Fiscal Unit/Academic Org	Linguistics - D0566
Administering College/Academic Group	Arts and Sciences
Co-adminstering College/Academic Group	
Semester Conversion Designation	New Program/Plan
Proposed Program/Plan Name	AI Language and Mind
Type of Program/Plan	Undergraduate certificate program
Program/Plan Code Abbreviation	
Proposed Degree Title	

Credit Hour Explanation

Program credit hour requirements		A) Number of credit hours in current program (Quarter credit hours)	B) Calculated result for 2/3rds of current (Semester credit hours)	C) Number of credit hours required for proposed program (Semester credit hours)	D) Change in credit hours
Total minimum credit hours required for completion of program				12	
Required credit hours offered by the unit	Minimum			0	
	Maximum			6	
Required credit hours offered outside of the unit	Minimum			6	
	Maximum			12	
Required prerequisite credit hours not included above	Minimum			0	
	Maximum			0	

Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

Program Learning Goals

- Students will be able to compare and contrast extant theories of human language comprehension and production with AI models of natural language processing.
- Students will be able to explain the relationship between extant theories of human mind and general cognition and extant models in AI.
- Students will be able to describe and critically assess claims regarding the implications of AI researchfor claims about mind and language.
- Students will be able to explain the potential practical implications of AI technologies for various domains of human linguistic and cognitive activity, such as those which occur inscience and business.

Assessment

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

Is this a degree program (undergraduate, graduate, or professional) or major proposal? No

Program Specializations/Sub-Plans

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

Pre-Major

Does this Program have a Pre-Major? No

Attachments

- AI Language and Mind Certificate proposal with letters 2025-06-12.pdf: Program proposal

(Program Proposal. Owner: McCullough,Elizabeth Ann)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	McCullough,Elizabeth Ann	06/17/2025 01:02 PM	Submitted for Approval
Approved	McCullough,Elizabeth Ann	06/17/2025 01:03 PM	Unit Approval
Pending Approval	Vankeerbergen,Bernadette Chantal	06/17/2025 01:03 PM	College Approval

THE OHIO STATE UNIVERSITY

College of Arts and Sciences

Department of Linguistics

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linguistics.osu.edu

May 27, 2025

Dear Colleagues,

I write to express the support of the Department of Linguistics for the proposed Certificate in AI, Language and Mind. This certificate will provide students an opportunity to complete a non-programming but otherwise comprehensive study of modern artificial intelligence, which is producing profound and complex effects across multiple central dimensions of human life.

Sincerely,

William Schuler

Professor and Chair
Department of Linguistics
The Ohio State University
schuler.77@osu.edu

THE OHIO STATE UNIVERSITY

Justin D'Arms
Department of Philosophy

350 University Hall
230 N. Oval Mall
Columbus, OH 43210

614-292-7914 Phone

darms.1@osu.edu

June, 2025

To Whom it May Concern,

I am happy to share the support of the Department of Philosophy for the proposed Certificate in AI, Language and Mind. This certificate offers a distinctive contribution to the study of artificial intelligence at Ohio State, enabling students to better understand some central theoretical questions about the relation between AI and human thinking and computation, including questions about consciousness and use and understanding of language. As one of the proposing departments, Philosophy looks forward to contributing to this certificate.

Yours sincerely,

Justin D'Arms
Professor and Interim Chair

ASC Certificate in AI Language and Mind

1. Required Information

Name of proposed certificate: AI Language and Mind Certificate

Certificate Type:
Type 1a, Stand-Alone Undergraduate Academic Certificate: Post-High School Diploma
Type 1b, Embedded Undergraduate Academic Certificate: Post-High School Diploma
Type 2, Stand-Alone Undergraduate Academic Certificate: Post-Bachelor

Instructional Mode: Delivered through in-person classroom instruction of required course and electives.

