# Disaster and Logistics

**AP/DEMS 4704 3.0**

**Winter 2025**

## Course Information

Course Instructor: David DeVries

E-mail: davidd11@yorku.ca

Phone:

Office Hours & Location: By appointment

Course Time & Days: 19:00 Thursdays

Class Location: Keele Campus SLH 107

Course eClass site:

## Course Overview

### Course Description

This course explores the science and principles of logistics from both private and non-profit sector models, as it applies to the field of disaster management, with the goal of helping academics and professionals develop knowledge and expertise in this area. The course focuses on presenting cases and developing quantitative models in the area of humanitarian logistics in both international and North American scenarios.

### Course Learning Objectives

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

* Understand principles of logistics and apply them to disaster situations
* Understand main modes of delivery of logistics support and plan on most effective means in disaster situations
* Understand critical infrastructure required to support logistics operations
* Understand requirements when conducting a reconnaissance of disaster areas
* Create logistics requirements to address disaster relief requirements
* Perform critical analysis of a situation to determine best means of supporting the disaster response

### Course Format and Organization

* This course is run as a lecture followed by practical application.
* The first half of each class focuses on delivery of theory for the lesson plan
* It is followed by in-class application and collaborative work

### Technical Requirements

Several platforms will be used in this course (e.g., eClass, Zoom, etc.) through which students will interact with the course materials, the course director/TA, as well as with one another.

### Using Zoom

Zoom will be used only if in -class lectures are not possible. Students shall note the following:

* Zoom is hosted on servers in the United States and Canada. Recordings done since May 1, 2022 are stored in Canada. For more information, please refer to the notes on [Zoom Privacy and Security](https://infosec.yorku.ca/zoom-privacy-and-security/) provided by Information Security at York.
* If you have privacy concerns about your data, provide only your first name or a nickname when you join a session.
* The system is configured in a way that all participants are automatically notified when a session is being recorded. In other words, a session cannot be recorded without you knowing about it.

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

* [Student Guide to eClass](https://lthelp.yorku.ca/student-guide-to-moodle)
* [Zoom@YorkU Best Practices](https://staff.computing.yorku.ca/wp-content/uploads/sites/3/2020/03/Zoom@YorkU-Best-Practicesv2.pdf)
* [Zoom@YorkU User Reference Guide](http://staff.computing.yorku.ca/wp-content/uploads/sites/3/2012/02/Zoom@YorkU-User-Reference-Guide.pdf)
* [University Information Technology (UIT) Student Services](https://student.computing.yorku.ca/)
* [Student Guide to eLearning at York University](http://elearning-guide.apps01.yorku.ca/)

To determine Internet connection and speed, there are online tests, such as [Speedtest](https://www.speedtest.net/), that can be run. If you need technical assistance, please consult the [University Information Technology (UIT) Student Services](https://www.yorku.ca/uit/student-services/) web page. For more specific assistance, please write to [askit@yorku.ca](mailto:askit@yorku.ca).

### Course Communication Plan and Office Hours

* Course announcements will be made in both the lecture and via eClass
* Individual notices will be made by email to the registered mail on file
* Lectures are intended to be interactive. We learn better by sharing questions and experiences. Students can also post questions in the Forum in eClass
* Students will be assigned group deliverables. Students can select how this wish to communicate with each other. All students are expected to participate in group work.
* I am available by appointment, through email. I will arrange with the requesting student the best location to meet on campus.

### Course Expectations

* Learning is best achieved through a cooperative effort. Students are asked to share their own experiences and to be considerate of other students sharing their experiences
* Students are expected to be fully engaged in group assignments

### Course Evaluation

|  |  |  |  |
| --- | --- | --- | --- |
| Assessment | Due Date | Weight % | Course Learning Outcome |
| Participation in class discussion and weekly posts | Participation is by class. Weekly posts are due Wednesday at midnight prior to the next class. | 10 | Application of logistics principles and techniques and critical assessment |
| Group Assignment Outline | 13 February 2025 | 10 | Plan logistic response to an emergency |
| Mid-term Exam | 27 February 2025 | 20 | Confirmation of learning |
| Individual case study – 3,500 word essay | 15 March 2025 | 35 | Critical assessment of the logistics response to a crisis. Emphasis must be on the logistics element of the response and not on the overall crisis situation. |
| Group Presentation of their plan to respond to an emergency | 4 April 2025 | 25 |  |
|  |  | **100%** |  |

