ACADEMIC SENATE
Executive Committee
REFERRAL FORM

CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

Date:	Date of next EC meeting…
To:	General Education Committee
From:	Academic Senate Executive Committee
Subject:	Academic Senate Referral
Classification	GE-001-256
Title of Referral:	PHL 3550 - Artificial Intelligence for Thinking Humans: A History (New GE Area 5D)
Background:	See attached referral request form. Additional background provided by the Executive Committee: Existing non-GE course proposed for GE Area 5D.
Recommended resources:	See attached referral request form and supporting documentation. Additional resources recommended by the Executive Committee: None. For the Committee's Report on this referral, please list in separate sections, the resources recommended, and resources actually consulted. If a resource was not consulted, briefly state why.
Review and recommend:	Review and recommend as appropriate.
Date required for presenting committee report to the Executive Committee:	3/2/2026

Name: Peter Ross

Email: pwross@cpp.edu

Names and Titles of Proponents:

Ashley Ly, Office of Academic Programs
Aaron DeRosa, Faculty Director for Undergraduate Studies and General Education
Brianne Dávila, College Dean
Robert Blumenfeld, College Curriculum Committee
Dale Turner, Department Chair and Department Curriculum Committee

Keywords: PHL, 3550, Artificial, Intelligence, Thinking, Humans, History, New, GE, Area, 5D

Background: History and core concepts of artificial intelligence for understanding its social significance. Early rule-based AI and the more recent development of data-based processing by machine learning. History of development of AI for object recognition, game design, robotics, and natural language processing.

Students will be able to:
1. Explain the early stages of historical development of two types of artificial intelligence, namely rule-based AI developing from mathematical logic and AI using machine learning developing from neuroscience.
2. Explain the concepts of data and data collection according to rule-based AI and machine learning, and identify and explain limitations of each.
3. Identify and explain ethical and cultural impacts of AI due to these limitations.
4. Explain the historical development of the application of AI to the real-world behavior of robots that use both rule-based AI and machine learning, and identify and explain the limitations of each.
5. Research a current development in AI and either write a historically oriented essay contextualizing its capabilities and limitations or produce at least 1500 words in support of an in-person or video presentation of this research project.

The Core Course Content (CCC) is:
1. Required Content: the historical development of AI and, due to AI's power and limitations, this development's impact on ethics and culture.
2. Required Content: use of different methodologies by different forms of AI, namely methods of deductive logic used by rule-based AI and methods of empirical science used by machine-learning AI.
3. The assignment of a research project on a current development in AI that involves at least 1500 words of writing (either an essay or writing in support of a presentation of this research project).

As an Option Requirement, PHL 3550 plays the role of introducing students to the historical context of current developments in AI, in terms of the development of the different techniques used by rule-based AI and machine learning, and the relative success and current dominance of machine learning.
The following matrix relating the STS Major Program's Program Learning Outcomes (PLOs) and the courses Course Learning Outcomes (CLOs) offers another demonstration of the course's role in the Program's curriculum. Each one of the STS PLOs is addressed by at least one CLO.

STS Program Learning Outcomes	CLO 1	CLO 2	CLO 3	CLO 4	CLO 5
PLO 1: Students have facility with scientific concepts and scientific methods of reasoning.	X	X			
PLO 2: Students are proficient in critical thinking					X
PLO 3: Students are proficient in written and oral communication.					X
PLO 4: Students are able to contextualize science and technology in order to identify, analyze, and influence the interrelation between science and society.	X		X	X	
PLO 5: Students are proficient in research skills.					X

Critical Thinking: research project on a current development in AI. This assignment will require students to give reasons for thinking that the current development in AI either does or doesn't adequately address the technology's limitations, including limitations that give rise to ethical and social consequences. The assessment instrument is a research project involving at least 1500 words of writing.
Information Literacy: research project on a current development in AI. The assignment will require students to seek a number of sources in providing reasons. This research project is evidence for assessment.
Civic Literacy: research project on a current development in AI. This assignment will require that students consider the current development in terms of the technology's limitations that give rise to ethical and social consequences. This research project is evidence for assessment.
Written Communication: at least three writing assignments including a research project involving at least 1500 words of writing (either an essay or writing in support of a presentation of this research). This research project is evidence for assessment.