Proposed implementation date: Spring 2026

Academic units (e.g., department, college) responsible for administering the certificate program: The Department of Linguistics and the Department of Philosophy will co-administer the certificate. The Department of Linguistics will provide principal advising support for the AI Language and Mind certificate, which includes approving Declaration of Completion forms. In the event that the demand for the certificate exceeds the capacity of the advising staff in Linguistics, the College of Arts and Sciences will provide additional advising support. The Department of Philosophy will provide a convenor/chair of a newly formed Interdisciplinary AI Steering Committee, which will be comprised of one or two representatives from each of the major contributing units, including (but not limited to): Comparative Studies, Linguistics, and Philosophy. The Interdisciplinary AI Steering Committee will oversee all interdisciplinary certificates in AI in ASC. This committee will meet periodically to monitor enrollment, oversee the implementation of the assessment plan, and vet any new courses to be included in the certificate.

2. Rationale

Advances in artificial intelligence are producing profound and complex effects across multiple central dimensions of human life. Tools and perspectives drawn from many disciplines are needed to understand, evaluate, and address these effects. However, traditional approaches to undergraduate education often silo the study of artificial intelligence into specific fields within the arts, or sciences, or humanities. The purpose of

the Undergraduate Certificate Program is to provide students from across the University and outside the University the opportunity to complete a non-technical but otherwise comprehensive program of study of artificial intelligence that is fundamentally interdisciplinary, engaging with multiple perspectives from different fields across the arts, sciences, and humanities. The Undergraduate Certificate Program will offer three different certificates: 1) AI Ethics and Society; 2) AI Language and Mind; and 3) AI, Arts and Design. By completing any one of the three Certificates, students will gain the training and credentialing necessary to become innovative industry leaders and thoughtful citizens who can understand the complex issues around artificial intelligence using diverse perspectives. This proposal focuses upon a certificate in AI Language and Mind. The proposal for a certificate in AI Ethics and Society is currently going through the curriculum approval process and an additional proposal for a certificate in AI Arts and Design will be submitted later.

Rationale for AI Language and Mind Certificate

With the success of large language models, such as ChatGPT, the topic of Artificial Intelligence (AI) has risen to international prominence, offering numerous economic and cultural opportunities and risks. AI tools do things that appear similar to what human beings do – such as writing text, searching documents, and generating solutions to problems. But the extent of the similarities is often complex and unclear. The AI Language and Mind Certificate affords students the opportunity to explore issues regarding the myriad relationships between AI, language, and mind. Some of these issues are longstanding ones regarding the nature of mind – e.g. what consciousness is, and whether thinking machines are possible. Other issues concern the potential scientific implications of AI technologies for the scientific study of human language and cognition. Still others concern the practical implications of these technologies for various domains of human endeavor.

Certificate Goal and Learning Outcomes

The goal of the AI Language and Mind certificate program is to expose students to the similarities and differences between human linguistic reasoning and processing in language models that form the basis of modern artificial intelligence.

Upon completion of the certificate, students will be able to:

1. Compare and contrast extant theories of human language comprehension and production with AI models of natural language processing.
2. Explain the relationship between extant theories of human mind and general cognition and extant models in AI.
3. Describe and critically assess claims regarding the implications of AI research for claims about mind and language.
4. Explain the potential practical implications of AI technologies for various domains of human linguistic and cognitive activity, such as those which occur in science and business.

3. Relationship to Other Programs / Benchmarking

Our research into peer institutions found that many are in the process of building capacity for an interdisciplinary undergraduate curriculum, but none yet offer a comparable undergraduate program of study. Of course, many peer institutions have undergraduate coursework and programs of study related to artificial intelligence, but these are mostly housed in Computer Science departments or Engineering colleges.

Overlap with Other OSU Programs

The proposed AI, Language and Mind certificate overlaps with the less technical track (Track A) of the Computational Analysis of Language certificate offered by the Department of Linguistics. LING 3802 (Language and Computers) can be applied towards either certificate, and the new LING 3804 (AI Models of Language) could conceivably apply towards either certificate if is added to the Computational Analysis of Language certificate course list. The courses offered by the other departments (ACCAD, COMPSTD, GEOG, PHILOS, PSYCH) are unique to the proposed certificate.