### Submitting Assignments

Assignments for this course must be received within the timeframe specified for the assignment and are to be handed in as specified for each assignment:

* Weekly posts will be submitted in the Forum section of E- Class
* Group assignments will be emailed to the professor
* Individual Case-Studies will be submitted via Turnitin

### Late Work Policy

Late coursework will be subject to a grade penalty of 10% per day. I expect students to approach me at last 2 weeks in advance if they cannot meet an assignment deadline with substantiation of why they require a modified assignment date. There is no extension possible for the Group Presentations.

### Missed Exams

Students who will miss an exam should reach out to me at the earliest opportunity to reschedule the exam.

### 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](https://calendars.students.yorku.ca/2022-2023/grades-and-grading-schemes).

|  |  |  |  |
| --- | --- | --- | --- |
| GRADE | GRADE POINT | PERCENT RANGE | DESCRIPTION |
| A+ | 9 | 90-100 | Exceptional |
| A | 8 | 80-89 | Excellent |
| 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 | (marginally below 50%) | Marginally Failing |
| F | 0 | (below 50%) | Failing |

### How to Use Citations

Citation practices are to be used throughout this course. Citations support academic integrity by linking information back to an identifiable source. Individual knowledge that a student has experienced themselves or opinions you have formed yourself do not require citation. All other information, including that used to form an opinion must be cited. If actual work is quoted, it must be cited as such:

* [Chicago Style Overview](https://researchguides.library.yorku.ca/c.php?g=679413&p=5163379), YorkU Libraries
* [APA Style Overview](https://researchguides.library.yorku.ca/c.php?g=679413&p=5163379), YorkU Libraries

## Course Schedule: Weekly Readings and Activities

### Required Course Materials

### There is no text for this course. Readings are provided for each Topic

### Articles may be added or substituted prior to the start of the course. Additional articles will be provided on E-Class. All articles are accessible either on-line or via the York Library Portal

