SAMPLE COURSE OUTLINE

Course Code, Number, and Title:

DGMD 2400: AI Applications

Course Format:
[Course format may vary by instructor. The typical course format would be:]

Lecture 1.0 h + Seminar 1.0 h + Laboratory Hours 2.0 h

Credits: 3.0   **Transfer Credit:** For information, visit bctransferguide.ca

Course Description, Prerequisites, Corequisites:
AI is transforming the way we study, work, and create, influencing nearly every facet of our lives. This course is designed for students from diverse backgrounds to gain a foundational understanding of modern AI models and systems, enabling them to fully utilize its potential regardless of background and experience level. Whether exploring AI for the first time or building on existing coding skills, students will engage in hands-on experimentation and project-based learning tailored to their skill set. Topics include how AI systems learn, effective prompting strategies, ethical considerations, and the latest tools, including large language models and multimodal AI. The course ensures accessibility for all while providing opportunities for deeper technical exploration.

Prerequisites: A minimum "C" grade in nine credits of first-year CPSC or DGMD courses

Learning Outcomes:

Upon successful completion of this course, students will be able to…

1. Define artificial intelligence (AI), machine learning (ML), and deep learning (DL) and explain their differences and interconnections.
2. Describe various AI model architectures and their applications.
3. Describe the AI learning processes: training, fine-tuning models, and in-context learning.
4. Explain the nature of prompting and develop effective prompting strategies for AI models.
5. Explain at a high level, the internal workings of popular and current AI models, including large language models (LLMs), diffusion models, and multimodal systems.
6. Explain how, at a foundational level, the ways AI produces its output, such as text and images.
7. Describe the nature of hallucinations in AI and how they impact model reliability.
8. Use the latest AI tools, either consumer-facing or developer-facing depending on students' interests and abilities.
9. Discuss social and ethical concerns with the development and deployment of AI technologies, including bias and responsible usage.

Instructor(s): TBA
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Office: TBA   **Phone: (604) 323-XXXX**
Office Hours: TBA   **Email: TBA**

Textbook and Course Materials:
[Textbook selection may vary by instructor. An example of texts and course materials for this course might be]

For textbook information, visit https://mycampusstore.langara.bc.ca/buy_courselisting.asp?selTerm=3|8

Note: *This course may use an electronic (online) instructional resource that is located outside of Canada for mandatory graded class work. You may be required to enter personal information, such as your name and email address, to log in to this resource. This means that your personal information could be stored on servers located outside of Canada and may be accessed by U.S. authorities, subject to federal laws. Where possible, you may log in with an email pseudonym as long as you provide the pseudonym to me so I can identify you when reviewing your class work.*

Assessments and Weighting:
Final Exam 20%
Other Assessments 80%
[An example of other assessments might be:]

Lab Work: 25%
Project: 30%
Quizzes/Test: 15%
Participation: 10%

This course has been approved by Education Council for Prior Learning Assessment (PLAR).

PLAR eligibility requirements/criteria:
1. To be determined (See Department)

If you meet the eligibility criteria and are enrolled in a program, please contact the department chair for more information. For information on policy, visit E2004: Prior Learning Assessment & Recognition.
Grading System:
Specific grading schemes will be detailed in each course section outline.

Topics Covered:
[Topics covered may vary by instructor. An example of topics covered might be:]

1. Introduction to AI: Definitions & History
2. Machine Learning & Deep Learning Basics
3. Understanding AI Model Architectures
4. AI Training Processes: Fine-tuning & Adaptation

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5. Effective Prompting & In-Context Learning
6. Large Language Models & Multimodal AI
7. AI in Text & Image Generation
8. AI Hallucinations & Model Reliability
9. Ethical Considerations in AI Development & Use
10. Hands-on AI Tools for Various Skill Levels
11. AI's Societal & Economic Impact

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

College Policies:

E1003 - Student Code of Conduct
F1004 - Code of Academic Conduct
E2008 - Academic Standing - Academic Probation and Academic Suspension
E2006 - Appeal of Final Grade
F1002 - Concerns about Instruction
E2011 - Withdrawal from Courses

Departmental/Course Policies:

Information unavailable, please consult Department for details.

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