This certificate also overlaps conceptually with the Computational Analytics specialization within the BS in Data Analytics. Courses for that specialization (specifically, the Linguistics and Text Analytics Focus) are drawn mostly from the Linguistics curriculum. However, the Linguistics and Text Analytics Focus draws from more advanced linguistic and computational analysis courses at the 4000- and 5000-level. In contrast, the proposed certificate offers additional/unique training specifically in how AI relates to human linguistic and cognitive processing, unlike the Data Analytics BS specialization.

The AI, Language and Mind certificate does not overlap with the Artificial Intelligence Specialization within the BS in Computer and Information Science (CIS)/Computer Science

& Engineering (CSE), which is oriented towards programming AI systems. Within the BA in CIS, students are required to take 12 hours of Related Field Core courses, which can include courses on linguistics as relevant but, crucially, is not required to. The proposed certificate is thus substantially distinct from the BA and BS degrees administered by CSE.

The proposed certificate does not overlap with any other certificates at OSU that we are aware of, other than the other two certificates in the undergraduate certificate program described above, *AI Ethics and Society* and *AI Arts and Design*. The certificates in this program all share a common *AI Models of Language* course but have different foci within AI and substantially different electives.

This certificate proposal has not previously been submitted for approval.

Similar Programs at Other Universities

Many other universities offer certificate programs focusing on AI from a computer science perspective rather than from an interdisciplinary humanities perspective. Moreover, while some universities have cognitive science majors that include electives on language and the mind as well as ethical issues with AI, they do not offer a focused program of study on these topics and do not feature a course on how AI relates to human linguistic and cognitive processing. Thus, to our knowledge, the proposed certificate will provide students with an innovative curriculum and credentialing option that is unique in its interdisciplinary focus on artificial intelligence, language and the mind.

Within Ohio, the most similar programs are at Case Western Reserve University and the University of Cincinnati. At Case Western, the Department of Cognitive Science major and minor include courses on Cognitive Neuroscience, Words and Mind, Responsible AI, and Cognitive Linguistics, but does not offer courses focusing on AI models and linguistic processing. At the University of Cincinnati, the Philosophy: Cognitive Studies major explores questions around machines, minds and brains through courses including Cognitive Studies, Philosophy of Mind, Minds and Machines, and Science, Philosophy & Society, but with no course offerings in linguistics (much less ones focusing on AI models and linguistic processing).

Within the Big 10 (now 18 peer institutions coast-to-coast), there are few similar programs at the undergraduate level, with the two most comparable at the University of Illinois, Urbana-Champaign and Michigan State University. At the University of Illinois, the Computer Science + Linguistics major has a required course on computational linguistics and includes options to take advanced coursework in machine learning. At Michigan State, the computer science department offers a concentration in artificial intelligence that requires students to take three courses from a long list including ones in linguistics,

cognitive science, and neuroscience in addition to courses in AI and machine learning. In both cases, however, there are no courses focusing on AI models and linguistic processing or on the ethics of AI.

Beyond Ohio and the Big 10, the most similar programs can be found (in alphabetical order) at New York University; the University of California, Berkeley; the University of Colorado, Boulder; and the University of Kansas. As noted, none currently feature a course on how AI relates to human linguistic and cognitive processing, and only some include an option to study the ethics of AI.

- NYU offers a language and mind major with required courses from linguistics, psychology and philosophy and plans to include computational linguistics from NYU's Center for Data Science.
- Berkeley offers a cognitive science major with a broad array of courses from many departments including ones on AI, ethics of AI and language and mind.
- The University of Colorado offers a cognitive science certificate that likewise includes courses on AI, ethics of AI and language and mind.
- The University of Kansas offers a mind and brain certificate with required courses from linguistics, psychology and philosophy but none with an evident AI focus.