### Course Schedule

|  |  |  |
| --- | --- | --- |
| Week/Module Dates | Topic and Readings | Notes |
| Week 1  Date - 9 Jan | Introduction to Logistics – Examine concepts and applications of logistics on a broader perspective.  Readings: Larson, Paul D, (2018), Process Improvement: a matter of life or death for non-governmental organizations, Humanitarian Logistics: Meeting the Challenge of Preparing For and Responding to Disasters, 3rd Edition, Kogan Page, London U.K. 2018, Chapter 1, PP 19-40 | Assignment of Case Study - due in week 9 |
| Week 2  Date – 16 Jan | Requirements of the impacted community – humanitarian requirements outside of the North American / European Sphere – use examples based on covered case studies and UN missions e.g. Haiti, Philippines – Quantitative assessments of requirements for large groups  Readings: Alain Mourey (2008) Nutrition Manual For Humanitarian Action, International Committee of the Red Cross, Geneva, August 2008, Chapter XII  Altay, Nezih & Prasad, Sameer & Sounderpandian, Jayavel. (2009). Strategic planning for disaster relief logistics: Lessons from supply chain management. International Journal of Services Sciences - Int J Serv Sci. 2. PP 142-161 10.1504/IJSSCI.2009.024937. | Selection of teams for Group Assignment |
| Week 3  Date – 23 Jan | Requirements of the impacted community - humanitarian requirements inside the North American / European Sphere – use examples based on case studies / experience – quantitative assessments of requirements for large groups  Readings: Florida Division of Emergency Management (2019) Hurricane Michael After Action Report and Improvement Plan, January 2019, https://portal.floridadisaster.org/SERT/AfterActionReports/Real-World%20AARs/Hurricane%20Michael%20AAR-IP%201-7-19.pdf  KPMG, (2017), May 2016 Wood Buffalo Wildfire Post-Incident Assessment Report, Final Report, May 2017, PP 63-66 |  |
| Week 4  Date – 30 Jan | Flow of logistics, planning considerations, evacuations, understanding partners in disaster response. Transportation considerations for responders to an emergency, ensuring effective flow of materials leveraging most efficient means - Quantitative assessments on material and transport requirements  Readings: Joshua Michaud, Kellie Moss, Derek Licina, Ron Waldman, Adam Kamradt-Scott, Maureen Bartee, Matthew Lim, Jamie Williamson, Frederick Burkle, Christina S Polyak, Nicholas Thomson, David L Heymann, Louis Lillywhite (2019). Militaries and global health: peace, conflict, and disaster response. The Lancet, Vol 393, January 2019 https://journals-scholarsportal-info.ezproxy.library.yorku.ca/pdf/01406736/v393i10168/276\_maghpcadr.xml  Marianne Jahre and Martine Jahre (2018) Logistics Preparedness and Response: A case of Strategic Change Decision-Making in Humanitarian Operations : Strategy, Behavior and Dynamics, edited by Sebastián Villa, et al., Springer International Publishing AG, 2018. ProQuest Ebook Central, Chapter 1 https://ebookcentral.proquest.com/lib/york/detail.action?docID=5606735. |  |
| Week 5  Date – 6 Feb | Understanding critical infrastructure, water, electricity, medical for the impacted population and the logistical reconnaissance – time spent in advance to ensure that success follows. Key issues that should be identified based on critical infrastructure.  United Nations University (2016), World Risk Report 2016, Bündnis Entwicklung Hilft and UNU-EHS, Berlin, August 2016. | Team Presentation outlines due |
| Week 6  Date – 13 Feb | Being prepared for disasters – predictable events vs no notice events – setting conditions for success – planning factors logistics and operations, security of logistics facilities. Quantitative assessment of staging and movement  Readings: Sivadass Thiruchelvam & Mohd Fauzi Ismail & Azrul Ghazali & Kamal Nasharuddin Mustapha & Fatin Faiqah Norkhair & Nora Yahya & Abdul Aziz Mat Isa & Zakaria Che Muda, 2018. "Development of Humanitarian Supply Chain Performance Conceptual Framework in Creating Resilient Logistics Network," Malaysian Journal of Geosciences (MJG), Zibeline International Publishing, vol. 2(1), pages 30-33, January.  Y. Jiang, Y. Yuan, K. Huang and L. Zhao, "Logistics for Large-Scale Disaster Response: Achievements and Challenges," 2012 45th Hawaii International Conference on System Sciences, Maui, HI, 2012, pp. 1277-1285.  doi: 10.1109/HICSS.2012.418 |  |
| Date – 20 Feb | Reading Week |  |
| Week 7  Date – 27 Feb | Midterm Review |  |
| Week 8  Date – 6 Mar | Case Study – Emergency Response. Build out a framework of a response to either a historical or emergent disaster |  |
| Week 9  Date – 13 Mar | Potential Guest Speaker / Essay preparation time | Individual Case Studies due by midnight on 15 March 2024 |
| Week 10  Date -20 Mar | Responding to disasters – 1st responders, reinforcements, need for self-sufficiency ongoing sustainment – planning considerations to avoid drawing resources from impacted community  Readings: Kapucu, N., Lawther, W. & Pattison, S. (2007). Logistics and Staging Areas in Managing Disasters and Emergencies. Journal of Homeland Security and Emergency Management, 4(2), pp. -. Retrieved 30 Oct. 2019, from doi:10.2202/1547-7355.1249 |  |
| Week 11  Date – 28 Mar | Managing emergency stocks, pre-positioned holdings – rotation of materials, emergency supplies and equipment to allow emergency responders to succeed. Procurement of supplies – development of effective tenders / requests for proposal / quotes  Class Review – programmed time  Readings: Samantha Jo Roth, (2019), DORIAN: FEMA Working Around Clock to Prepare for Storm, Spectrum News, August 28, 2019P  Federal Emergency Management Agency, An Exception to the Rules During Emergency or Exigent Circumstances, 2020, <https://www.fema.gov/grants/procurement/understand-exception> |  |
| Week 12  Date – 4 Apr | Team Presentations, Wrapping Up |  |

## Course Policies

All students are expected to familiarize themselves with the following information:

