

FALL 2020 - ACMA 355 D100

(3)

**Class Number: 3729 Delivery Method In Person**

**COURSE TIMES + LOCATION:**

Mo 2:30 PM – 4:20 PM

REMOTE LEARNING, Burnaby

We 2:30 PM – 3:20 PM

REMOTE LEARNING, Burnaby

**INSTRUCTOR:**

Himchan Jeong

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**INSTRUCTOR:**

Himchan Jeong

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**COREQUISITES:**

STAT 330.

## Description

**CALENDAR DESCRIPTION:**

Severity models. Risk measures. Frequency models. Frequency and severity with coverage modifications: deductibles, policy limits, coinsurance, partial retention. Estimation: the method of moments, Maximum Likelihood Estimation. Model selection. Covers part of the syllabus for Exam STAM of the Society of Actuaries. This course is accredited under the University Accreditation Program of the Canadian Institute of Actuaries. Quantitative.

**COURSE DETAILS:**

**Outline:**

This course covers part of the syllabus for the new exam STAM of the SOA. Please refer to the CAS website for the syllabi of their new exams.

This course covers the fundamentals of actuarial loss models. The topics covered correspond to Chapters 3-6, 11-13, and 15 of the required textbook. They include the following

1. Severity models: basic distributional quantities, tail behavior, risk measures, creating new distributions, extreme value distributions.

2. Frequency models: Poisson, negative binomial, binomial distributions,  $(a,b,0)$  class, truncation and modification at zero.

3. Review of mathematical statistics: point estimation, measures of quality, interval estimation, tests of hypotheses.

4. Primary and secondary loss models. 5. Compound distributions. 6. Renewal theory. 7. Risk theory. 8. Credibility theory. 9. Actuarial mathematics. 10. Actuarial mathematics. 11. Actuarial mathematics. 12. Actuarial mathematics. 13. Actuarial mathematics. 14. Actuarial mathematics. 15. Actuarial mathematics. 16. Actuarial mathematics. 17. Actuarial mathematics. 18. Actuarial mathematics. 19. Actuarial mathematics. 20. Actuarial mathematics. 21. Actuarial mathematics. 22. Actuarial mathematics. 23. Actuarial mathematics. 24. Actuarial mathematics. 25. Actuarial mathematics. 26. Actuarial mathematics. 27. Actuarial mathematics. 28. Actuarial mathematics. 29. Actuarial mathematics. 30. Actuarial mathematics. 31. Actuarial mathematics. 32. Actuarial mathematics. 33. Actuarial mathematics. 34. Actuarial mathematics. 35. Actuarial mathematics. 36. Actuarial mathematics. 37. Actuarial mathematics. 38. Actuarial mathematics. 39. Actuarial mathematics. 40. Actuarial mathematics. 41. Actuarial mathematics. 42. Actuarial mathematics. 43. Actuarial mathematics. 44. Actuarial mathematics. 45. Actuarial mathematics. 46. Actuarial mathematics. 47. Actuarial mathematics. 48. Actuarial mathematics. 49. Actuarial mathematics. 50. Actuarial mathematics. 51. Actuarial mathematics. 52. Actuarial mathematics. 53. Actuarial mathematics. 54. Actuarial mathematics. 55. Actuarial mathematics. 56. Actuarial mathematics. 57. Actuarial mathematics. 58. Actuarial mathematics. 59. Actuarial mathematics. 60. Actuarial mathematics. 61. Actuarial mathematics. 62. Actuarial mathematics. 63. Actuarial mathematics. 64. Actuarial mathematics. 65. Actuarial mathematics. 66. Actuarial mathematics. 67. Actuarial mathematics. 68. Actuarial mathematics. 69. Actuarial mathematics. 70. Actuarial mathematics. 71. Actuarial mathematics. 72. Actuarial mathematics. 73. Actuarial mathematics. 74. Actuarial mathematics. 75. Actuarial mathematics. 76. Actuarial mathematics. 77. Actuarial mathematics. 78. Actuarial mathematics. 79. Actuarial mathematics. 80. Actuarial mathematics. 81. Actuarial mathematics. 82. Actuarial mathematics. 83. Actuarial mathematics. 84. Actuarial mathematics. 85. Actuarial mathematics. 86. Actuarial mathematics. 87. Actuarial mathematics. 88. Actuarial mathematics. 89. Actuarial mathematics. 90. Actuarial mathematics. 91. Actuarial mathematics. 92. Actuarial mathematics. 93. Actuarial mathematics. 94. Actuarial mathematics. 95. Actuarial mathematics. 96. Actuarial mathematics. 97. Actuarial mathematics. 98. Actuarial mathematics. 99. Actuarial mathematics. 100. Actuarial mathematics.

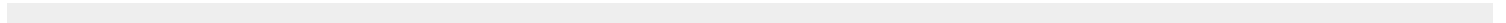
Of ice hours: synchronous

Exams: synchronous; date: TBA

For exams, remote invigilation (proctoring software) will be used and students are strongly encouraged to have access to high-speed internet and webcam.

This course is accredited under the Canadian Institute of Actuaries (CIA) University Accreditation Program (UAP). Achievement of the minimum required grades in accredited courses may provide credit for preliminary exams. Please note that a combination of courses may be required to achieve exam credit. Details of required courses and grades at Simon Fraser University are available here ([https://www.cia-ica.ca/membership/university-accreditation-program-home/accredited-universities/accredited-university-detail?pav\\_universityid=236ca8c4-60e5-e511-80b9-00155d111030](https://www.cia-ica.ca/membership/university-accreditation-program-home/accredited-universities/accredited-university-detail?pav_universityid=236ca8c4-60e5-e511-80b9-00155d111030)).

In addition to the specific university's internal policies on conduct, including academic misconduct, candidates pursuing credits for writing professional examinations shall also be subject to the Code of Conduct and Ethics for Candidates in the CIA Education System and the associated Policy on Conduct and Ethics for Candidates in the CIA Education System. For more information, please visit Obtaining UAP Credits (<https://www.cia-ica.ca/membership/university-accreditation-program-home/information-for-candidates/obtaining-uap-credits>)



**Students with Disabilities:**

Students requiring accommodations as a result of disability must contact the Centre for Accessible Learning 778-782-3112 or [csdo@sfu.ca](mailto:csdo@sfu.ca)

**Tutor Requests:**

Students looking for a Tutor should visit <http://www.stat.sfu.ca/teaching/need-a-tutor-.html>. We accept no responsibility for the consequences of any actions taken related to tutors.

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**REGISTRAR NOTES:****ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS**

SFU's Academic Integrity web site <http://www.sfu.ca/students/academicintegrity.html> is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and resources.