Course Syllabus

Course	CISC 7026 Fall 2025
Time	19:00-22:00, Fridays
Location	Room E6-1102C
Description	This course introduces the theory and application of deep neural networks
Instructor	Steven Morad <smorad at um.edu.mo>
Office Hours	14:00-16:00 Thursday in E11-4084c
Grading	• Assignments: 30% • Exams: 30% • Final Project: 30% • Participation: 10%
Cheating Policy	Any students caught cheating will fail the entire course
Exam Policy	Lowest exam score dropped
Late Work Policy	• −25% 0-1 days late • −50% 1-2 days late • −75% 2-3 days late • −100% 3+ days late
Prerequisites	• Linear Algebra • Multivariable Calculus • Programming in Python
Preliminary Lecture Schedule	• Week 1 (08.22): Course Introduction • Week 2 (08.29): Linear Regression (D2L 3.1, 3.6) • Week 3 (09.05): Neural Networks (D2L 5.1, 5.2, 6.1) • Week 4 (09.12): Backpropagation and Optimization (D2L 5.3, 12.1, 12.3-12.5) • Week 5 (09.19): Exam 1 • Week 6 (09.26): Classification (D2L 4.1, 4.2, 4.4) • Week 7 (10.03): Training Tricks (D2L 5.1-5.5, 6.1-6.3, 12.1-12.10) • Week 8 (10.10): Convolutional Neural Networks (D2L 7) • Week 9 (10.17): Exam 2 • Week 10 (10.24): Recurrent Neural Networks (D2L 9-10) • Week 11 (10.31): Autoencoders and Generative Models • Week 12 (11.07): Diffusion Models • Week 13 (11.14): Attention and Transformers (D2L 11.1-11.7) • Week 14 (11.21): Exam 3 • Week 15 (11.28): Foundation Models (D2L 11.8-11.9)
Preliminary Assignment Schedule	• Week 1-2 (08.22 - 08.29): (Optional) Array Programming • Week 2-4 (08.29 - 09.12): Linear Regression • Week 4-6 (09.12 - 09.26): Neural Networks and Backpropagation • Week 6-8 (09.26 - 10.10): MLP Regression • Week 8-10 (10.10 - 10.24): Convolutional MNIST Classification • Week 10-12 (10.24 - 11.07): RNN Stock Market Prediction • Week 11-12 (10.31 - 11.07): Final Project Plan • Week 12-16 (11.07 - 12.05): Final Project