



UNIVERSITY OF  
MARYLAND

OFFICE OF THE PRESIDENT

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March 11, 2026

Dr. Sanjay Rai  
Secretary  
Maryland Higher Education Commission  
217 East Redwood Street, Suite 2100  
Baltimore, MD 21202

Dear Secretary Rai:

I am writing to request approval for a new Bachelor of Arts program in Human-Centered Artificial Intelligence. The proposal for the new program is attached. I am also submitting this proposal to the University System of Maryland for approval.

The proposal was endorsed by the appropriate faculty and administrative committees. I also endorse this proposal and am pleased to submit it for your approval.

Sincerely,

A handwritten signature in black ink that reads "Darryll J. Pines".

Darryll J. Pines  
President  
Glenn L. Martin Professor of Aerospace Engineering

DJP/mdc

cc: Candace Caraco, Associate Vice Chancellor  
Jennifer King Rice, Senior Vice President and Provost  
Stephanie Shonekan, Dean, College of Arts and Humanities



Office Use Only: PP#

**Cover Sheet for In-State Institutions  
New Program or Substantial Modification to Existing Program**

Institution Submitting Proposal	University of Maryland, College Park
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*Each action below requires a separate proposal and cover sheet.*

- |   |   |
|---|---|
| <input checked="" type="radio"/> New Academic Program | <input type="radio"/> Substantial Change to a Degree Program            |
| <input type="radio"/> New Area of Concentration       | <input type="radio"/> Substantial Change to an Area of Concentration    |
| <input type="radio"/> New Degree Level Approval       | <input type="radio"/> Substantial Change to a Certificate Program       |
| <input type="radio"/> New Stand-Alone Certificate     | <input type="radio"/> Cooperative Degree Program                        |
| <input type="radio"/> Off Campus Program              | <input type="radio"/> Offer Program at Regional Higher Education Center |

Payment <input checked="" type="radio"/> Yes	Payment <input checked="" type="radio"/> R*STARS # JJ620191	Payment	Date
Submitted: <input type="radio"/> No	Type: <input type="radio"/> Check #	Amount: 850	Submitted: 1/15/2026

Department Proposing Program	Department of Philosophy		
Degree Level and Degree Type	Bachelor's; Bachelor of Arts		
Title of Proposed Program	Human-Centered Artificial Intelligence		
Total Number of Credits	120		
Suggested Codes	HEGIS: 079905	CIP: 30.3101	
Program Modality	<input checked="" type="radio"/> On-campus <input type="radio"/> Distance Education (fully online) <input type="radio"/> Both		
Program Resources	<input checked="" type="radio"/> Using Existing Resources <input type="radio"/> Requiring New Resources		
Projected Implementation Date <small>(must be 60 days from proposal submission as per COMAR 13B.02.03.03)</small>	<input checked="" type="radio"/> Fall <input type="radio"/> Spring <input type="radio"/> Summer            Year: 2026		
Provide Link to Most Recent Academic Catalog	URL: <a href="https://academiccatalog.umd.edu/">https://academiccatalog.umd.edu/</a>		

Preferred Contact for this Proposal	Name: Michael Colson		
	Title: Senior Coordinator for Academic Programs		
	Phone: 301-405-5626		
	Email: mcolson@umd.edu		

President/Chief Executive	Type Name: Darryll J. Pines		
	Signature:	Date: 03-11-2026	

Date of Approval/Endorsement by Governing Board:	
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Revised 4/2025

## **A. Centrality to the University's Mission and Planning Priorities**

*Description.* Artificial Intelligence (AI) is transforming nearly every sector of society, reshaping how people work, create, govern, communicate, and make decisions. As AI technologies increasingly influence public life, democratic institutions, cultural production, healthcare, education, and the economy, there is a growing need for graduates who not only understand how AI systems function, but who are equipped to evaluate, design, and guide these systems in ways that align with human values and societal priorities.

The University of Maryland, College Park (UMD) proposes to establish a **Bachelor of Arts in Human-Centered Artificial Intelligence**, housed in the Department of Philosophy within the College of Arts and Humanities and developed in close collaboration with the Artificial Intelligence Interdisciplinary Institute at Maryland (AIM). The program is designed as an interdisciplinary major that integrates foundational technical knowledge in artificial intelligence with sustained engagement in the arts, humanities, social sciences, and other human-facing disciplines.

The program has two central objectives. First, it provides students—regardless of prior technical background—with accessible but rigorous training in the core computational and formal foundations of AI, including programming, machine learning, and formal methods. Second, it prepares students to critically assess and shape AI systems by drawing on disciplines such as ethics, philosophy, linguistics, design, public policy, law, communication, history, and cultural studies. Students will graduate with the capacity to analyze AI systems for fairness, transparency, accountability, and societal impact, and to contribute meaningfully to interdisciplinary teams developing or governing AI technologies.

Unlike traditional computer science pathways in which AI is introduced late in the curriculum and primarily from a technical perspective, the B.A. in Human-Centered Artificial Intelligence is structured from the outset to integrate technical and humanistic inquiry. The curriculum embeds ethical, social, and cultural analysis alongside programming and formal foundations, ensuring that students understand AI as both a computational and a societal phenomenon.

*Relation to Strategic Goals.* The proposed Bachelor of Arts in Human-Centered Artificial Intelligence directly advances [UMD's Strategic Plan 2022–2032](#), particularly its commitment to “reimagine learning” and to address humanity’s grand challenges. The program reimagines AI education as interdisciplinary, inclusive, and publicly engaged. By integrating technical foundations with sustained engagement in ethics, policy, culture, and design from the outset, the major moves beyond traditional computing models and reflects the Strategic Plan’s call for innovative, integrative approaches to teaching and learning. At the same time, the program prepares students to confront one of the defining challenges of our era: ensuring that artificial intelligence systems are developed and governed in ways that advance the public good. By embedding analysis of fairness, accountability, transparency, and democratic governance into the core curriculum, the program equips graduates to shape AI technologies in alignment with human values and societal priorities.

The University of Maryland is intent on becoming a leader in AI education. In Spring 2024, UMD launched the Artificial Intelligence Interdisciplinary Institute at Maryland (AIM), bringing together AI experts across campus to focus on responsible, ethical development and use of the technology to advance public good in industry, government and society. Given the rapid pace of AI development, a core part of AIM’s mission is to reimagine learning in the face of these drastic changes through the introduction of new interdisciplinary programs, including this proposed Bachelor of Arts program and a Bachelor of Science degree in Artificial Intelligence: Computing Structures for AI Systems, which will be proposed in a separate proposal.

*Funding and Institutional Commitment.* The program will utilize existing coursework for foundational and interdisciplinary applications and will develop new courses focused on the technical and human-facing aspects of AI. The new major will be launched with a strategic reallocation of existing institutional resources, allowing for targeted new instructional and administrative hires without requiring additional funding. The University of Maryland has prioritized this program as part of its broader investment in interdisciplinary education and responsible innovation, consistent with the goals of the *Fearlessly Forward* strategic plan. New instructional needs will be met through a combination of existing faculty capacity and planned hires within affiliated units, supported by internally reallocated funds. Similarly, administrative infrastructure, including an Assistant Program Director, academic advising staff, and technical support, will be added through strategic redeployment of resources. This funding model reflects the University’s commitment to launching high-impact academic programs that advance institutional priorities while ensuring fiscal sustainability and cross-campus collaboration.

## **B. Critical and Compelling Regional or Statewide Need as Identified in the State Plan**

*Need.* Artificial intelligence is transforming government operations, public services, business practices, media ecosystems, healthcare delivery, education systems, and democratic institutions. As AI systems are increasingly deployed in decision-making processes that affect employment, housing, policing, healthcare access, financial services, and information distribution, there is a growing societal need for professionals who understand not only how AI systems function, but how they affect individuals, communities, and public institutions.

The State of Maryland has formally recognized both the transformative potential and the risks associated with AI technologies. Governor Wes Moore’s Executive Order 01.01.2024.02, “Catalyzing the Responsible and Productive Use of Artificial Intelligence in Maryland State Government,” emphasizes the importance of ensuring that AI use in state government is responsible, ethical, beneficial, and trustworthy. The Order underscores the need for fairness, equity, transparency, privacy protections, and accountability in AI deployment.