PHL 3550 provides a history of AI that, by assuming no technical background, allows all CPP students to better understand the current development of AI. AI is widely expected to affect nearly all aspects of our lives, and with this pervasive influence, students need to have a grasp of AI's capabilities and limitations. PHL 3550 will provide this understanding by describing the historical rivalry between rule-based AI, where AI functioning is coded, and machine learning, where AI develops algorithms from the processing of large amounts of training data. Machine learning has become dominant, but its method of learning from training data makes it vulnerable to a range of problems (e.g. algorithmic bias). The course's explanation of the vulnerabilities of rule-based AI and machine learning help students evaluate risks and benefits, and establish the civic-minded understanding needed to consider AI's regulation. The course requires a historically oriented research project which will help students' develop writing and critical thinking skills, and information and civic literacy. The final essay requires students to explain the development of new AI technology in terms of its development from earlier AI, and ask them to consider whether the new development addresses ethical and social problems of earlier AI.
The following matrix relating GE Area 5D rubrics with Class Learning Outcomes (CLOs) and Core Course Content (CCC) further shows that the course content is aligned with the rubrics.

GE Area 5D:	Evidence	Course Learning Outcomes (CLOs)	Core Course Content

Upper Division Scientific Inquiry and Quantitative Reasoning		See list in section IIA	(CCCs) See list in section IIB
I.a. Area: Course content centers the study of scientific theories, concepts and data about the physical and/or biological aspects of the world.	II.A. CLOs II.B. Core Course Content III.C. GE Area III.D. Syllabus	CLO 2	CCC 2
I.b. Area: Course content teaches students to understand and appreciate scientific principles and the scientific method, as well as the potential limits of scientific endeavors and the value systems and ethics associated with human inquiry.	II.A. CLOs II.B. Core Course Content III.C. GE Area III.D. Syllabus	CLOs 1, 2	CCC 2
I.c. Area: Course content presents the relationship between science, technology, and civilization and the effect science and technology have on culture and human values.	II.A. CLOs II.B. Core Course Content III.C. GE Area III.D. Syllabus	CLO 3	CCC 1
I.d. Area: Course content incorporates the application and generalization of basic scientific or quantitative knowledge from the foundational courses to real world or practical problems.	II.A. CLOs II.B. Core Course Content III.C. GE Area III.D. Syllabus	CLO 4	CCC 3
II.a. Policy: The course's assignments assess the GE SLO for Critical Thinking	III.B. GE SLOs III.D. Syllabus		
II.b. Policy: The course's assignments assess the GE SLO for Information Literacy.	III.B. GE SLOs III.D. Syllabus		
II.c. Policy: The course's assignments assess the GE SLO for EITHER Intercultural Engagement OR Civic Literacy	III.B. GE SLOs III.D. Syllabus		
II.d. Policy: The course's assignments assess the GE SLO for EITHER Written Communication, Oral Communication, or Quantitative Literacy.	III.B. GE SLOs III.D. Syllabus		
II.e. Policy: The course is designed to be inclusive and open to all students (e.g., not major-specific coursework)	II.B. Core Course Content III.D. Syllabus		
II.f. Policy: The course's syllabus reflects what is described in the ECO, is appropriate for GE students, includes the GEMPS, and identifies the GE SLOs.	III.D. Syllabus		
II.g. Policy: The course focuses attention on understanding the interrelationship among the disciplines and examines idea in broader, more integrative ways.	II.A. CLOs II.B. Core Course Content III.C. GE Area III.D. Syllabus	CLO 1	CLO 2

To provide justification for criteria not evidenced by CLOs or CCCs:

II.a-II.b. Policy: The research project in core content can be used to assess the GE SLOs for Critical Thinking and Information Literacy.

II.c. : The research project in core content can be used to assess the GE SLO for Civic Literacy.
II.d. : The research project in core content can be used to assess the GE SLO for Written Communication.
II.e. The course is oriented to students without a technical background in AI or in general.

Recommended Resources:

Attachments: