liberal arts & professional studies | YORK U

Disaster Risk Management

ADMS/DEMS 3701 – 3 CREDIT HOURS
WINTER 2026

Course Information

Course Instructor: Rebecca Hanson
E-mail: rebhan@yorku.ca
Office Hours & Location:
Telephone/Zoom by appointment

Course Time & Days: Thursdays, 4:00 – 6:50 pm
Class Location: CFA 312
Course eClass site:

Land Acknowledgment

York University recognizes that many Indigenous Nations have longstanding relationships with the territories upon which York University campuses are located that precede the establishment of York University. York University acknowledges its presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, and the Huron-Wendat. It is now home to many First Nation, Inuit, and Métis communities. We acknowledge the current treaty holders, the Mississaugas of the Credit First Nation. This territory is subject of the Dish with One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region (LA&PS Land Acknowledgement).

Course Overview

Course Description

Academic calendar description: Practical analysis of the risk management process and the specific tools and methods used to address the risks facing organizations, institutions, and communities.

Expanded course description: Emergency and disaster risk planning processes must include an understanding of disaster risk management (DRM) components and building resilience. This course will focus on the fundamentals of disaster risk management, including concepts related to disaster risk, hazard identification, assessing and analyzing risk, the varying ways risk is perceived, strategies for managing, mitigating

and preventing risk, and recovering from and reducing disaster risk. Theory will be used to explain these different aspects of disaster risk management and case studies will be used to bridge theory with the concepts taught.

Pre-Requisites: N/A
Course Credit Exclusions (CCE): N/A

Course Learning Objectives

By the end of this course, students will be able to:

1. Describe the relationship between hazard exposure, risk, vulnerability, risk reduction, and resilience;
2. Outline the risk management process;
3. Evaluate disaster risk using quantitative and qualitative methods;
4. Analyze risk management options, including various forms of risk control;
5. Recognize the unintended consequences of disaster risk management decisions;
6. Understand how risk is socially constructed; and
7. Conclude that successful disaster risk management requires a holistic and equity-centred approach

Course Organization

The structure of this course consists of **in-person instruction**. Each class will include a combination of lectures and group activities. Class discussions and group activities are key to learning and understanding of the material. Recent disaster case studies will be used to enhance comprehension of theoretical concepts and add practical relevance to what is being taught.

This course incorporates the following teaching methods and use of technology:

- **eClass site** – This course has a page on eClass. All students who register for the course should be able to access the course page using their York Passport IDs and Passwords.
- **In-person lectures** – Lectures will serve to enrich, clarify, and illustrate critical content in assigned readings.
- **Open discussion during lectures** – Stimulating group discussions will serve to enhance student ability to articulate and defend positions and to consider different points of view.
- **Individual & Group work** – activities and assignments will be conducted individually as well as in groups of varying sizes in order to enhance student retention and encourage the development of teamwork skills.

We will have **12 sessions** throughout the term. The first session is scheduled for **Thursday January 8 at 4:00 pm ET**. *Students are expected to come to lectures having completed the relevant readings.*

Instructor Office Hours and Communication Guidelines

The Course Director will be available for in-person, telephone, or Zoom meetings by appointment as arranged by email. Students may also ask questions via email. Contact the Course Director at rebhan@yorku.ca. Please ensure that emails are worded professionally **and include the course number (DEMS3701) in the subject line.** Emails will be answered within 48 hours.

Required Course Materials

There are a number of readings assigned throughout the course. All readings will be accessible on our eClass page. There are no expected costs for you to access required course materials.

Technical Requirements

Several platforms will be used in this course (e.g., eClass, Zoom, etc.) where students will interact with the course materials, the course director/TA, as well as with each other.

Here are some useful links for computing information, resources, and help:

- Student Guide to eClass
- Zoom@YorkU Best Practices
- Zoom@YorkU User Reference Guide
- eLearning Getting Started (LA&PS eServices)
- Student Guide to Remote and Online Learning

To determine Internet connection and speed, there are online tests, such as Speedtest, that can be run. If you need technical assistance, please consult the University Information Technology (UIT) Student Services web page or write to askit@yorku.ca.

Course Evaluations

Course Evaluation Chart

Assessment		Due Date		Weight %	Learning Outcome
Attendance - 10 x 1.5%; drop lowest 1 of 11		Throughout		15%	1-7
AI in DEM	Original Post on eClass	Jan. 22	Week 3	10%	n/a
	Peer Post on eClass	Feb. 4	Week 4		
Quizzes – In-class, multiple choice and short answer Q1 – Weeks 1-3 Q2 – Weeks 4-7 Q3 – Weeks 8-11		Jan. 29	Week 4	15%	1, 2, 3
		Mar. 5	Week 8	15%	3, 6
		Apr. 2	Week 12	15%	4, 5, 6, 7
Major Assignment		Mar. 26	Week 11	30%	3, 4, 5
				100%	

Assessment Descriptions

In-person attendance and participation – 15%

In-person attendance during class is strongly encouraged. Students' attendance **and participation** during class will be recorded across 11 sessions (Weeks 2-12). There will be no opportunity to make up the attendance grade. Each week is worth 1.5% and the lowest 1 grade across the 11 sessions will be dropped. In other words, students can miss up to 1 session during Weeks 2-12.