The proposed Bachelor of Arts in Human-Centered Artificial Intelligence directly supports this statewide priority by preparing graduates who can critically evaluate AI systems, identify bias and risk, contribute to governance frameworks, and ensure that AI applications align with public values. Graduates will be equipped to serve in government agencies, regulatory bodies, nonprofit organizations, media institutions, and private industry—particularly within

Maryland’s unique Washington, D.C.–Maryland–Virginia (DMV) ecosystem, where federal, state, and defense agencies are actively integrating AI technologies into public-facing systems.

In addition to workforce demand, there is a compelling educational need. AI education at research universities has been concentrated in enrollment-limited technical majors. This structure can unintentionally restrict access to students who lack prior technical preparation or who wish to engage AI from interdisciplinary or humanistic perspectives. The proposed B.A. program addresses this gap by creating an accessible, structured pathway into AI that integrates technical training with ethical, social, cultural, and policy analysis. In doing so, the program expands educational opportunity in a high-demand, emerging field.

*State Plan.* The proposed program aligns with Priority 5 in the 2022 [Maryland State Plan for Postsecondary Education](#): “Maintain the commitment to high-quality postsecondary education in Maryland,” specifically addressing the Action Item to “Identify innovative fields of study.” Artificial intelligence is reshaping government, industry, media, healthcare, and civic life across Maryland, creating a statewide need for graduates who understand not only how AI systems function, but how they affect individuals, communities, and public institutions. The Bachelor of Arts in Human-Centered Artificial Intelligence responds to this need by establishing an innovative interdisciplinary degree that integrates foundational technical AI training with sustained engagement in ethics, policy, culture, and societal impact. By creating an accessible pathway into AI that embeds fairness, accountability, and public responsibility into its core curriculum, the program advances Maryland’s commitment to high-quality, forward-looking postsecondary education that prepares graduates to shape emerging technologies in service of the public good.

### **C. Quantifiable and Reliable Evidence and Documentation of Market Supply and Demand in the Region and State**

According to the US Bureau of Labor Statistics, Computer Systems Design and Related Services is projected to be the fastest growing area of employment with an increase of 19.5% from 2023 to 2033: “Heightened demand for workers in this industry is expected due to outsourcing of IT functions to specialized firms, increased cybersecurity needs, and continued adoption of advanced technologies, such as artificial intelligence (AI).”<sup>1</sup> The state of Maryland data also projects that Computer and Mathematical Occupations will have the greatest increase, with 14.32% from 2023 to 2033.<sup>2</sup>

The Washington, D.C.–Maryland–Virginia (DMV) region demonstrates particularly high concentration of AI-related employment activity due to the presence of federal agencies, defense contractors, technology firms, consulting organizations, financial institutions, media enterprises, and policy organizations integrating AI into operational and decision-making systems. As AI systems are incorporated into governance, regulatory oversight, public

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<sup>1</sup> US Bureau of Labor Statistics Career Outlook. The fastest growing industry sector, 2023-33: Professional, Scientific, and Technical Services. <https://www.bls.gov/careeroutlook/2025/article/fastest-growing-industry-sector.htm>

<sup>2</sup> Maryland Department of Labor. Maryland Occupational Projections: 2023-2033-Workforce Information and Performance. <https://labor.maryland.gov/lmi/iandoproj/maryland.shtml>

communication, healthcare administration, infrastructure planning, and cultural production, there is growing need for professionals who possess both foundational AI literacy and the capacity to analyze its ethical, legal, and societal implications.

While Maryland institutions offer programs in computer science and applied artificial intelligence, there is currently no undergraduate program in the state specifically designed to integrate technical AI foundations with sustained training in ethics, governance, culture, and human-centered design. The proposed Bachelor of Arts in Human-Centered Artificial Intelligence addresses this gap by preparing graduates for interdisciplinary roles such as AI policy analyst, AI ethics consultant, technology strategist, user experience researcher, program manager, compliance analyst, and public-sector AI advisor. At steady state, the program anticipates graduating approximately 50-70 students annually, contributing responsibly to workforce capacity in an area of documented technological expansion.

#### **D. Reasonableness of Program Duplication**

There is currently no undergraduate Bachelor of Arts degree in Maryland specifically focused on Human-Centered Artificial Intelligence. While several institutions in the state offer programs in computer science, information technology, or applied artificial intelligence, these programs are primarily technical in orientation and focus on system development, programming, or IT operations. None integrates foundational AI training with sustained engagement in ethics, governance, culture, design, and public-facing disciplines as a core structural feature of the degree.

Four institutions in the state have artificial intelligence-oriented bachelor's level programs. Capitol Technology University has programs in Artificial Intelligence and Artificial Intelligence and Autonomous Systems. The University of Maryland Global Campus has a bachelor's program in Artificial Intelligence, and the University of Baltimore has a program in Artificial Intelligence for IT Operation. Bowie State University has a program in Artificial Intelligence that was recently approved in Fall 2025. These programs serve different student populations and institutional missions. As the state's flagship public research university, UMD is uniquely positioned to offer an interdisciplinary, research-informed, and humanities-integrated AI degree that reflects its land-grant mission and national leadership in both artificial intelligence research and public scholarship.

Given the rapid expansion of AI across sectors and the absence of a comparable human-centered AI undergraduate program in the state, the proposed degree does not represent unreasonable duplication. Rather, it constitutes a necessary and distinct expansion of high-quality AI education in Maryland.

#### **E. Relevance to Historically Black Institutions (HBIs)**

As noted above, Bowie State University, a Historically Black Institution, has recently received approval for a bachelor's program in Artificial Intelligence (Fall 2025). Bowie State's program is a technically oriented program with a different purpose than our proposed Bachelor of Arts

program. There are currently no undergraduate Bachelor of Arts programs in Human-Centered Artificial Intelligence offered by Maryland’s Historically Black Institutions. The proposed degree expands statewide educational capacity in artificial intelligence without duplicating an existing HBI program.

Given the rapid growth of artificial intelligence across industry, government, media, healthcare, and public policy, increasing Maryland’s overall capacity to educate students in AI—particularly in interdisciplinary and human-centered approaches—is essential to meeting workforce and civic needs. The proposed program does not draw away from HBIs nor diminish their academic offerings; rather, it contributes to the broader statewide ecosystem of AI education.

#### **F. Relevance to the identity of Historically Black Institutions (HBIs)**

The proposed Bachelor of Arts in Human-Centered Artificial Intelligence does not diminish or alter the unique missions or institutional identities of Maryland’s Historically Black Institutions. The program reflects the University of Maryland’s established identity as the state’s flagship public research university, with nationally recognized strengths in philosophy, ethics, public policy, communication, linguistics, information studies, and artificial intelligence research. Its interdisciplinary design—integrating technical AI foundations with sustained engagement in the arts, humanities, and social sciences—is consistent with UMD’s land-grant mission and research-intensive character.

The degree does not replicate or redirect distinctive academic programs at HBIs, nor does it interfere with their institutional priorities. Rather, it expands statewide capacity in artificial intelligence education within a framework that is uniquely aligned with UMD’s research infrastructure, interdisciplinary institutes, and flagship mission.

#### **G. Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes**

*Curricular Development.* In the spring of 2024, UMD launched the Artificial Intelligence Interdisciplinary Institute at Maryland (AIM), bringing together AI experts across campus to focus on responsible, ethical development and use of the technology to advance public good in industry, government and society. Given the rapid pace of AI development, a core part of AIM’s mission is to reimagine learning in the face of these drastic changes through the introduction of new interdisciplinary programs.

The curriculum for the Bachelor of Arts in Human-Centered Artificial Intelligence was developed in response to the following guiding considerations:

- Growing sophistication and societal impact of AI technologies, creating demand for AI education not only within computer science but across the arts, humanities, social sciences, and other non-technical disciplines.
- Limitations of existing “CS+X” models, such as interdisciplinary philosophy and computer science programs at Oxford, Illinois, Northeastern, Carnegie Mellon, University College London, and Purdue, which combine traditional computer science

and humanities coursework while retaining prerequisite structures that can restrict accessibility for students without prior technical preparation.

