


| | | |
|---|------------------|---|
|  | Course | RMIS/FIN 4338 Financial Decision Making for Risk |
| | Professor | Steven Haynes |
| | Term | Spring 2022 |
| | Meetings | Monday: 10:00 a.m. – 12:45 p.m. January 24 th – May 2, 2022 In-Person Classroom: JSOM 2.902 Online Classroom: Blackboard Collaborate Assignments: eLearning Blackboard |

Course Coordinator's Contact Information

| | |
|--------------------------|---|
| Phone | 972-883-5038 |
| Office Location | JSOM 14. 401 or Virtual Meeting |
| Email | Steven.Haynes@utdallas.edu |
| Office Hours | By Appointment: Mon thru Friday. 8 a.m. to 8 p.m. |
| Other Information | Please email me at the above email address – not via eLearning or LinkedIn. All emails must come from a registered UTD email account. Emails sent from another account -e.g., Hotmail, Yahoo, Gmail, etc. - will not be answered. |

General Course Information

| | |
|-----------------------------|---|
| Pre-or Co-requisites | RMIS/FIN 3370 and FIN 3320 |
| Course Description | Enhanced data-driven decision making is an essential component of a successful organization's risk management and insurance program. This course provides a fundamental understanding of analytical techniques for big data. All business students will benefit from exploring the Internet of Things, data mining techniques, social network analysis, predictive modeling concepts, and the development of a data analytics strategy to help achieve superior business results. |
| Learning Outcomes | <p>At the end of the course, students will be able to:</p> <ul style="list-style-type: none"> • Describe the evolution of big data and technology and its impact on the property/casualty insurance industry • Categorize the various characteristics and sources of big data available for risk management and insurance (RMI) applications • Summarize data quality concepts and basic techniques to improve data quality • Describe data mining and its process, how data science applies to RMI, and the role of the data scientist • Explain how data-driven decision making applies to RMI • Summarize text mining and social network analysis concepts, including neural networks, and their application to RMI • Determine how artificial intelligence, wireless sensor networks, smart products and computer vision can support RMI |

| | |
|---|---|
| | <ul style="list-style-type: none"> Analyze and classify risk; describe the importance of correlation and covariance when analyzing risk; utilize regression analysis to forecast gains or losses Evaluate loss exposures using data credible, relevant, complete, consistent, and organized Distinguish risk control techniques; design processes for desired outcomes designed to reduce frequency or severity of losses and/or increase predictability of losses Associate Key Performance Indicators and critical success factors with risk tolerance within an enterprise risk management framework |
| <p>Required Text</p> | <p><i>Thaler, R.H. & Sunstein, C.R. (2008). Nudge: Improving Decisions About Health, Wealth, and Happiness Penguin Books: New York, NY.</i></p> <p>Or</p> <p><i>Meadows, D.H. (2009) Thinking in Systems: A Primer Chelsea Green Publishing: White River Junction, VT</i></p> |
| <p>Supplemental Resources & Articles</p> | <p>Provided by Professor</p> |
| <p>Calculators/ Computers</p> | <p>Please use whatever electronic device is necessary for you to be successful in this class. However, situations may arise in which you may need to answer a call or text, please do so in a professional manner that minimizes the disturbance to the learning environment. Students will be responsible for any information missed as a result of the circumstance. Professor reserves the right to amend the electronic policy as needed to maximize the learning environment.</p> |
| <p>Class Schedule</p> | <p>Though the class dates are set, the material covered each session remains fluid and may be updated throughout the semester. Please make every effort to attend and actively participate in each class meeting. If low attendance becomes a persistent issue, a more restrictive policy may be put in place. In addition, classes will be held in-person or on BlackBoard Collaborate. Students are expected to sign in before the scheduled class time.</p> <p>This course can be accessed using your UT Dallas NetID account on the eLearning website.</p> <p>Please see the course access and navigation section of the Getting Started with eLearning webpage for more information.</p> |

