CSC413H1 F

Neural Networks and Deep Learning

Fall 2024 Syllabus

Course Meetings

CSC413H1 F

Section	Day & Time	Delivery Mode & Location
LEC0101	Monday, 9:00 AM - 10:00 AM Wednesday, 9:00 AM - 11:00 AM	In Person: BA 1190 In Person: MP 134
LEC0201	Monday, 11:00 AM - 12:00 PM Wednesday, 11:00 AM - 1:00 PM	In Person: GB 244 In Person: MP 134
LEC2001	Monday, 9:00 AM - 10:00 AM Wednesday, 9:00 AM - 11:00 AM	In Person: BA 1190 In Person: MP 134
LEC2101	Monday, 11:00 AM - 12:00 PM Wednesday, 11:00 AM - 1:00 PM	In Person: GB 244 In Person: MP 134

Refer to ACORN for the most up-to-date information about the location of the course meetings.

Course Contacts

Course Website: https://q.utoronto.ca/courses/352639

Instructor: Colin Raffel
Email: colin.raffel@utoronto.ca

Course Overview

An introduction to neural networks and deep learning. Backpropagation and automatic differentiation. Architectures: convolutional networks and recurrent neural networks. Methods for improving optimization and generalization. Neural networks for unsupervised and reinforcement learning.

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Prerequisites: CSC311H1/ CSC311H5/ CSCC11H3/ CSC411H1/ STA314H1/ ECE421H1/ ROB313H1/; MAT235Y1/ MAT237Y1/ MAT257Y1/ MAT257Y5/ MAT291H1/ MAT294H1/

AER210H1/ (MAT232H5, MAT236H5)/ (MAT233H5, MAT236H5)/ (MATB41H3, MATB42H3); MAT223H1/ MAT240H1/ MAT185H1/ MAT188H1/ MAT223H5/ MATA23H3
Corequisites: None
Exclusions: CSC321H1/CSC421H1, CSC321H5, CSC413H5. NOTE: Students not enrolled in the Computer Science Major or Specialist program at A&S, UTM, or UTSC, or the Data Science Specialist at A&S, are limited to a maximum of 1.5 credits in 300-/400-level CSC/ECE courses.
Recommended Preparation: None
Credit Value: 0.5

Marking Scheme

Assessment	Percent	Details	Due Date
Midterm	20%		2024-10-16
HW1	12.5%		2024-09-26
HW2	12.5%		2024-10-17
HW3	12.5%		2024-11-07
HW4	12.5%		2024-11-28
In-Person Final Exam	30%		Final Exam Period

Late Assessment Submissions Policy

Every student has a total of 7 grace days to extend the coursework deadlines through the semester. Each grace day allows for a 24 hours deadline extension without late penalty. That is, you may apply the grace days on a late submission to remove its late penalty. The maximum extension you may request is up to the remaining grace days you have banked up. We will keep track of the grace days on MarkUs. After the grace period, assignments will be accepted up to 3 days late, but 10% will be deducted for each day late, rounded up to the nearest day. After that, submissions will not be accepted and will receive a score of 0.

Policies & Statements

Late/Missed Assignments

This item is listed here to remind you to include your late/missed assignment policy; if you have late penalties, you are required to publish them in your syllabus. Please see the A&S Academic Handbook (https://www.artsci.utoronto.ca/faculty-staff/teaching/academic-handbook) sections on missed term work (Section 4.7), late term work and extensions (section 4.8), and missed term tests (Section 5.3) for more information.

Quercus Info (if using)

This Course uses the University's learning management system, Quercus, to post information about the course. This includes posting readings and other materials required to complete class

activities and course assignments, as well as sharing important announcements and updates. New information and resources will be posted regularly as we move through the term. To access the course website, go to the U of T Quercus log-in page at https://q.utoronto.ca.
SPECIAL NOTE ABOUT GRADES POSTED ONLINE: Please also note that any grades posted are for your information only, so you can view and track your progress through the course. No grades are considered official, including any posted in Quercus at any point in the term, until they have been formally approved and posted on ACORN at the end of the course. Please contact me as soon as possible if you think there is an error in any grade posted on Quercus.