4. Apply put-call parity.
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* Read “How I Passed My Final SOA Exam” by Michael McDermid from *Actuary of the Future* Issue 30, May 2011. (see <https://www.soa.org/globalassets/assets/library/newsletters/actuary-of-the-future/2011/may/afn-2011-iss30-mcdermid.pdf>)
* Read “Finding More Time in a Day” by Mindy Moss (see <https://www.casact.org/newsletter/article/finding-more-time-day-tips-and-tricks-get-those-study-hours>)
* Review *Actuarial Exam Tactics*

Give a detailed, specific summary of how you plan to ensure that your study is both effective and efficient this semester. Consider including comments on time limits, goals for individual sessions, start-up costs, self-imposed pressure, etc.