Artificial Intelligence (AI) in Disaster and Emergency Management (DEM) – 10%

The use of artificial intelligence (AI) has increased in all sectors – DEM being no exception. However, errors and misunderstandings abound in generative AI as the output is only as good as the information that is input into systems. Human-centred AI is increasingly being used to accelerate processes and assist in producing higher

quality written materials. Students **must** understand DEM concepts to be able to identify issues with AI-generated outputs and use suitable AI prompts.

For this assignment, students will formulate a disaster risk management research question and enter it in the AI system of their choosing (e.g., ChatGPT or CoPilot) instructing the AI system to provide a written output of 250 words with in-text citations and references. Students will assess the quality of the AI-generated answer in a 250 word (+/- 50 words) short essay. The quality and accuracy of the AI-generated answer and the appropriateness of the references used should be considered in the essay. Students should complete separate research to substantiate their findings (either contradicting or supporting the AI-generated answer) and include a reference list for the sources. Post your research question, the AI-generated answer, and your short essay in the discussion forum on eClass by end of day **January 22nd**.

Students should read and comment on at least one other student post – provide constructive commentary (100-150 words) on the student's short essay or any issues with the generated AI output that has not been discussed. Independent research may be used to support commentary. Responses to student posts are due in the discussion forum on eClass by end of day on **February 5th.**

This is a critical thinking assignment. I will evaluate your essay and peer reply based on your critique of the AI-generated content and how well you supported your positions. The writing, syntax, and conformity with APA (7th edition) will be assessed in your essay and peer reply.

Note:
**** Uses of generative artificial intelligence (AI) in this course is prohibited except as described in the AI in DEM assignment.***
****Unless a student receives formal accommodation for illness through Academic Counselling, late submissions will be penalized at the rate of 5%/day late for up to a total of 5 days (including weekends) following the due date. Late submissions will not be accepted after 5 days.***

*Quizzes + Short-Answer - *In-class Assessments*– 45%*
Three (3) times throughout the term, students will complete in-person assessments that combine 15 multiple choice questions plus 2 short answer questions. Each quiz + short answer assessment is worth 15% of students' final grade. Quizzes will be closed-booked and non-cumulative.
The quiz and short answer assessments will be held in the first hour of in-person sessions during Week 4 (January 29th), Week 8 (March 5th), and Week 12 (April 2nd).

Unless a student has formal accommodation in place and/or communicates in advance of the quiz date an illness or exceptional circumstance, there will be no opportunity to make up the quiz grades.

Major Assignment – 30% (partner project)
Students in this course will complete one (1) major assignment that includes a hazard profile, risk assessment, and a potential risk control option. More information on the Major Assignment will be shared in class.

Students will be encouraged to *select a partner early in the course* and begin working on the assignment early/well before the due date. Information relevant for completing the hazard profile is included in Week 3 of the course. Information relevant for completing the risk assessment portion of the assignment is included in Weeks 5 and 6 of the course. And information related to risk control is included in Week 9. This means that students can begin working on the major assignment as early as Week 3.

The major assignment is to be submitted as a word document through an Assignment portal on eClass. The major assignment is worth 30% of students' final grade and is due end of day of the Week 11 class (March 26th).

Note:
**** Uses of generative artificial intelligence (AI) in this course is prohibited except as outlined in the AI in DEM assignment.***
Unless a student receives formal accommodation for illness through Academic Counselling, late submissions for each component of the Major Assignment will be penalized at the rate of 5%/day late for up to a total of 5 days (including weekends)

How to Use Citations in this Course

Good citation practices are important because they support academic integrity by linking information back to an identifiable source. This course will require students to use APA (version 7) style formatting for citations and references for all Assignments.

Students must attribute information to original sources using in text citations and properly formatted entries in the reference list. Directly quoted information must be properly formatted and cited; yet should be used sparingly and where it is essential that the author's original words be precisely conveyed.

Sources of information should be evaluated for credibility and reliability. Online sources may be used if they meet the standards for academic writing. Open-edit weblog or unattributed websites (i.e., Wikipedia) should not be used.

