Subject Description Form

Subject Code	COMP5572
Subject Title	AI Applications in the Humanities
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	This subject aims to provide an interdisciplinary perspective on artificial intelligence (AI) and its transformative effects within the humanities. As AI revolutionizes numerous fields, people engaged in humanistic endeavors should understand its potential and applications. Students will be empowered to investigate and critically evaluate AI, with opportunities to apply cutting-edge AI tools across different humanities disciplines.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. understand essential AI concepts and their connections to humanistic studies; b. evaluate the influence of AI technologies on humanistic endeavors, considering both the potential and the challenges they present; c. develop hands-on proficiency with AI tools for innovative problem-solving within the humanities;
Subject Synopsis/ Indicative Syllabus	**1. Introduction to AI in the humanities** - Overview of AI, including concepts, history, and implications. - AI tasks and applications. - The use of AI in the humanities **2. AI tools and technology for humanities applications** - Text analytics tools and natural language processing. - Data analytics and visualization. - Hands-on practice with AI tools in real-world humanities scenarios. **3. AI-driven problem-solving in humanities** - Overview of AI applications in various humanities fields, such as language studies, art, history, politics, etc. - Future trends in AI-assisted research and methodology in humanities data analytics. **4. Ethical concerns of AI in the Humanities**

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<tr><td></td><td>- Ethical considerations of AI in humanities applications.
- Human-centered fairness, accountability, explainability, transparency, and ethics in AI systems.</td></tr>
<tr><td>Teaching/Learning Methodology</td><td>1. Lectures and Seminars
Lectures will cover AI concepts and their relevance to the humanities, establishing a robust theoretical base. Seminars will complement these lectures, providing an interactive environment for the in-depth exploration of topics and practical exercises with AI tools. Active learning will be promoted through group discussions and case studies during lectures and seminars.
2. Labs and Tutorials
Tutorials will facilitate a deeper understanding of AI concepts through interactive discussions and problem-solving exercises. On the other hand, labs will offer practical experience with AI tools, enabling students to apply their theoretical knowledge to real- world humanities scenarios, thereby enhancing their skills and understanding.

39 hours of class activities, including lectures, tutorials, labs, and seminars, where applicable.</td></tr>
<tr><td>Assessment Methods in Alignment with Intended Learning Outcomes</td><td>Students’ performance in this subject will be assessed using a letter-grading system according to the University’s conventions, ranging from grade F (failure) to A+. The relative weighting of the different assessment components is as follows:

<table>
<tr><td rowspan="2">Specific assessment methods/ tasks</td><td rowspan="2">% weighting</td><td colspan="3">Intended subject learning outcomes to be assessed</td></tr>
<tr><td>a</td><td>b</td><td>c</td></tr>
<tr><td>Exercises and assignments</td><td>15%</td><td></td><td></td><td>✓</td></tr>
<tr><td>Quizzes</td><td>20%</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td>Essay</td><td>20%</td><td>✓</td><td>✓</td><td></td></tr>
<tr><td>Exam</td><td>45%</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td>Total</td><td>100%</td><td></td><td></td><td></td></tr>
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Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</td></tr>
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<tr><td></td><td colspan="2">Hands-on exercises and assignments will enable students to practice and apply AI tools in the humanities (ILO c).

Quizzes and exams are given to help students better understand the AI and humanities concepts discussed in lectures (ILO a), assess AI's impact on the humanities via after-class reading (ILO b), and learn how to employ the ability to solve real-world problems (ILO c).

Each student should submit a research essay to discuss AI's implications for the humanities. It requires a student to read related papers and write a literary review to better understand the AI/humanities concepts (ILO a) and analyze the pros and cons of AI implications in the humanities (ILO b).</td></tr>
<tr><td rowspan="6">Student study effort expected.</td><td>Class Contact:</td><td></td></tr>
<tr><td>Class Activities (lectures, seminars, labs, tutorials)</td><td>39 hours</td></tr>
<tr><td>Other student study efforts:</td><td></td></tr>
<tr><td>Self-study, Exercises, Assignments, Quizzes, Exams</td><td>46 hours</td></tr>
<tr><td>Literary review and essay writing</td><td>20 hours</td></tr>
<tr><td>Total student study effort</td><td>105 hours</td></tr>
<tr><td>Reading list and references</td><td colspan="2">
Mitchell, M. (2019). Artificial intelligence: A guide for thinking humans. Penguin UK.
Tegmark, M. (2018). Life 3.0: Being human in the age of artificial intelligence. Vintage.
Russell, S. (2019). Human compatible: Artificial intelligence and the problem of control. Penguin.
Cave, Stephen, Kanta Dihal, and Sarah Dillon, eds. AI narratives: A history of imaginative thinking about intelligent machines. Oxford University Press, 2020.
Rothman, D. (2022). Transformers for Natural Language Processing: Build, train, and fine-tune deep neural network architectures for NLP with Python, Hugging Face, and OpenAI's GPT-3, ChatGPT, and GPT-4. Packt Publishing Ltd.
Littman, M. L. (2023). Code to Joy: Why Everyone Should Learn a Little Programming. MIT Press.
Phoenix, J. and Taylor, M. (2024): Prompt Engineering for Generative AI. O'Reilly Media, Inc.
Khan, I (2024): The Quick Guide to Prompt Engineering: Generative AI Tips and Tricks for ChatGPT, Bard, Dall-E, and Midjourney. John Wiley & Sons
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