4. Sources of Student Demand and Expected Enrollment

We anticipate this certificate will attract STEM majors who want to develop critical literacies in humanistic perspectives and Humanities majors who want to develop critical literacies in the nuts-and-bolts design of artificial intelligence.

Based on our experience with the Computational Analysis of Language certificate, we anticipate that initially the program will attract 5 to 10 students. We hope that the number of enrolled students stabilizes around 25 to 40 students after the first few years.

The program is relevant for and open for students from all colleges across the university as well as students who are currently not enrolled at the university. The OSU majors that will be recruited for this certificate include (by alphabetical order), not a complete list: Comparative Studies (BA in ASC); Computer Science and Engineering (BS CIS in CSE); Computer and Information Science (BA in ASC); Leadership Studies (BA in ASC); Linguistics (BA in ASC); Philosophy (BA in ASC); Political Science (BA in ASC); Politics, Philosophy and Economics (BA in ASC); Public Policy Analysis (BS in JGCPA); Social and Environmental Geography (BS in ASC); and Sociology (BA in ASC).

5. Curricular Requirements

Four courses comprise this certificate, and a minimum of 12 credit hours. One course is required and three additional courses will be selected by the student from the following list of theory and practical electives, with at least one theory elective and at least one practical elective. The three electives must be from different department designators. Students must have a cumulative GPA of 2.0. Advising support for this certificate will be supplied by the Department of Linguistics.

Dept & Course #	**Course Title**	**Credit Hours**	**Type**	**Current or New?**	**When offered?**
LING 3804	AI Models of Language	3	Required	NEW	Autumn and Spring
CSE 3521	Survey of Artificial Intelligence I: Basic Techniques	3	Required	Current	Autumn or Spring
CSE 5052	Survey of Artificial Intelligence for Non-Majors	3	Required	Current	Autumn or Spring
ACCAD 5301	Devising Experiential Media Systems	3	Theory elective	Current	Spring
ACCAD 5500	Integrated Tech Lab	.5 to 3	Theory elective	Current	Spring
COMPSTD 2340	Intro to Cultures of Science & Technology	3	Practical elective	Current	Autumn
COMPSTD 2367.04	Science and Technology in American Culture	3	Practical elective	Current	Spring
CSE 5525	Foundations of Speech and Language Processing	3	Practical elective	Current	Autumn or Spring
GEOG 3703	Living with Artificial Intelligence	3	Practical elective	Current	Autumn or Spring
LING 3701 / PSYCH 3371	Language and the Mind	3	Theory elective	Current	Autumn or Spring
LING 3802	Language and Computers	3	Practical or theory elective	Current	Autumn or Spring
PHILOS 3800	Introduction to Philosophy of Mind	3	Theory elective	Current	Autumn or Spring

PHILOS 3820	Philosophy of Perception	3	Theory elective	Current	Once every three years
PHILOS 3830	Consciousness	3	Theory elective	Current	Once every three years
PHILOS 5840	Advanced Philosophy of Cognitive Science	3	Theory elective	Current	Once every three years
PSYCH 3312	Memory and Cognition	3	Theory elective	Current	Autumn or Spring
PSYCH 3513	Introduction to Cognitive Neuroscience	3	Theory elective	Current	Autumn or Spring

Sample Program

We anticipate that this certificate will be completed by students over two to three consecutive or non-consecutive semesters.

Here is how a student can fulfill the certificate requirements in two semesters:

Fall Year 1: LING 3804 and GEOG 3703
Spring Year 1: ACCAD 5301 and PHILOS 3800 (prereq 6 cr hrs PHILOS coursework)

Here is how a student can fulfill the certificate requirements in three semesters:

Fall Year 1: LING 3804 and LING 3802
Spring Year 1: COMPSTD 2340 (prereq ENGLISH 1110)
Spring Year 2: PSYCH 3513 (prereq PSYCH 1100)

Curriculum Map

The required course is mapped to certificate ELOs as follows:

Course #	**Course Title**	**ELO 1**	**ELO 2**	**ELO 3**	**ELO 4**
LING 3804	AI Models of Language	X	X		
CSE 3521	Survey of Artificial Intelligence I: Basic Techniques	X	X		

CSE 5052	Survey of Artificial Intelligence for Non-Majors	X	X		

The theory elective courses are mapped to certificate ELOs as follows:

Course #	Course Title	ELO 1	ELO 2	ELO 3	ELO 4
ACCAD 5301	Devising Experiential Media Systems		X	X	
ACCAD 5500	Integrated Tech Lab			X	
LING 3701 / PSYCH 3371	Language and the Mind	X	X	X	
LING 3802	Language and Computers			X	X
PHILOS 3800	Philosophy of Mind		X	X	
PHILOS 3820	Philosophy of Perception		X	X	
PHILOS 3830	Consciousness		X	X	
PHILOS 5840	Advanced Philosophy of Cognitive Science	X	X	X	
PSYCH 3312	Memory and Cognition		X	X	
PSYCH 3513	Introduction to Cognitive Neuroscience		X	X	

The practical elective courses are mapped to certificate ELOs as follows:

Course #	Course Title	ELO 1	ELO 2	ELO 3	ELO 4
COMPSTD 2340	Intro to Cultures of Science & Technology				X
COMPSTD 2367.04	Science Technology and Culture in the US				X
CSE 5525	Foundations of Speech and Language Processing				X
GEOG 3703	Living with Artificial Intelligence				X
LING 3802	Language and Computers			X	X

6. Assessment Plan

Assessment Schedule

Each ELO will be assessed *at least* once in a three-year cycle. Assuming that Spring 2026 will be our first semester of offering the certificate, the ELOs will be assessed according to the following schedule:

AY 2026-2027: ELO (1) and (2)

AY 2027-2028: ELO (4)

AY 2028-2029: ELO (3)

Each ELO will be assessed every year thereafter.

Data Collection

Students will be required to submit a portfolio of coursework they completed for the Certificate and short reflective writing via PebblePad during the semester in which they complete their Certificate coursework (especially if they are not degree-seeking students) or any subsequent semester prior to graduation. This will supply direct measures of the Certificate's ELOs.

Students will download a "workbook" from the Resource Store in PebblePad, which will guide them through the process of constructing, completing, and turning in their portfolio. The first page of this PebblePad workbook will supply an overview of the Certificate ELOs and purpose of completing the portfolio. Subsequent pages in the PebblePad workbook will focus on each ELO, which students will complete. Each page will include the following information or input fields: provide the ELO, provide prompts for students to reflect upon in the "Justification" field of each "artifact", include a place for them to upload coursework (i.e. artifacts) from at least two courses with different department designators that they believe demonstrates their competence with the ELO, and include a place for them to add text to the page wherein they will write a summative statement of at least 250 words reflecting on how the various coursework submitted — as a unit—demonstrates their competence with the ELO. A final page will provide instructions to students about how they can mark the workbook as complete and email a shareable link to the Faculty Program Advisor.

Sample PebblePad Workbook Page

As described in our plan for data collection, students will complete a workbook in PebblePad. The following is sample content for the workbook page for ELO (1).

> Upon completion of the AI Language and Mind Certificate, you will be able to compare and contrast AI models of natural language processing and reasoning with theories of human language comprehension and general cognition.
>
> Identify the assignments that you completed in Certificate coursework that you think are relevant to this ELO.
>
> > Upload Artifact #1 (required)
> >
> > Upload Artifact #2 (optional)
> >
> > Upload Artifact #3 (optional)
>
> In the Justification field of *each* artifact, respond to the following questions in at least 25 words:
>
> a. What course and what semester did you complete this assignment in?
> b. What do you identify as your most significant learning from completing this assignment?
> c. Is there anything, upon reflection, that you would change or like to refine further?
>
> In a text field on the bottom of the page, include at least a 250-word reflection on the following questions:
>
> 1) Identify and describe *at least* one difference between AI models of language and theories of human language that you explored in the uploaded artifact(s).
> 2) Identify and describe *at least* one difference between AI models of general cognition and theories of human cognition that you explored in the uploaded artifact(s).
> 3) Describe *at least* one way in which the differences you identified in (1) or (2) may impact theories of human language or general cognition.
> 4) How do you think you might use this knowledge and/or skills in the future?