- UMD’s institutional strengths in philosophy and formal reasoning, including logic, epistemology, philosophy of language, philosophy of mind, and ethics, which enable the creation of a purpose-built technical sequence that provides an accessible “path to AI” while integrating ethical and social analysis from the outset.
- The success of interdisciplinary models such as Stanford’s Symbolic Systems program, whose structure (gateway course, core sequence, specializations, capstone) informs this degree, adapted to center artificial intelligence and require sustained engagement with its ethical and societal implications.

*Faculty Oversight.* The Bachelor of Arts in Human-Centered Artificial Intelligence will be administered by the Department of Philosophy in collaboration with the Artificial Intelligence Interdisciplinary Institute at Maryland (AIM). A tenure-track faculty member in Philosophy will serve as Director of the program and will be responsible for curricular coherence, coordination across participating units, assessment oversight, and ongoing program development. A Steering Committee composed of the Director and faculty representatives from AIM and participating departments will provide interdisciplinary guidance and review. This structure ensures that the program maintains both academic rigor and cross-campus collaboration while allowing governance to remain within the academic unit in which the degree is housed.

Faculty teaching in the program include tenured/tenure-track and professional-track faculty from Philosophy and collaborating departments. Graduate teaching assistants may be used for lower-level foundational courses in some specializations.

*Educational Objectives and Learning Outcomes.* The B.A. in Human-Centered Artificial Intelligence aims to: (1) provide students from a variety of backgrounds with the hands-on, technical skills necessary to engage with AI in a meaningful way; (2) provide students with training in disciplines from the arts, the humanities, the social sciences, along with other human-facing disciplines, allowing them to understand, evaluate, and contribute to work in AI; (3) equip students with the ability to write clearly and concisely, read and distill information carefully, and construct arguments in an organized and convincing manner; and (4) inspire a love of learning from a diverse array of scholarly disciplines.

The learning outcomes for the program are as follows:

1. Apply concepts and ideas from human-facing disciplines to critically evaluate the implications of current and emerging AI technologies.
2. Critically evaluate the ethical, social, and cultural implications of AI technologies and their applications.
3. Analyze AI systems for biases, transparency, and accountability to ensure fairness, accountability, and responsible outcomes.
4. Write technical reports explaining the implementation, challenges, and outcomes of AI projects.
5. Contribute to the design and development of AI applications with an understanding of their technical foundations while ensuring alignment with societal and human values.

*Institutional assessment and documentation of learning outcomes.* For more information on program and learning outcomes assessment, see Appendix A.

*Course requirements.* The curriculum for the Bachelor of Arts in Human-Centered Artificial Intelligence is structured to integrate foundational technical training with sustained ethical and interdisciplinary inquiry. Students complete a gateway course and a technical sequence in programming, formal methods, artificial intelligence, and machine learning, alongside required coursework in ethics and social analysis. They then pursue depth through a structured specialization and complete a capstone experience that synthesizes technical competence with human-centered evaluation and application.

Course Code	Course Title	Credits
<b>Technical Core Courses (18 Credits)</b>		
HCAI100	AI and the Human Experience	3
HCAI120	Programming for AI 1	3
HCAI121	Programming for AI 2	3
HCAI200	Formal Methods in AI	3
HCAI300	Artificial Intelligence	3
HCAI301	Machine Learning	3
<b>Ethical and Social Core Courses (9 Credits)</b>		
PHIL211	AI & Ethics	3
INST204	Designing Fair Systems	3
WGSS115	Gender, Race and Computing	3
<b>Capstone (3 Credits)</b>		
HCAI490	Human-Centered Artificial Intelligence Capstone	3
<b>Specialization (choose one of the following):</b>		<b>18-21</b>
	Arts	
	Design and User Experience	
	Ethics	
	Language and Cognition	
	Logic, Epistemology, and Machine Learning	
	Law, Policy, and Governance	
	Society, Culture, and Technology	
<b>Total Credits</b>		<b>48-51</b>

See Appendix B for the Specialization course requirements. Appendix D provides a list of course descriptions. Please note that courses with the HCAI course prefix are new courses proposed for the program and have not yet been approved through the university’s course review process and are therefore not listed in the university academic catalog.

*General Education.* All UMD students are required to complete [General Education requirements](#) in Fundamental Studies (Mathematics, Writing, and Analytic Reasoning) and Distributive Studies in the sciences, humanities, and social sciences. The Distributive Studies area includes a diversity requirement, two practice-based courses, and two “Big Question”

courses that address societal grand challenges. Maryland community college students who complete the associate degree and are admitted to UMD are deemed to have completed their General Education requirements, except for Professional Writing (typically completed in the 3<sup>rd</sup> year of study). See Appendix E for how students in the program will fulfill their General Education requirements.

*Accreditation or Certification Requirements.* There are no specialized accreditation or certification requirements associated with this program.

*Other Institutions or Organizations.* The university is not planning to contract with another institution or non-collegiate organization for this program.

*Student Support.* Students enrolled in the Bachelor of Arts in Human-Centered Artificial Intelligence will receive clear, complete, and timely information regarding program requirements, course sequencing, specialization pathways, technology expectations, and available academic resources through the Undergraduate Catalog and program website. Dedicated advising will be provided through the Department of Philosophy advising office, supplemented by faculty mentorship from the Academic Director and affiliated faculty, particularly for research, capstone, and interdisciplinary experiences. Students will have access to university-wide academic support services including tutoring, writing assistance, career services, mental health resources, and financial aid counseling. Given the program's technical rigor, students will also receive guidance regarding required computing competencies and access to campus high-performance computing infrastructure and IT support.

*Marketing and Admissions Information.* The program will be clearly and accurately described in the university website and be marketed at university recruiting events. The University of Maryland's Office of Undergraduate Admissions markets nationally to a broad base of interested students who are admitted to the university as a whole. If the program is approved, it will be included among the more than 100 possible undergraduate majors available to students.

## **H. Adequacy of Articulation**

The University of Maryland respectfully requests a waiver of the requirement to provide a formal transfer pathway agreement for the Bachelor of Arts in Human-Centered Artificial Intelligence based on the unique nature of this program.

Foundational coursework in mathematics and computing will continue to articulate, and transfer students will remain eligible for admission under established university transfer standards. The University remains committed to ongoing collaboration with Maryland community colleges as artificial intelligence curricula continue to evolve statewide.

## **I. Adequacy of Faculty Resources**

*Program faculty.* Appendix C contains a list of faculty members who will teach in the program. The Bachelor of Arts in Human-Centered Artificial Intelligence will be supported by tenured/tenure-track and professional-track faculty from the Department of Philosophy and collaborating units across campus. Many participating faculty members hold joint or affiliated appointments with the Artificial Intelligence Interdisciplinary Institute at Maryland (AIM), ensuring both disciplinary depth and interdisciplinary integration. The Department of Philosophy provides particular strength in technical areas overlapping AI, including logic, epistemology, philosophy of language, philosophy of mind, and ethics, which support the program's integrated technical and human-centered approach. Existing faculty resources are sufficient to support the core and specialization courses, and the university anticipates strategic hiring in AI focus areas.

*Faculty training.* Faculty teaching in the program will use the university's learning management system along with its extensive electronic resources. They will have access to instructional development opportunities available across the College Park campus, including those offered as part of the Teaching and Learning Transformation Center, many of which are delivered in a virtual environment. Instructors will work with the learning design specialists on campus to incorporate best practices when teaching in the online environment.

#### **J. Adequacy of Library Resources**

The University of Maryland Libraries assessment concluded that the Libraries are able to meet, with current resources, the curricular and research needs of the program.

#### **K. Adequacy of Physical Facilities, Infrastructure, and Instructional Resources**

The university is not anticipating overall enrollment growth as a result of this major (we expect a shift in major selection by matriculating students); therefore, no new tuition revenue is assumed in identifying resources. Some core coursework is already offered by academic units across campus. For new courses, reallocated resources will come from redirection of tuition revenue at the campus level, redirection of instructional resources from the collaborating departments, and from other reallocated resources within the university. As enrollments grow, additional instructional support—including faculty lines and teaching assistantships—will be aligned with demand through ongoing coordination with the college, AIM, and university administration. The university affirms that physical facilities, computing infrastructure, and instructional equipment are adequate to initiate the program.

The program will be delivered primarily in existing classroom spaces within the College of Arts and Humanities and collaborating units across campus. The technical sequence requires access to standard computing environments for programming and machine learning instruction, which are supported through UMD's established IT infrastructure, enterprise learning management system, and campus-wide access to computing resources. Additional support for technical resources will be allocated to the program by the Provost's Office.

The program will be supported by established advising and administrative infrastructure within the Department of Philosophy and the Artificial Intelligence Interdisciplinary Institute at Maryland (AIM). Academic advising will be provided by a dedicated advising team under the leadership of the program's Academic Director to ensure coordinated degree planning and student success. These resources are integrated within existing departmental and college structures and supported in coordination with the College of Arts and Humanities.

The proposed program will be in-person, but for the online components of the coursework, UMD maintains an Enterprise Learning Management System (ELMS). ELMS is a Web-based platform for sharing course content, tracking assignments and grades, and enabling virtual collaboration and interaction. All students and faculty have access to UMD's electronic mailing system.

#### **L. Adequacy of Financial Resources**

The budget tables reflect the reallocation of internal UMD resources to operate the program. In particular, the budget tables reflect a redistribution of students into the new program without increasing the overall UMD enrollment. There will also be new courses taught for the program and this reallocation will come from funding reserved by the university specifically for new AI programs.

##### *Resources (see Table 1):*

This table assumes an enrollment of approximately 250 full-time students and 15 part-time students per year with increases over time. The reallocated resources reflect that some funds will be shifted from within the Department of Philosophy and collaborating departments and the remaining funds will be set aside by UMD leadership for developing AI programs.

1. Line 1 reflects the reallocated resources anticipated to support the program.
2. We assume no additional tuition revenue will be generated by this new major since we do not anticipate a significant change in the overall undergraduate population.
3. Our model assumes that most students will be full-time undergraduates enrolled at UMD.
4. A portion of the reallocation reflects the redistribution of existing students and courses from existing majors to the new program.
5. No external sources of funding are assumed.
6. No other sources of funding are assumed.

##### *Expenditures (see Table 2):*

Most faculty and staff are already in place to operate this program. Some new courses, alongside additional staff, advising, and graduate assistant support will be required for the major.

1. Line 1 reflects the faculty who will teach the new courses in the program as well as the faculty who will continue their course instruction within collaborating academic units.
2. Line 2 reflects the administrative support.
3. Line 3 reflects the staff support.
4. Line 4 reflects graduate student positions.

5. The additional equipment, library, and operational expenses will mainly be reserved for informational resource and technology related purchases.

### **M. Adequacy of Program Evaluation**

Formal program review is carried out according to the University of Maryland's policy for Periodic Review of Academic Units, which includes a review of the academic programs offered by, and the research and administration of, the academic unit (<http://www.president.umd.edu/policies/2014-i-600a.html>). Program Review is also monitored following the guidelines of the campus-wide cycle of Learning Outcomes Assessment ([https://irpa.umd.edu/Assessment/loa\\_overview.html](https://irpa.umd.edu/Assessment/loa_overview.html)). Faculty within the department are reviewed according to the University's Policy on Periodic Evaluation of Faculty Performance (<http://www.president.umd.edu/policies/2014-ii-120a.html>). Since 2005, the University has used an online survey instrument that standardizes student course feedback across campus. The survey has standard, university-wide questions and allows for supplemental, specialized questions from the academic unit offering the course.

### **N. Consistency with Minority Student Achievement goals**

The Bachelor of Arts in Human-Centered Artificial Intelligence supports expanding access to education in artificial intelligence, a high-demand and rapidly evolving field. Unlike enrollment-limited technical majors, the B.A. is designed to provide an accessible pathway into AI for students from different academic and socioeconomic backgrounds, including those who may not enter traditional computer science tracks. The curriculum embeds sustained engagement with issues of bias, fairness, equity, and accountability in AI systems through required coursework in ethics, gender, race, and computing, and designing fair systems, ensuring that questions of social justice are foundational rather than peripheral to the degree.

The program will collaborate with existing campus initiatives that promote inclusion in computing and interdisciplinary education, including partnerships with AIM and recruitment programs across the College of Arts and Humanities and related units, and will support recruitment efforts targeting internal transfer students, community college pathways, and underrepresented populations. Through its structure and content, the program advances UMD's commitment to broadening participation in emerging technology fields while promoting student success across a variety of communities.

### **O. Relationship to Low Productivity Programs Identified by the Commission**

N/A

### **P. Adequacy of Distance Education Programs**

This program is not intended for distance education.

**Table 1: Resources**

<b>Resources Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
1. Reallocated Funds	\$1,000,000	\$1,050,000	\$1,075,000	\$1,100,000	\$1,125,000
2. Tuition/Fee Revenue (c+g below)	\$0	\$0	\$0	\$0	\$0
a. #FT Students	250	275	303	333	366
b. Annual Tuition/Fee Rate	\$23,994	\$24,714	\$25,456	\$26,219	\$27,006
c. Annual FT Revenue (a x b)	\$5,998,500	\$6,796,350	\$7,713,168	\$8,730,927	\$9,884,196
d. # PT Students	15	17	18	20	22
e. Credit Hour Rate	\$933.40	\$961.40	\$990.24	\$1,019.95	\$1,050.55
f. Annual Credit Hours	12	12	12	12	12
g. Total Part Time Revenue (d x e x f)	\$168,012	\$196,126	\$215,675	\$244,360	\$276,860
3. Grants, Contracts, & Other External Sources	\$0	\$0	\$0	\$0	\$0
4. Other Sources	\$0	\$0	\$0	\$0	\$0
<b>TOTAL (Add 1 - 4)</b>	<b>\$1,000,000</b>	<b>\$1,050,000</b>	<b>\$1,075,000</b>	<b>\$1,100,000</b>	<b>\$1,125,000</b>

**Table 2: Expenditures**

<b>Expenditure Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
1. Faculty (b+c below)	\$598,500	\$616,455	\$634,949	\$653,997	\$673,617
a. #FTE	3	3	3	3	3
b. Total Salary	\$450,000	\$463,500	\$477,405	\$491,727	\$506,479
c. Total Benefits	\$148,500	\$152,955	\$157,544	\$162,270	\$167,138
2. Admin. Staff (b+c below)	\$133,000	\$136,990	\$141,100	\$145,333	\$149,693
a. #FTE	1	1	1	1	1
b. Total Salary	\$100,000	\$103,000	\$106,090	\$109,273	\$112,551
c. Total Benefits	\$33,000	\$33,990	\$35,010	\$36,060	\$37,142
3. Total Support Staff (b+c below)	\$59,850	\$61,646	\$63,495	\$65,400	\$67,362
a. #FTE	0.75	0.75	0.75	0.75	0.75
b. Total Salary	\$45,000	\$46,350	\$47,741	\$49,173	\$50,648
c. Total Benefits	\$14,850	\$15,296	\$15,754	\$16,227	\$16,714
4. Graduate Assistants (b+c)	\$114,540	\$117,976	\$121,515	\$125,161	\$128,916
a. #FTE	2	2	2	2	2
b. Stipend	\$72,000	\$74,160	\$76,385	\$78,676	\$81,037
c. Tuition Remission	\$18,780	\$19,343	\$19,924	\$20,521	\$21,137
d. Benefits	\$23,760	\$24,473	\$25,207	\$25,963	\$26,742
5. Equipment	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
6. Library	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
7. New or Renovated Space	\$0	\$0	\$0	\$0	\$0
8. Other Expenses: Operational Expenses	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
<b>TOTAL (Add 1 - 8)</b>	<b>\$980,890</b>	<b>\$1,008,067</b>	<b>\$1,036,059</b>	<b>\$1,064,890</b>	<b>\$1,094,587</b>

## **Appendix A: Program and Learning Outcomes Assessment**

The B.A. in Human-Centered Artificial Intelligence is committed to establishing, monitoring, and maintaining high standards to deliver an exceptional student learning experience and achieve outstanding educational outcomes. These standards will be applied across all aspects of the program, including courses, activities, advising, faculty effectiveness, administrative services, and technical support. Regular assessments will guide the development and improvement of the curriculum to ensure continuous enhancement.