* [Student Rights & Responsibilities](https://oscr.students.yorku.ca/csrr)
* [Academic Accommodation for Students with Disabilities](https://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-with-disabilities-guidelines-procedures-and-definitions/)

**Please also review the following course policies:**

### Academic Integrity

In this course, we strive to maintain academic honesty to the highest extent possible. Please familiarize yourself with the meaning of academic integrity by completing [SPARK’s Academic Integrity module](https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/) at the beginning of the course. Breaches of academic honesty range from cheating to plagiarism (i.e., the improper crediting of another’s work, the representation of another’s ideas as your own, etc.). All instances of academic dishonesty in this course will be reported to the appropriate University authorities and can be punishable according to the [Senate Policy on Academic Honesty](https://www.yorku.ca/secretariat/policies/policies/academic-honesty-senate-policy-on/).

### 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

While all individuals are expected to satisfy the requirements of their program of study and to aspire to achieve excellence, the University recognizes that persons with disabilities may require reasonable accommodation to enable them to perform at their best. The University encourages students with disabilities to register with [Student Accessibility Services](https://accessibility.students.yorku.ca/) to discuss their accommodation needs as early as possible in the term to establish the recommended academic accommodations that will be communicated to Course Directors through their Letter of Accommodation (LOA).

Please let your instructor know as early as possible in the term if you anticipate requiring academic accommodation so that we can discuss how to consider your accommodation needs within the context of this course.Sufficient notice is needed so that reasonable steps for accommodation can be discussed. 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 special significance](https://www.yorku.ca/secretariat/policies/policies/academic-accommodation-for-students-religious-observances-policy-guidelines-and-procedures/). Should any of the dates specified in this syllabus for course examinations, tests, or deadlines conflict with a date of religious significance, please contact the instructor within the first three (3) weeks of class. If the date falls within the formal examination periods, you must complete and submit a [Religious Accommodation for Examination Form](https://secure.students.yorku.ca/pdf/religious-accommodation-agreement-final-examinations.pdf) at least three (3) weeks 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](https://www.yorku.ca/secretariat/policies/policies/code-of-student-rights-and-responsibilities-presidential-regulation/), the [Senate Policy on Academic Honesty](https://www.yorku.ca/secretariat/policies/policies/academic-honesty-senate-policy-on/), and/or legal consequences for copyright violations.

### Student Conduct in the Learning Environment

York University is committed to fostering teaching and learning environments that are free of disruptive and/or harassing behaviour, are physically safe, and conducive to effective teaching and learning. Students and instructors are expected to maintain a professional relationship characterized by courtesy, civility, and mutual respect and to refrain from actions disruptive to such a relationship. Individuals who fail to adhere to such standards and who violate University or public law may be subject to disciplinary action by the University.

For more information, see the policies on [Disruptive and/or Harassing Behaviour in Academic Situations](https://www.yorku.ca/secretariat/policies/policies/disruptive-andor-harassing-behaviour-in-academic-situations-senate-policy/), the [Student Conduct and Responsibilities](https://calendars.students.yorku.ca/2022-2023/student-conduct-and-responsibilities), and the [Code of Student Rights & Responsibilities](https://oscr.students.yorku.ca/csrr).

### Netiquette for eClass and Online Learning

Students and instructors have a joint responsibility to create and maintain a welcoming and inclusive learning environment. All students are expected to conduct themselves in accordance with the [Code of Student Rights and Responsibilities](https://oscr.students.yorku.ca/student-conduct). Please review and familiarize yourself with behaviours that support “netiquette” in virtual classrooms by consulting the [Guide to Netiquette](https://eclass.yorku.ca/pluginfile.php/3583106/mod_book/chapter/26166/Infographic_Netiquette_June.pdf) and [Student Guide to eLearning](http://elearning-guide.apps01.yorku.ca/).

### Student Notice of Recording for Online Teaching and Learning

Activities for this course involve recording, in partial fulfillment of the course learning outcomes. Images, audio, text/chat messaging that have been recorded may be used and/or made available by the University to students enrolled in the course and those supporting the course for the purpose of materials review, for assessment, etc. Recordings will be managed according to the University’s Common Record Schedule and will be securely destroyed when no longer needed by the University. Your personal information is protected in accordance with York University’s [Guidelines on Access of Information and Protection of Privacy](https://registrar.yorku.ca/index.php/privacy) and the [Freedom of Information and Protection of Privacy Act](https://www.ontario.ca/laws/statute/90f31#BK0). Access to online materials, including recordings or live meetings, is subject to York University’s [Senate Policy on Computing and Information Technology Facilities](https://www.yorku.ca/secretariat/policies/policies/computing-and-information-technology-facilities-senate-policy/).