Course Policies

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---------------|-----|---------------|-----|--------------------|-----|--------------|-----|--------------|-----|---------------|-----|--------------|----|--------------|---|-------------|----|--------------|----|--------------|---|-------------|----|------------|---|
| <p>Course Grade/ Exam Chapters</p> | <p>The course will be graded as follows:</p> <table border="0"> <tr> <td>Concept Paper</td> <td>25%</td> </tr> <tr> <td>Project Topic</td> <td>10%</td> </tr> <tr> <td>Project PowerPoint</td> <td>25%</td> </tr> <tr> <td>Presentation</td> <td>10%</td> </tr> <tr> <td>Final Exam</td> <td>20%</td> </tr> <tr> <td>Participation</td> <td>10%</td> </tr> </table> | Concept Paper | 25% | Project Topic | 10% | Project PowerPoint | 25% | Presentation | 10% | Final Exam | 20% | Participation | 10% | | | | | | | | | | | | | | |
| Concept Paper | 25% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Topic | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project PowerPoint | 25% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Presentation | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Exam | 20% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Participation | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Grading</p> | <p>All grades will be posted on eLearning. UTD's grading policies may be found online at https://catalog.utdallas.edu/2015/graduate/policies/grades. This course will follow the same scale:</p> <table border="0"> <tr> <td>97.1 – 100</td> <td>A+</td> </tr> <tr> <td>93.33 - 97</td> <td>A</td> </tr> <tr> <td>93.32 – 90.0</td> <td>A-</td> </tr> <tr> <td>89.9 – 86.67</td> <td>B+</td> </tr> <tr> <td>86.66 – 83.3</td> <td>B</td> </tr> <tr> <td>83.2 – 80.0</td> <td>B-</td> </tr> <tr> <td>79.9 – 76.67</td> <td>C+</td> </tr> <tr> <td>76.66 – 73.3</td> <td>C</td> </tr> <tr> <td>73.2 – 70.0</td> <td>C-</td> </tr> <tr> <td>69.9 – 67.67</td> <td>D+</td> </tr> <tr> <td>67.66 – 63.3</td> <td>D</td> </tr> <tr> <td>63.2 – 60.0</td> <td>D-</td> </tr> <tr> <td>Below 60.0</td> <td>F</td> </tr> </table> | 97.1 – 100 | A+ | 93.33 - 97 | A | 93.32 – 90.0 | A- | 89.9 – 86.67 | B+ | 86.66 – 83.3 | B | 83.2 – 80.0 | B- | 79.9 – 76.67 | C+ | 76.66 – 73.3 | C | 73.2 – 70.0 | C- | 69.9 – 67.67 | D+ | 67.66 – 63.3 | D | 63.2 – 60.0 | D- | Below 60.0 | F |
| 97.1 – 100 | A+ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 93.33 - 97 | A | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 93.32 – 90.0 | A- | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 89.9 – 86.67 | B+ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 86.66 – 83.3 | B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 83.2 – 80.0 | B- | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 79.9 – 76.67 | C+ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 76.66 – 73.3 | C | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 73.2 – 70.0 | C- | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 69.9 – 67.67 | D+ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 67.66 – 63.3 | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 63.2 – 60.0 | D- | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Below 60.0 | F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Final Grade Calculation</p> | <p>Grades will not be “rounded up”. For example, if you earn a 79.9, your grade is C+. The grades <i>you earn</i> are what are posted.</p> <p>Professor reserves the right to make extra credit opportunities available to the whole class.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Examination Policy</p> | <ul style="list-style-type: none"> • The material covered in class will be weighted most heavily on the exams; however, material in the book and on handout sheets and articles may also be covered on the exams. • Cheating is a violation of the rules and will not be condoned at UT Dallas. The use or attempted use of any internet searches, information shared by others, materials, resources, and/or study aids, etc. during quizzes is cheating. While there may be significant motivating factors to some, to the student with personal honor and integrity, they are not sufficient to | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|--------------------------------|---|
| | <p>jeopardize a higher education investment. https://www.utdallas.edu/conduct/dishonesty/</p> |
| <p>Research Project</p> | <p>The Assignment is due on the date and time stated in eLearning. <u>No late assignments will be accepted</u>, meaning once the assignment closes, I will not accept your assignment (unless you have contacted me prior to the assignment due date and made special arrangements). All homework must be typed and double-spaced in 12 pt. font. Your Assignment should contain the following information in the upper portion of the paper: <i>name, date, course number and section, and homework title</i>.</p> <p>Research Presentation. Organizations are learning to leverage Big Data for driving productivity and helping them reduce the total cost of risk (TCOR). Identify a problem plaguing organizations, hopefully one and explain how this problem is either a systems problem or a data problem. I will provide greater clarity during class on what to look for, but ultimately, the project is about using all the principles taught in class to devise a possible solution. You will give this presentation the last week of class. The visual slide deck will need to be turned into BlackBoard for grading purposes (25% of your total grade). The presentation should be between 10-15 minutes and be prepared to answer a question or two from the class (10% of total grade).</p> |
| <p>Concept Paper</p> | <p>Read <i>Nudge: Improving Decision About Health, Wealth, and Happiness</i> Or Read <i>Thinking in Systems: A Primer</i></p> <p>In a well-researched paper, I expect you to write a 5-7-page paper on how this book shapes your perception and understanding of the world. How should we view complexity or decision-making? This assignment is aimed at making you think deeper on the subjects that ultimately can shape your career progressions. I want you to also look for outside resources (2 or 3) to help guide your argument. I will go over this in class the second week. The rubric is in Blackboard under the Assignments tab. The due date is listed in Blackboard. Late work will not be accepted.</p> |