The program's goals, outcomes, courses, and services will be evaluated regularly under an Assessment Plan developed and overseen by the Director in consultation with the Steering Committee and the Department of Philosophy. This plan will align with the UMD Undergraduate Program Learning Outcomes Assessment Plan and will outline responsibilities, metrics, timelines, and procedures for evaluation.

The overall performance of the curriculum will be assessed through two primary measures: direct evaluation of student mastery of the learning outcomes and indirect evaluation by tracking alumni career trajectories over time. To assess alumni success, the Director will collaborate with the Career Center to track initial job placement, mid-career achievements, and conduct surveys of graduates and employers.

Individual courses and their outcomes will be assessed on a rotating schedule, with a subset of courses reviewed in detail each year and all courses evaluated every four years. Priority will be given to courses directly overseen by the program, with coordination for courses supported by other departments. Mastery of course material will be assessed through examinations, projects, or other appropriate measures.

The curriculum and course assessments will take place annually during the Spring semester. An annual assessment report will be submitted to the Provost each fall, summarizing assessment results and providing recommendations for program improvements based on those findings.

## Appendix B: Specialization Curricula

Each specialization is 18 credits, except for the Law, Policy, and Governance Specialization, which requires GVPT170 and 18 additional elective credits.

### Arts Specialization

Course	Course Title	Credits
AMST260	American Culture in the Information Age	3
ARCH418J	Artificial Intelligence and Architecture: Background, Applications, and the Design Process	3
ARTT255	Introduction to Digital Art and Design Processes	3
ARTT370	Elements of Digital Media	3
COMM371	Communication and Digital Media	3
COMM373	Communication and Digital Visual Narrative	3
COMM449A	Artificial Intelligence in the Information Age	3
THET385	Media Design	3
THET475	History of Art, Architecture, and Decor for the Theatre	3
CINE319	Special Topics in Documentary, Animation, Experimental, and Other Visual Media	3

### Design and User Experience Specialization

Course	Course Title	Credits
INST430	User Experience Research	3
INST431	AI and UX	3
INST432	AI and Human Creativity	3
INST433	Trust, Design, and AI	3
INST436	User Modeling and Personalization	3
INST480	Technology Design Ethics	3

### Ethics Specialization

Course	Course Title	Credits
INST366	Privacy, Security and Ethics for Big Data	3
PHIL341	Ethical Theory	3
PHIL344	Philosophy of Race	3
PHIL347	Philosophy of Law	3
PHIL438	Topics in Value Theory	3
PHPE308	Special Topics in Philosophy, Politics, and Economics	3
HCAI410	Fairness	3

### Language and Cognition Specialization

Course	Course Title	Credits
LING311	Syntax I	3

LING312	Syntax II	3
LING440	Grammars and Cognition	3
PHIL202	Know Thyself: Wisdom Through Cognitive Science	3
PHIL360	Philosophy of Language	3
PHIL366	Philosophy of Mind	3
PHIL408	Topics in Contemporary Philosophy	3
PHIL488	Topics in Philosophy of Cognitive Studies	3

### Law, Policy, and Governance Specialization

Course	Course Title	Credits
Required		
GVPT170	American Government	3
Choose Remaining Courses from Below (18 Credits)		
COMM330	Argumentation and Public Policy	3
GVPT331	Courts, Law and Justice	3
GVPT431	Introduction to Constitutional Law	3
GVPT432	Civil Rights and the Constitution	3
HIST338F	What Does Government Do?: Rethinking American Political History	3
HIST454	Constitutional History of the United States: From Colonial Origins to 1865	3
HIST455	Constitutional History of the United States: Since 1865	3
PHIL347	Philosophy of Law	3
PHIL438	Topics in Value Theory (Philosophy and Law)	3
PHIL445	Contemporary Political Philosophy	3
PLCY100	Foundations of Public Policy	3
PLCY313	Advocacy in the American Political System	3
WGSS200	Introduction to WGSS: Gender, Power, and Society	3

### Logic, Epistemology, and Machine Learning Specialization

Course	Course Title	Credits
PHIL362	Theory of Knowledge	3
PHIL366	Philosophy of Mind	3
PHIL370	Logical Theory I: Metatheory	3
PHIL470	Logical Theory II: Incompleteness and Undecidability	3
PHIL478	Topics in Philosophical Logic	3
HCAI410	Fairness	3
CMSC422	Introduction to Machine Learning	3

### Society, Culture, and Technology Specialization

Course	Course Title	Credits
AMST260	American Culture in the Information Age	3
ENGL318	Special Topics in Digital and New Media Studies	3
ENGL467	Creative Approaches to Digital Textuality	3

HIST407	Technology and Inequality	3
IMDM150	Digital Media Theory and Culture	3
JOUR389W	News Alchemy: Journalism and Artificial Intelligence	3
JOUR458A	Machine Editors: Search Engines, Social Media, AI and The News	3
PHIL344	Philosophy of Race	3
WGSS280	Gender and Science in Film and Media	3

## Appendix C: Faculty Involved in Major

The chart below lists faculty members are projected to regularly teach in the program. Some courses will be taught by graduate assistants, who are not listed here. All faculty are full-time unless otherwise indicated.

P/T indicates part-time status.

<b>Name</b>	<b>Highest Degree Earned, Institution and Program</b>	<b>UMD Title</b>	<b>Courses</b>
Omer Agha	PhD, New York University; Linguistics	Assistant Professor	LING312
Tonia Bleam	PhD, University of Delaware; Linguistics	Senior Lecturer	LING311
Beth Bonsignore	PhD, University of Maryland; Information Studies	Associate Research Professor	INST432
Tom Brinck	M.S., University of Michigan; Cognitive Psychology	Instructor (P/T)	INST431
Ilaria Canavotto	PhD, University of Amsterdam; Logic	Assistant Professor	HCAI100; HCAI300
Fabrizio Cariani	PhD, University of California, Berkeley; Logic & Methodology of Science	Professor & Chair	HCAI121; HCAI490; PHIL344; PHIL408; PHIL478
Marine Carpuat	Ph.D., Hong Kong University of Science and Technology	Associate Professor	CMSC422
Peter Carruthers	D. Phil, University of Oxford; Philosophy	Distinguished University Professor	PHIL202; PHIL220
Alexandra Colburn	MFA, University of Maryland, College Park; Theatre	Lecturer (P/T)	THET385
Toby Egan	PhD, University of Minnesota; Human Resource Development	Associate Professor	PLCY100
Gerard Evans	JD, University of Baltimore; Law	Lecturer	PLCY313

Jason Farman	PhD, University of California, Los Angeles; Theatre	Professor	AMST260
David Freund	PhD, University of Michigan-Ann Arbor; History	Associate Professor	HIST338F
Oliver Gaycken	PhD, University of Chicago; English	Associate Professor	CINE319
Ilse Genovese	M.A., Czech Republic; Interpreting and Translation (English & German)	Lecturer	COMM371
Kenneth Glazer	JD, Stanford University; Law	Lecturer	PHIL347
Jen Golbeck	PhD, University of Maryland; Computer Science	Professor	INST436
Caroline Hickman	PhD, University of North Carolina; Art History	Lecturer	THET475
John F. Horty	PhD, University of Pittsburgh; Philosophy	Distinguished University Professor	HCAI200
John Horty	PhD, University of Pittsburgh; Philosophy	Professor	PHIL370
Samuel Kerstein	PhD, Columbia University; Philosophy	Professor	PHIL438
Martin Kobren	PhD, University of Maryland; Political Science	Senior Lecturer	GVPT170
Hooman Koliji	PhD, Virginia Tech; Architecture and Design Research	Associate Clinical Professor	ARCH418J
Kari Kraus	PhD, Rochester; Textual and Digital Studies	Associate Professor	ENGL467
Nick Laskowski	PhD, University of Southern California; Philosophy	Assistant Professor	PHIL211; PHIL341
Ellen Lau	PhD, University of Maryland, College Park; Linguistics	Associate Professor	LING440
Nathan Lauffer	PhD, Northwestern University; Philosophy	Lecturer	PHIL362