The University will use reasonable means to protect the security and confidentiality of the recorded information, but cannot provide a guarantee of such due to factors beyond the University’s control, such as recordings being forwarded, copied, intercepted, circulated, disclosed, or stored without the University’s knowledge or permission, or the introduction of malware into computer system which could potentially damage or disrupt the computer, networks, and security settings. The University is not responsible for connectivity/technical difficulties or loss of data associated with your hardware, software, or Internet connection.

By engaging in course activities that involve recording, you are consenting to the use of your appearance, image, text/chat messaging, and voice and/or likeness in the manner and under the conditions specified herein. In the case of a live stream recording, if you choose not to have your image or audio recorded, you may disable the audio and video functionality. If you choose to participate using a pseudonym instead of your real name, you must disclose the pseudonym to your instructor in advance to facilitate class participation.

You are not permitted to disclose the link to/URL of an event or an event session recording or copies of recording to anyone, for any reason. Recordings are available only to authorized individuals who have been directly provided the above instructions/link for their use. Recordings for personal use, required to facilitate your learning and preparation of personal course/lecture notes, may not be shared with others without the permission of the instructor or event coordinator, and may not be published, posted, linked to, or otherwise made available online, including on social media feeds, even if those feeds are private.

### Health and Safety

All York students and instructors share responsibility for the safety and well-being of the community while on York's campuses. Please continue to check [YUBetter Together](https://www.yorku.ca/bettertogether/" \o "https://www.yorku.ca/bettertogether/) for the latest information on health and safety.

may result in disclosure of the personal information and intellectual property of students and instructors to others. If you have any questions about the collection or use of your personal information, please contact your instructor or the Privacy Office at [info.privacy@yorku.ca](https://yuoffice-my.sharepoint.com/personal/mchaktsi_yorku_ca/Documents/Microsoft%20Teams%20Chat%20Files/info.privacy@yorku.ca).

## Student Support and Resources

To help you succeed academically, York University offers a wide range of resources and services. Everything from writing workshops and peer mentorship to wellness support and career guidance is available to fulfill our LA&PS students’ needs. Explore the links below to access these on-campus resources:

* [Academic Advising](https://www.yorku.ca/laps/support/academic-advising/) is available to provide students support and guidance in making academic decisions and goals.
* [Student Accessibility Services](https://accessibility.students.yorku.ca/) are available for support and accessibility accommodation when required.
* [Student Counselling, Health & Wellbeing](https://counselling.students.yorku.ca/) offers workshops, resources, and counselling to support your academic success.
* [Peer-Assisted Study Sessions (PASS) Program](https://www.yorku.ca/laps/support/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)](https://www.yorku.ca/laps/snack/) supports students in courses involving math, stats, and Excel.
* [The Writing Centre](https://www.yorku.ca/laps/writing-centre/) provides multiple avenues of writing-based support including drop-in sessions, one-to-one appointments, a Multilingual Studio, and an Accessibility Specialist.
* [ESL Open Learning Centre (OLC)](https://www.yorku.ca/laps/eslolc/) supports students with building proficiency in reading, writing, and speaking English.
* [Learning Skills Services](https://www.yorku.ca/scld/learning-skills/) provides tips for time management, effective study and learning habits, keeping up with coursework, and other learning-related supports.
* [Learning Commons](https://learningcommons.yorku.ca/) provides links to supports for time management, writing, study skills, preparing for exams, and other learning-related resources.
* [Roadmap to Student Success](https://www.yorku.ca/laps/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)](https://oscr.students.yorku.ca/) is responsible for administering the [Code of Student Rights & Responsibilities](https://oscr.students.yorku.ca/csrr) and provides critical incident support.
* [goSAFE](https://www.yorku.ca/safety/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](https://www.yorku.ca/laps/support/).