Assessment Methods

Members of the Interdisciplinary AI Steering Committee will assess annually the PebblePad portfolios for the ELO identified in the Assessment Schedule (noted above)

according to the following performance levels: Exceeding, Achieving, Developing, Emerging. Students will be considered to have met mastery at or above Achieving. Anonymized data will be summarized by performance level in a table, bar chart, or other appropriate visualization.

Plan for Improving Student Learning

The results of the assessment exercise each year will be discussed at a meeting of the Interdisciplinary AI Steering Committee. If warranted by this data, curricular or instructional changes in the required core course (LING 3804) or electives will be suggested and forwarded to the curricular and/or instructional leads of the relevant course(s) for their consideration. Curricular leads are often Director of Undergraduate Studies; instructional leads are generally an instructor or course convenor. When a significant number of students do not achieve Certificate ELOs over several assessment cycles, an elective might be removed from the list of approved courses.

List of Courses

ACCAD 5301 Devising Experiential Media Systems

This course focuses on the creation of interactive and responsive spaces through the design of experiential media systems within the context of their underlying history, methodology, technology, and theory. Using a multidisciplinary and collaborative approach, students create hybrid digital-physical experiences which investigate the application of the technology used in experiential media design.

Approved for DL: no
Prereq: none listed

ACCAD 5500 Integrated Tech Lab

This course is focused on designing and creating projects using generative AI tools. This will include generating text, audio, image and video outputs, as well as leveraging all of those mediums and more as inputs.

Approved for DL: no
Prereq: Instructor permission

COMPSTD 2340 Intro to Cultures of Science & Technology

Critical analysis of the multiple relations of science to society, with emphasis on knowledge, power, authority, values, and ethics.

Approved for DL: no
Prereq: ENGLISH 1110, or GE Foundation Writing and Information Literacy course

COMPSTD 2367.04 Science and Technology in American Culture

Role of science and technology in contemporary American society; their relationship to human values; sources of concern about their impact; evaluation of selected issues.

Approved for DL: no
Prereq: EduTL 1902, 1902.04, IELP WRITE score of 80, or English Placement Level 4

CSE 3521 Survey of Artificial Intelligence I: Basic Techniques

Survey of basic concepts and techniques in artificial intelligence, including problem solving, knowledge representation, and machine learning.

Approved for DL: no

Prereq: CSE 2331 or 5331; and MATH 2174 or 2568 or 4568 or 5520H; and STAT 3201 or 3450 or 3460 or 3470 or 4201 or MATH 4530 or 5530H; and enrollment in CSE, CIS, ECE or Data Analytics major

CSE 5052 Survey of Artificial Intelligence for Non-Majors

Survey of basic concepts and techniques in artificial intelligence, including problem solving, knowledge representation, and machine learning.

Approved for DL: no

Prereq: CSE 1211, 1221, 1222, 1223, or 2221, or grad standing (not open to students with credit for CSE 3521, 4521, or 5521, or students enrolled in a CSE or CIS major)

CSE 5525 Foundations of Speech and Language Processing

Fundamentals of natural language processing, automatic speech recognition and speech synthesis; lab projects concentrating on building systems to process written and/or spoken language.

Approved for DL: no

Prereq: CSE 3521 or 5521, and CSE 5522, STAT 3460, or STAT 3470

GEOG 3703 Living with Artificial Intelligence

This course examines issues surrounding AI from the vantage point of human geography, which broadly engages the construction of personal, social, cultural, political, economic, and ecological spaces in relation to societal developments. Effects of AI sweep across space, yet unevenly as individuals and groups experience it differently.