UTD Policies

Policies and Procedures for Students

The University of Texas at Dallas provides a number of policies and procedures designed to provide students with a safe and supportive learning environment. Brief summaries of the policies and procedures are provided for you at

<http://provost.utdallas.edu/home/syllabus-policies>

and include information about technical support, field trip policies, off-campus activities, student conduct and discipline, academic integrity, copyright infringement, email use, withdrawal from class, student grievance procedures, incomplete grades, access to Disability Services, and religious holy days. You may also seek further information at these websites:

- http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm
- <http://www.utdallas.edu/judicialaffairs/UTDJudicialAffairs-HOPV.html>
- <http://www.utsystem.edu/ogc/intellectualproperty/copypol2.htm>
- <http://www.utdallas.edu/disability/documentation/index.html>

JSOM is a professional school whose mission, in part, is to prepare students for the business community. Therefore, students will present themselves with commonly accepted business manners and appearance. Doing so will add to one's professional points.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity and service in all that I do."

DESCRIPTION OF LECTURES

| Topics | Description |
|--------|---|
| 1 | Classifying and Analyzing Risk |
| 2 | Analyzing Loss Exposures |
| 3 | Risk Control |
| 4 | Analyzing Business Performance |
| 5 | Exploring Big Data Analytics |
| 6 | Text Mining, Social Network Analysis, and Neural Networks |
| 7 | Technology and Smart Products |
| 8 | Underwriting Applications of Big Data Analytics |
| 9 | Claims Applications of Big Data Analytics |
| 10 | Risk Management Applications of Big Data Analytics |

IMPORTANT DATES

| Date | Description |
|----------------------|---|
| Jan 24 th | First Day of Classes |
| Feb 14 th | Project Topic - One Submission with Group Member's Names. |
| Apr 4 th | Concept Paper Due by 11:59 p.m. |
| Apr 25 th | Presentation Slides Due by 11:59 p.m. |
| May 2 nd | Last day of Class! |
| May 11 th | Final Exam Due by 11:59 p.m. |
| | <i>Watch eLearning for added events, news, scholarships and career opportunities!</i> |