Resources to help with citations:

- I need to cite and reference, Learning Commons
- Drop-in Research Support, YorkU Libraries
- Writing Centre
- SPARK Student Papers & Academic Research Kit

ADDITIONAL INFORMATION

- Topics related to disaster and emergency management may be upsetting for some individuals due to the nature of the subject matter and depictions of human suffering, anti-social behaviours, and the consequences of extreme events. Contact the course director if you have any concerns.
- Written assignments will be graded primarily on content, but will also consider the technical quality of the writing. All written assignments should be carefully proofread for spelling, grammar, and syntax.
- Course announcements will be made via eClass when required.
- If class is cancelled for emergency reasons (e.g., inclement weather) York University's cancellation schedule will be followed. In the unlikely event the course director determines it is necessary to cancel class, a posting will be made to eClass, and a course announcement will be sent to registered students. Whenever possible, four hours advance notice will be provided; nevertheless, if the course instructor is not present in the classroom within 20 minutes of the start time, students may infer that the class has been cancelled due to emergency reasons.
- Due to privacy reasons of the course instructor and students, audio or video recording of class activities and photography of people in the classroom is prohibited.

Grading

The grading scheme for this course conforms to the 9-point system used in undergraduate programs at York University. For a full description of the York grading system, visit the York University Academic Calendar.

Grade	Grade Point	Percent Range	Description
A+	9	90-100	Exceptional
A	8	80-89	Excellent

Grade	Grade Point	Percent Range	Description
B+	7	75-79	Very Good
B	6	70-74	Good
C+	5	65-69	Competent
C	4	60-64	Fairly Competent
D+	3	55-59	Passing
D	2	50-54	Marginally Passing
E	1	40-49	Marginally Failing
F	0	0-39	Failing

Course Schedule

Important Dates

Explore the York University Academic Calendar to find a list of important dates, such as class start/end dates, drop deadlines, holidays and more.

Weekly Course Schedule (Interim – Readings to follow)

Week	Date	Topics	Required Readings	In Class Activities & Deadlines
1	Jan. 8	**Course Introduction** **Framing disaster risk management**	Course Syllabus	TBD
2	Jan. 15	**Disaster Risk Management Process** **Relationship to Disaster and Emergency Management** **Hazard Identification**	TBD & posted on eClass	TBD
3	Jan. 22	**Hazard Analysis**		AI in DEM Post on eClass due 10% (inclusive of reply post)

Week	Date	Topics	Required Readings	In Class Activities & Deadlines
		- Community profiles: human systems, economic assets, natural resources **Hazard Modelling** - Nature and types, examples, assessing models **Hazard Profiles**		Students can begin choosing partner for Major Assignment (30% total)
4	Jan. 29	**Vulnerability and Resilience** - Identifying, Measuring and Analysis - Models		Quiz #1 (weeks 1-3) 15% Introduce Hazard Profile portion of Major Assignment
5	Feb. 5	**Risk Analysis** - Process, quant/qual approaches, likelihood and consequences, historical data - Uncertainty – types and how it is visualized - Risk Assessments and visualizations in different hazard contexts: atmospheric, geomagnetic, seismic, wildfire, hydrologic		AI in DEM student reply post on eClass due 10% (inclusive of original post)

Week	Date	Topics	Required Readings	In Class Activities & Deadlines
6	Feb. 12	**Risk Assessment** - Quantitative Risk Assessment - Qualitative Risk Assessment		Introduce Risk Assessment portion of the Major Assignment (30% total)
7	Feb. 26	**Risk Models** - PAR Model - Community Perceptions Model - Protective Action Decision Model		TBD
8	Mar. 5	**Social Construction of Risk and Risk Perception** - Social Amplification of Risk		Quiz #2 (weeks 4-7) 15%
9	Mar. 12	**Managing Risk** - Identifying and Explaining Risk Control in the Disaster Context		Introduce Risk Control portion of the Major Assignment (30% total)

Week	Date	Topics	Required Readings	In Class Activities & Deadlines
		- Strategies, types, implications of risk control decisions **Risk Control** - Retreat		
10	Mar. 19	**Managing Risk – Response** 1. Identify the various activities that take place during disaster response 2. Explain the value of social relations in effectively responding to disaster risk 3. Planning for response		TBD
11	Mar. 26	**Recovering from Disaster** - Social Dimensions of Recovery		Major Assignment due 30%
12	Apr. 2	**Planning for Hazard & Disaster Resilience** **Course Wrap-Up**		Quiz #3 (weeks 8-11) 15%

Course Policies

Please review the course policies in this section. All students are expected to familiarize themselves with the following information:

- Student Rights & Responsibilities
- Academic Accommodation for Students with Disabilities

Academic Integrity

Academic integrity is a fundamental and important value of York University. To maintain a fair and honest learning environment, you are responsible for understanding and upholding academic integrity in all courses and academic activities. You are encouraged to connect with reliable on-campus resources that support your coursework and academic honesty. To better understand the serious consequences of breaching academic honesty policies, familiarize yourself with the *Senate Policy on Academic Conduct*. You can learn more about upholding academic integrity in your courses by exploring SPARK: Academic Integrity Module, LA&PS Academic Honesty and Academic Integrity for Students.

Generative Artificial Intelligence (GenAI)

Students are not permitted to use generative artificial intelligence (AI) in this course. Submitting any work created (in whole or part) through the use of generative AI tools will be considered a violation of York University's *Senate Policy on Academic Conduct*. Using AI apps such as ChatGPT, GPT-3, DALL-E, translation software among others to complete academic work **without your instructor's knowledge or permission**, is considered to be a breach of academic honesty. For more information, please review AI Technology & Academic Integrity: Information for Students.

If you're not sure whether using an AI app for your academic work is acceptable, it is recommended that you:

- Carefully review the guidelines for your assessments
- Check for any messages from your instructor on eClass
- Ask your instructor or TA if they are permitting the use of these tools

Turnitin

To promote academic integrity in this course, students will normally be required to submit their written assignments to Turnitin (via the course's eClass site) for a review of textual similarities and the detection of possible plagiarism. In so doing, students

will allow their material to be included as source documents in the Turnitin.com reference database, where they will be used only for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin service are described on the Turnitin.com website. York students may opt out of using Turnitin. If you wish to opt out, you should contact your instructor as soon as possible.

Accessibility

York University is committed to creating a learning environment which provides equal opportunity to all members of its community. If you anticipate or experience any barriers to learning in this course, please discuss your concerns with your instructor as early as possible. For students with disabilities, contact Student Accessibility Services to coordinate academic accommodations and services. Accommodations will be communicated to Course Directors through a Letter of Accommodation (LOA). Accommodations for tests/exams normally require three (3) weeks (or 21 days) before the scheduled test/exam to arrange.

Religious Observance Accommodation

York University is committed to respecting the religious beliefs and practices of all members of the community and making reasonable and appropriate accommodations to adherents for observances of days of religious significance. Should any of the dates specified in this syllabus for course assignments, tests, or deadlines conflict with a date of religious significance, please contact the instructor not less than two (2) weeks (or 14 days) prior to the date for which accommodation is sought. If the requested accommodation is for an exam or falls within the formal examination periods, you must complete and submit a Religious Accommodation Agreement at least three (3) weeks (or 21 days) before the start of the exam period.

Intellectual Property

Course materials are designed for use as part of this particular course at York University and are the intellectual property of the instructor unless otherwise stated. Third-party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian copyright law. Students may not publish, post on an Internet site, sell, or otherwise distribute any course materials or work without the instructor's express permission. Course materials should only be used by students enrolled in this course.

Copying this material for distribution (e.g., uploading material to a commercial third-party website) may lead to a charge of misconduct according to York's *Code of Student Rights and Responsibilities*, the *Senate Policy on Academic Conduct*, and/or legal consequences for copyright violations.

Student Support and Resources

York University offers a wide range of student supports resources and services, including everything from writing workshops and peer mentorship to wellness support and career guidance. Explore the links below to access these on-campus resources:

- Academic Advising is available to provide students support and guidance in making academic decisions and goals.
- Student Accessibility Services are available for support and accessibility accommodation when required.
- Student Counselling, Health & Wellbeing offers workshops, resources, and counselling to support your academic success.
- Peer-Assisted Study Sessions (PASS) Program provides student study sessions for students to collaborate and enhance their understanding of course content in certain courses.
- Student Numeracy Assistance Centre at Keele (SNACK) supports students in courses involving math, stats, and Excel.
- The Writing Centre provides multiple avenues of writing-based support including drop-in sessions, one-to-one appointments, a Multilingual Studio, and an Accessibility Specialist.
- Centre for Indigenous Student Services offers a community space with academic, spiritual, cultural, and physical support, including writing and learning skills programs.
- ESL Open Learning Centre (OLC) supports students with building proficiency in reading, writing, and speaking English.
- Learning Skills Services provides tips for time management, effective study and learning habits, keeping up with coursework, and other learning-related supports.
- Learning Commons provides links to supports for time management, writing, study skills, preparing for exams, and other learning-related resources.
- Roadmap to Student Success provides students with timely and targeted resources to help them achieve academic, personal, and professional success.
- Office of Student Community Relations (OSCR) is responsible for administering the *Code of Student Rights & Responsibilities* and provides critical incident support.

- Peer Mentorship helps students transition through their first year by connecting them with upper-year students. The mentors can help find supports and resources. They also lead a community hub on campus.
- goSAFE is staffed by York students and can accompany York community members to and from any on-campus location, such as the Village Shuttle pick-up hub, parking lots, bus stops, or residences.

For a full list of academic, wellness, and campus resources visit Student Support & Resources.