Approved for DL: no

Prereq: none listed

LING 3701 / PSYCH 3371 Language and the Mind

The course is an introduction to the psychological processes by which humans produce and understand sentences in conversation, the means by which these processes arise in the child, and their bases in the brain. It deals with the following topics (among others): (1) Speech Perception, the process of detecting distinct 'sounds' in speech signals; (2) Lexical Access, the process of 'looking up' words in a mental dictionary; (3) Syntactic Parsing, the process of discovering the structure of sentences; (4) Semantic Interpretation, the process of using syntactic structures, word meaning and general world knowledge to interpret what we hear; (5) Language Acquisition, the process by which a child becomes able to produce and understand sentences of his or her native language(s), (f) Neurolinguistics, the study of the way language functions are implemented in the brain.

Approved for DL: yes
Prereq: LING 2000 or 2000H, or PSYCH 1100 or 1100H

LING 3802 Language and Computers

What makes Siri tick? How does Google Translate make sense of 100+ languages? In this course, you will be given insight into the fundamentals of how computers are used to represent, process and organize textual and spoken information, discussing both how language technology works and why it often doesn't. We will also consider social and ethical considerations such as privacy, job creation and loss due to language technologies, and the nature of consciousness and machine intelligence.

Approved for DL: no
Prereq: Soph standing or above

LING 3804 AI Models of Language

This non-programming course introduces students to AI language models like ChatGPT, explains how they work and what kinds of things they can do, and contrasts them with models of human language and mind. Upon completing the course, students should understand the basic mechanisms by which AI language models work and be able to explain what AI language models can and cannot do.

Approved for DL: no
Prereq: none listed

PHILOS 3800 Introduction to Philosophy of Mind

Over the last few decades, the philosophy of mind has become a central subfield of philosophy. The aim of this course is to provide a survey of the major themes, theories and issues that have dominated this subfield. Specifically, we will focus on three fundamental issues: the traditional mind-body problem (roughly, how mental and physical phenomena are related to each other); the problem of consciousness (roughly, what consciousness is and how physical organisms can have conscious experiences); and the problem of intentionality (roughly, how it is possible for our thoughts to represent the world).

Approved for DL: no
Prereq: 6 cr hrs of PHILOS course work, or permission of instructor

PHILOS 3820 Philosophy of Perception

This course is an introduction to issues in the philosophy of perception. Here are some of the questions that we'll discuss. How does perception represent the external world? And how does perception give us knowledge of the external world? Do we perceive things unconsciously as well as consciously? And if so, does conscious perception give us any advantage over unconscious perception? We will consider relevant empirical work in psychology and neuroscience as well as surveying the major philosophical theories of perception.

Approved for DL: no
Prereq: PHILOS major, or 9 cr hrs of PHILOS course work exclusive of 1500, or permission of instructor

PHILOS 3830 Consciousness

This course is an introduction to consciousness with a focus on the interactions between philosophy, psychology, and neuroscience. Topics will include concepts of consciousness, the hard problem of consciousness, neural correlates of consciousness, global workspace theories, higher-order theories, representational theories, change blindness, the persistent vegetative state, the unity of consciousness, the function of consciousness, and the role of consciousness in perception, cognition, introspection, action, and free will.

Approved for DL: yes
Prereq: 3 cr hrs of PHILOS course work, or permission of instructor

PHILOS 5840 Advanced Philosophy of Cognitive Science

In-depth examination of the influence of results in cognitive science upon the way in which philosophers approach fundamental issues about the nature of the mind.

Approved for DL: no
Prereq: 6 cr hrs in PHILOS at or above 2000-level or permission of instructor

PSYCH 3312 Memory and Cognition

This course surveys selected topics in modern cognitive psychology with an emphasis on memory, learning, categorization, reasoning, knowledge representation, judgment & decision making, and problem solving.

Approved for DL: yes
Prereq: PSYCH 1100 or 1100H

PSYCH 3513 Introduction to Cognitive Neuroscience

Cognitive Neuroscience explores the means by which mental processes are produced and represented by circuits of neurons within the human nervous system. The primary course objective is to introduce terminology and concepts that will allow you to begin to understand how cognitive function arises from interactions between groups of neurons. This class will examine the basic structure of the nervous system, and survey current methods of inquiry.

Approved for DL: yes
Prereq: PSYCH 1100 or 1100H

The Ohio State University
College of Arts and Sciences
AI Language and Mind Certificate

Faculty Program Advisor: Dr. William Schuler (schuler.77@osu.edu)
Academic Advisor: Dr. Liz McCullough (mccullough.136@osu.edu, 614-688-3109)

The AI Language and Mind Certificate affords students the opportunity to explore issues regarding the myriad relationships between AI, language, and mind. Some of these issues are longstanding ones regarding the nature of mind – e.g. what consciousness is, and whether thinking machines are possible. Other issues concern the potential scientific implications of AI technologies for the scientific study of human language and cognition. Still others concern the practical implications of these technologies for various domains of human endeavor.

Required foundational/core course:
(one of the following courses; 3 CH)

- LING 3804: AI Models of Language (3 CH)
- CSE 3521: Survey of Artificial Intelligence I: Basic Techniques (3 CH)
- CSE 5052: Survey of Artificial Intelligence for Non-Majors (3 CH)

Elective courses: (3 courses; min 9 CH)
Choose 3 courses from different department designators, with at least one from each of the below Theory and Practical lists.
Theory:

- ACCAD 5301 Devising Experiential Media Systems (3 CH)
- ACCAD 5500 Integrated Tech Lab (.5 to 3 CH)
- LING 3701 / PSYCH 3371 Language and the Mind (3 CH)
- LING 3802 Language and Computers (3 CH)
- PHILOS 3800 Philosophy of Mind (3 CH)
- PHILOS 3820 Philosophy of Perception (3 CH)
- PHILOS 3830 Consciousness (3 CH)
- PHILOS 5840 Advanced Philosophy of Cognitive Science (3 CH)
- PSYCH 3312 Memory and Cognition (3 CH)
- PSYCH 3513 Introduction to Cognitive Neuroscience (3 CH)

Practical:

- COMPSTD 2340 Intro to Cultures of Science & Technology (3 CH)
- COMPSTD 2367.04 Science Technology and Culture in the US (3 CH)
- CSE 5525 Foundations of Speech and Language Processing (3 CH)
- GEOG 3703 Living with Artificial Intelligence (3 CH)
- LING 3802 Language and Computers (3 CH)

AI Language and Mind Certificate Guidelines
Credit hours required: A minimum of 12 CH.

Transfer and EM credit hours allowed: All courses applied toward the certificate must have been taken at Ohio State. No credit by exam is permitted.

Overlap with the courses in degree:

- Max 50% overlap with courses in a major, minor or other certificate, or GE.

Grades required:

- Minimum C- for a course to be counted on the certificate.
- Minimum 2.00 cumulative GPA for all certificate course work.

X193 credits - Not permitted.

Declaring certificate and approval of coursework:
It is the student's responsibility to consult with an advisor and ensure that appropriate paperwork is submitted by the relevant deadlines.

AI Language and Mind Certificate
Declaration of Completion

Student Name: _____

Student OSU Email: _____

Student ID #: _____

Certificate Advisor Name: _____

REQUIRED CORE COURSE (one of the following, at least 3 credit hours)

Department Designator & Course #	Course Title	Credit Hours	Course Grade	Term Completed
LING 3804	AI Models of Language	3		
CSE 3521	Survey of Artificial Intelligence I: Basic Techniques	3		
CSE 5052	Survey of Artificial Intelligence for Non-Majors	3		

ELECTIVE COURSES (3 courses from different dept designators, at least 9 credit hours, with at least one theory elective and at least one practical elective)

Department Designator & Course #	Course Title	Credit Hours	Course Grade	Term Completed

CERTIFICATE ADVISOR SIGNATURE: _____

DATE: _____