Sydney Lewis	PhD, University of Washington; African-American Culture, Black Feminisms, and Queer and Gender Studies	Senior Lecturer	WGSS200
Hallie Liberto	PhD, University of Wisconsin- Madison; Philosophy	Associate Professor	PHIL438
Alexis Lothian	PhD, University of Southern California; English, Gender Studies	Associate Professor	ENGL318; WGSS115
Wayne Lutters	PhD, University of California- Irvine; Computer and Information Science	Professor	INST204; INST366
Jessica Mathiason	PhD, University of Minnesota; Comparative Studies in Discourse and Society	Assistant Research Professor	WGSS280
Dan Moller	PhD, Princeton University; Philosophy	Professor	PHIL445; PHPE308
Adam Nixon	PhD, University of Maryland; Theatre and Performance Studies	Senior Lecturer	COMM373
Jade Olson	PhD, University of Maryland, College Park; Communication	Associate Clinical Professor	COMM330
Eric Pacuit	PhD, CUNY; Computer Science	Professor	HCAI120; HCAI301; HCAI410; PHIL470
Stefano Passeri	M.Arch, Southern California Institute of Architecture; Architecture	Lecturer	ARTT370; IMDM150
Narendra Ratnapala	MFA, University of Maryland, College Park; Art	Lecturer	ARTT255
Michael Ross	PhD, University of North Carolina Chapel Hill; History	Professor	HIST454; HIST455
Elizabeth Schechter	PhD, University of Maryland; Philosophy	Associate Professor	PHIL366; PHIL488
Katie Shilton	PhD, University of California, Los Angeles; Information Studies	Professor	INST480

Michael Spivey	PhD, University of Maryland; Government and Politics	Principal Lecturer	GVPT331; GVPT432
Daniel Trielli	PhD, Northwestern University; Media Technology and Society	Assistant Professor	JOUR458A
Alexander Williams	PhD, Linguistics, University of Pennsylvania; Linguistics	Associate Professor	PHIL360
Caro Williams- Pierce	PhD, University of Wisconsin- Madison; Curriculum & Instruction (Mathematics Education)	Assistant Professor	INST430; INST433
Derek Willis	B.A., University of Pittsburgh; Communication and Rhetoric	Lecturer	JOUR389W
Thomas Zeller	PhD, University of Munich; Modern History	Professor	HIST407
Lamia Zia	MA, University of Iowa; Journalism	Lecturer	COMM449A

## **Appendix D: Course Descriptions**

### **AMST Courses**

#### **AMST260 American Culture in the Information Age 3 Credits**

Examines the ways in which content and form of public information interact with the culture, families and individuals.

### **ARCH Courses**

#### **ARCH418J Artificial Intelligence and Architecture: Background, Applications, and the Design Process 3 Credits**

A study of architecture and AI.

### **ARTT Courses**

#### **ARTT255 Introduction to Digital Art and Design Processes 3 Credits**

Introduction to basic software and principles of digital imaging, and how they are applied to art and design. Topics covered: Digital image construction and manipulation, Vector-Based digital techniques (layout, typography, etc), time-based digital techniques (video and audio composition and manipulation), and basic interactivity (web-design). Digital media used to explore visual principles established in ARTT100.

#### **ARTT370 Elements of Digital Media 3 Credits**

Exploration of image creation and manipulation, interactivity, and linkages between digital audio and video. Emphasis on issues in contemporary digital art.

### **CINE Courses**

#### **CINE319 Special Topics in Documentary, Animation, Experimental Cinema, and Other Visual Media 3 Credits**

Examine the possibilities of non-narrative cinema, or cinema that is structured differently from the fiction feature film, as well as other media (television, digital imagery, and photography) that entertain a close relationship with cinema in terms of form, content, and audience. Content varies.

### **CMSC Courses**

#### **CMSC422 Introduction to Machine Learning 3 Credits**

Machine Learning studies representations and algorithms that allow machines to improve their performance on a task from experience. This is a broad overview of existing methods for machine learning and an introduction to adaptive systems in general. Emphasis is given to practical aspects of machine learning and data mining.

## **COMM Courses**

### **COMM330 Argumentation and Public Policy 3 Credits**

Contemporary theories of argumentation with special emphasis on methods of formulating and critiquing public policy argument.

### **COMM371 Communication and Digital Media 3 Credits**

A basic introduction to communication in the digital age. Through class lectures, assignments and projects, students will learn to effectively use new media for the purpose of strategic message creation and management used in the field of communication. Students will apply the basics of visual layout skills and the principles of visual design to create messages using words and images.

### **COMM373 Communication and Digital Visual Narrative 3 Credits**

Examination of the traditional style of visual communication, its practices and theoretical underpinnings juxtaposed against contemporary digital media aesthetics and techniques. Utilizing a variety of communication skills and new media tools, students will plan, write, shoot, edit, and upload digital visual narratives.

### **COMM449A Artificial Intelligence in the Information Age 3 Credits**

Artificial Intelligence and communication in the information age.

## **ENGL Courses**

### **ENGL318 Special Topics in Digital and New Media Studies 3 Credits**

Explore digital and new media culture, narrative, poetics, and rhetoric. Topics may include creative expression in new media platforms and analytical approaches to electronic literature, social media, interactive fiction, literary datasets, digital writing, and artificial intelligence.

### **ENGL467 Creative Approaches to Digital Textuality 3 Credits**

Examines electronic literature and other aspects of the literary world online with a focus on experimental writing with computers. Topics may include digital fiction and storytelling, bots, book hacking, flash fiction, narrative in games, and artificial-intelligence-generated fiction, poetry, and art. No programming experience required.

## **GVPT Courses**

### **GVPT170 American Government 3 Credits**

A comprehensive study of national government in the United States.

### **GVPT331 Courts, Law and Justice 3 Credits**

An introductory course to the study of law with emphasis on how lawyers and judges think and argue. Topics include, contract law, property, family law, torts, and criminal procedure.

**GVPT431 Introduction to Constitutional Law 3 Credits**

A systematic inquiry into the general principles of the American constitutional system, with special reference to the role of the judiciary in the interpretation and enforcement of the federal constitution.

**GVPT432 Civil Rights and the Constitution 3 Credits**

A study of civil rights in the American constitutional context, emphasizing freedom of religion, freedom of expression, minority discrimination, and the rights of defendants.

**HCAI Courses****HCAI100 AI and the Human Experience 3 Credits**

A non-technical survey course introducing foundational concepts in artificial intelligence and examining their historical development and societal implications. Students explore major AI applications such as recommender systems, large language models, facial recognition, and predictive analytics, alongside questions about ethics, bias, governance, and human impact. The course provides a conceptual framework for understanding AI as both a technological and social phenomenon.

**HCAI120 Programming for AI 1 3 Credits**

Introduces core programming concepts tailored to artificial intelligence applications. Students learn variables, data types, conditionals, loops, functions, input/output operations, and introductory object-oriented programming using Python. The course emphasizes hands-on coding, debugging, and problem-solving to build foundational programming skills necessary for AI development.

**HCAI121 Programming for AI 2 3 Credits**

Builds on foundational programming skills and introduces libraries essential for AI applications, including tools for numerical computation, data manipulation, and visualization. Students explore key mathematical concepts relevant to AI, including logic, graph theory, linear algebra, probability, and statistics, applying these concepts through programming exercises.

**HCAI200 Formal Methods in AI 3 Credits**

Provides foundational mathematical and logical tools essential for understanding artificial intelligence systems. Topics include propositional and predicate logic, sets, functions, relations, graph theory, recursion, linear algebra, and probability. Students learn how these formal methods support reasoning, modeling uncertainty, and the development of reliable AI systems.

**HCAI300 Artificial Intelligence 3 Credits**

Introduces core principles and techniques in artificial intelligence, including symbolic methods, probabilistic reasoning, and data-driven approaches. Topics may include search strategies, constraint satisfaction, automated planning, Bayesian networks, hidden Markov models, and foundational machine learning methods. Students develop both conceptual understanding and practical experience applying AI techniques.

**HCAI301 Machine Learning 3 Credits**

Provides a comprehensive introduction to machine learning paradigms, including supervised learning, unsupervised learning, and deep learning. Students study algorithms for classification, regression, pattern recognition, and neural networks, and gain practical experience building and evaluating models. The course also considers the strengths, limitations, and ethical implications of machine learning systems.

**HCAI410 Fairness 3 Credits**

Examines theories of fairness in philosophy, social choice theory, and algorithmic decision-making, and explores how these concepts apply to artificial intelligence systems. Students analyze bias, equity, distributive justice, and accountability in automated systems and study formal approaches to fairness in machine learning and data-driven decision processes.

**HCAI490 Human-Centered Artificial Intelligence Capstone 3 Credits**

A culminating seminar in which students integrate technical knowledge and human-centered analysis to examine a significant problem involving artificial intelligence. Students complete a substantial project, research paper, or applied experience that demonstrates their ability to evaluate, design, or critique AI systems in light of ethical, social, and disciplinary considerations.

**HIST Courses****HIST338F What Does Government Do?: Rethinking American Political History 3 Credits**

Historical study of US political history.

**HIST407 Technology and Inequality 3 Credits**

How are social inequality and technology related? Have technologies exacerbated social tensions or have they ameliorated them? In the age of climate change, pandemics, and economic transformations, this class looks at technology in history to examine previous transitions in production, infrastructures, computing, and pollution. The emphasis is on the interplay between society and technology in the 19th and 20th centuries.

**HIST454 Constitutional History of the United States: From Colonial Origins to 1865 3 Credits**

The interaction of government, law, and politics in the constitutional system. The nature and purpose of constitutions and constitutionalism; the relationship between the constitution and social forces and influences, the way in which constitutional principles, rules, ideas, and institutions affect events and are in turn affected by events. The origins of American politics and constitutionalism through the Constitutional Convention of 1787. Major constitutional problems such as the origins of judicial review, democratization of government, slavery in the territories, secession, and civil war.

**HIST455 Constitutional History of the United States: Since 1865 3 Credits**

American public law and government, with emphasis on the interaction of government, law, and politics, and the relationship between the constitution and social forces and influences, the way in which constitutional principles, rules, ideas, and institutions affect events and are in turn affected by events. Major crises in American government and politics such as Reconstruction,

the rise of corporate power, civil liberties during wartime, the New Deal era, the civil disorders of the 1960s.

## **IMDM Courses**

### **IMDM150 Digital Media Theory and Culture 3 Credits**

An introduction to the fundamental structures and themes of digital culture in contemporary society. This course will provide you with a theoretical grounding in which to understand the current landscape of digital media culture, design and art. As an introductory course for the Immersive Media Design major, the focus will be on contextualizing immersive digital media such as virtual reality, augmented reality, immersive projection, and electronic art installation through reading, writing and discussion. Students will have opportunities to experience a range of these technologies first hand.

## **INST Courses**

### **INST204 Designing Fair Systems 3 Credits**

Examines the design of sociotechnical systems with attention to fairness, accountability, transparency, and equity. Students explore how data-driven and algorithmic systems can reproduce or mitigate structural inequalities, and develop strategies for designing systems that promote inclusive and responsible outcomes.

### **INST366 Privacy, Security and Ethics for Big Data 3 Credits**

Evaluates major privacy and security questions raised by big data, Internet of Things (IoT), wearables, ubiquitous sensing, social sharing platforms, and other AI-driven systems. Covers the history of research ethics and considers how ethical frameworks can and should be applied to digital data practices and emerging technologies.

### **INST430 User Experience Research 3 Credits**

Introduces research methods for understanding user needs and behaviors in technology design. Examines qualitative, quantitative, and mixed-method approaches to user-centered design and prepares students to conduct systematic research to inform the development and evaluation of AI-enabled systems.

### **INST431 AI and UX 3 Credits**

Explores how generative AI is transforming user experience practice and human-computer interaction. Students examine how AI tools can augment design workflows, generate prototypes, expand design spaces, and reshape interaction models while critically evaluating long-term implications for UX methodology.

### **INST432 AI and Human Creativity 3 Credits**

Investigates the interaction between generative AI systems and human creativity across domains such as art, design, and scientific discovery. Students examine the capabilities and limitations of generative models alongside cognitive and social theories of creative production.

**INST433 Trust, Design, and AI 3 Credits**

Analyzes how the design of user interfaces for AI systems shapes perceptions of usability, reliability, and trust. Students evaluate contemporary AI interfaces and develop design strategies that promote transparency, responsible use, and informed interaction.

**INST436 User Modeling and Personalization 3 Credits**

Examines recommender systems, personalization algorithms, and adaptive interfaces that tailor content and services to individual users. Covers technical foundations alongside ethical considerations related to bias, autonomy, and user agency.

**INST480 Technology Design Ethics 3 Credits**

Explores ethical approaches to technology design in contemporary workplaces. Students evaluate tools, frameworks, and interventions intended to embed human values, rights, and social responsibility into the development of AI and digital systems.

**JOUR courses****JOUR389W News Coverage of Special Topics: News Alchemy: Journalism and Artificial Intelligence 3 Credits**

Advanced training and practice in writing and reporting news in one specialized field of interest. This course focuses on the role of Artificial Intelligence in journalism.

**JOUR458A Special Topics in Journalism: Machine Editors: Search Engines, Social Media, AI and The News (3 Credits)**

Issues of special concerns and current interest. This course focuses on automated systems and their interactions with journalism.

**LING Courses****LING200 Introductory Linguistics 3 Credits**

An exploration of the nature of human language. Introduction to the basic concepts and methodology of modern linguistic analysis (sound systems, word formation, sentence structure). Examination of the factors that contribute to dialect differences and the social implications of language variation. Additional topics may include: semantics, pragmatics, language change, writing systems, typology, language universals, comparison with other communication systems.

**LING240 Language and Mind 3 Credits**

The study of language as a cognitive phenomenon. Ways of representing people's knowledge of their native language, ways in which that knowledge is attained naturally by children, and how it is used in speaking and listening. Additional topics may include: animal communication, language and the brain, language and thought.

**LING311 Syntax I 3 Credits**

Basic concepts, analytical techniques of generative syntax, relation to empirical limits imposed by viewing grammars as representations of a component of human mind. Aspects of current theories.

### **LING312 Syntax II 3 Credits**

Continuation of LING311. Development of theories of syntax. Criteria for revising theories. Methods and strategies of scientific efforts to explain natural phenomena.

### **LING440 Grammars and Cognition 3 Credits**

Relationship between the structure, development and functioning of grammars and the structure, development and functioning of other mental systems. Interpretations of experimental and observational work on children's language, aphasia, speech production and comprehension.

### **LING444 Child Language Acquisition 3 Credits**

Examines language acquisition in infancy and early childhood: the nature of children's linguistic representations and how these develop naturally. Role of (possible) innate linguistic structure and interaction of such structure with experience. Evaluation of methods and results of current and classic research leading to contemporary models of language development.

## **PHIL Courses**

### **PHIL202 Know Thyself: Wisdom Through Cognitive Science 3 Credits**

How do we improve our decision making? Cognitive science demonstrates that self-knowledge isn't as easy as we think, and that there are numerous biases and fallacies that impact our decision-making in ways that are hard for us to be aware of. In this course you will learn what some of these are and how they have been discovered, and you will explore potential strategies for avoiding these fallacies and for making wiser choices.

### **PHIL211 AI & ETHICS 3 Credits**

An introduction to a major subfield of contemporary Philosophy, namely applied ethics, and the experience of using some major tools in the practice of philosophy more generally, namely, the construction and formal evaluation of arguments, conceptual analysis, the use of thought experiments, and clear, direct and persuasive writing. Learning how to execute the latter will involve an intense iterative process. The substantive focus of the course will be the ethical evaluation of Artificial Intelligence (AI) in some of its current and potentially future incarnations. We'll examine algorithmic opacity, algorithmic bias and decision-making, autonomous weapons systems, human-robot interaction, and artificial moral agents, in order to uncover what, if any, ethical issues they give rise to.

### **PHIL341 Ethical Theory 3 Credits**

A critical examination of classical and contemporary systems of ethics, such as those of Aristotle, Kant, Mill, and Rawls.

### **PHIL344 Philosophy of Race 3 Credits**

A survey of philosophical arguments involving race and racism. Guiding questions will include: How have philosophers and scientists conceived of the concept of race? Is race a coherent concept? Does it help us explain differences in performance and behavior? What makes racism, racial prejudice, and discrimination wrong? What is the point of equality? Do we owe reparations to victims of racism?

**PHIL347 Philosophy of Law 3 Credits**

Examination of fundamental concepts related to law, e.g. legal systems, law and morality, justice, legal reasoning, responsibility.

**PHIL360 Philosophy of Language 3 Credits**

The nature and function of language and other forms of symbolism from a philosophical perspective.

**PHIL362 Theory of Knowledge 3 Credits**

Some central topics in the theory of knowledge, such as perception, memory, knowledge, and belief, skepticism, other minds, truth, and the problems of induction.

**PHIL366 Philosophy of Mind 3 Credits**

An introduction to core issues in the philosophy of mind, focusing especially on the basic metaphysical question of dualism versus physicalism.

**PHIL370 Logical Theory I: Metatheory 3 Credits**

This course is an introduction to logical "metatheory", that is, to logical reasoning about logic systems themselves. Topics include alternative proof-theoretic presentations of logical systems as well as soundness and completeness theorems for propositional and first-order logic. Along the way, we will deepen our understanding of the elementary set-theoretic concepts underlying first order logic. Other topics may include basic results in the semantics of first order logic (such as the Craig interpolation theorem, the Beth definability theorem, or the Lowenheim-Skolem theorem).

**PHIL408 Topics in Contemporary Philosophy 3 Credits**

An intensive examination of contemporary problems and issues. Source material will be selected from recent books and articles.

**PHIL438 Topics in Value Theory 3 Credits**

An intensive examination of contemporary problems and issues in ethics, aesthetics, political philosophy and related areas. Source material will be selected from recent books and articles.

**PHIL445 Contemporary Political Philosophy 3 Credits**

Major trends in contemporary political philosophy: liberal, libertarian, communitarian, socialist, feminist.

**PHIL470 Logical Theory II: Incompleteness and Undecidability 3 Credits**

Introduces the formal theory of computation, and then presents the central limitative results of modern first-order logic: Church's undecidability theorem and Godel's first and second incompleteness theorems. The primary focus of the course is a thorough technical study of these fundamental results, but we will also discuss some of the philosophical issues they raise. Further topics may include second-order logic.

#### **PHIL478 Topics in Philosophical Logic 3 Credits**

Philosophical logics result from the application of formal techniques to problems of philosophical interest; these logics often have applications in other areas as well, such as AI, linguistics, psychology, economics, and law. This course will either concentrate on a particular family of philosophical logics (such as modal or temporal or defeasible logics) or else survey a number different logical systems.

#### **PHIL488 Topics in Philosophy of Cognitive Studies 3 Credits**

Examination of a particular topic or problem in philosophy of cognitive studies.

#### **PHPE Courses**

#### **PHPE308 Special Topics in Philosophy, Politics, and Economics 3 Credits**

A sustained investigation of a topic at the intersection of philosophy, politics and economics.

#### **PLCY Courses**

#### **PLCY100 Foundations of Public Policy 3 Credits**

A survey course, focusing on public policy institutions and analytical issues as well as on overview of key public policy problems. Students will be introduced to public policy as a discipline, with a brief overview of the actors and institutions involved in the process, and familiarize themselves with the kinds of problems typically requiring public action. The course will examine these problems from a multijurisdictional and multisectoral perspective. Specific policy areas examined include education policy, health policy, economic and budgetary policy, criminal justice policy, environmental policy, and national and homeland security policy. The course should permit students to have broad foundational exposure to the field that will give them a solid base for more advanced courses.

#### **PLCY313 Advocacy in the American Political System 3 Credits**

Introduces students to the creation of law through the legislative process with a special focus on the Maryland General Assembly.

#### **THET Courses**

#### **THET385 Media Design 3 Credits**

Focuses on learning the grammar and conceptual thinking behind multimedia design for live performance. Students will learn how our new multimedia tools can enhance the sense of

liveness as well as explore the different ways in which technology can be implemented into preproduction thinking, rehearsal experimenting, and ultimately, effective use in performance.

### **THET475 History of Art, Architecture, and Decor for the Theatre 3 Credits**

Study of Western art, architecture, and decor and their practical application to theatrical production.

### **WGSS Courses**

#### **WGSS115 Gender, Race and Computing 3 Credits**

Race and gender have shaped computing from its earliest histories to contemporary debates over bias in search algorithms, surveillance, and AI. As computational processes shape ever more dimensions of everyday life from the personal to the global scale, understanding how they operate and how power operates within them grows ever more important. Combating racism and sexism is not as simple as ensuring the pool of programmers and engineers is more diverse; structures of power are embedded in digital technologies as they are in all aspects of our society, and we must learn to perceive their operation if we hope to transform them. We will examine how racism and sexism operate in the field of computer science and in everyday uses of digital technologies, while studying how feminist and racial justice movements have created alternative approaches. This class is for anyone who wishes to better understand the relationships between digital technology, structural power, and social justice.

#### **WGSS200 Introduction to WGSS: Gender, Power, and Society 3 Credits**

Examines constructions of race, class, sexuality, ability, and gender relations from a social science multi-disciplinary perspective. The course interrogates the ways that systems of hierarchy and privilege are created, enforced, and intersect through the language of race, class, sexuality, and national belonging. The course will provide students with the skills to examine how systems of power manifest in areas such as poverty, division of labor, health disparities, policing, violence. In addition to examining the impact of systems of power, students will reflect on their own location within the exercise of racialized, and gendered power relations. This course encourages students to understand and critique these systems both personally and politically.

#### **WGSS280 Gender and Science in Film and Media (3 Credits)**

Isaac Azimov once said of science fiction that it is the genre that "deals with the reaction of human beings to changes in science and technology." With this definition in mind, we will embark on a critical exploration of sci-fi film and other media, using it as a lens for analyzing society's deepest fears and most furtive hopes. Our investigation will center on the liminal space between hegemonic culture and its prescribed excesses. These liminal spaces--between self and other, disability and enhancement, cultural hybridization, and gender crossing--shift in response to real-world sociopolitical tensions. We will consider feminist and anti-racist media scholars' concerns over representation, authorship and ideology alongside questions of technological change. Students will use analytical and creative assignments to explore not only

how the scientific imaginary serves as fertile ground for feminist, disability, and anti-racist critique, but also provides a locus for alternative futures.

**Appendix E: B.A. in Human-Centered Artificial Intelligence (with General Education code)**

Year 1	Fall		Spring	
Oral?	Course	Credit	Course	Credit
	ENGL101 (AW)	3	Natural Science (NS)	3
	MATH115 (MA)	3	Analytic Reasoning (AR)	3
	HCAI100	3	Humanities (HU, UP)	3
	HCAI120	3	HCAI121	3
	ARHU158	3	WGSS115	3
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>
Year 2	Fall		Spring	
	Course	Credit	Course	Credit
	Humanities (HU)	3	Oral Communication (OC)	3
	History/Social Sciences (HS, CC)	3	Scholarship in Practice (SP)	3
	*College Global Engagement #1	3	*College Global Engagement #1	3
	HCAI200	3	HCAI300	3
	PHIL211 (SP)	3	INST204	3
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>
Year 3	Fall		Spring	
	Course	Credit	Course	Credit
	Natural Science Lab (NL)	4	History/Social Sciences (HS)	3
	HCAI301	3	Specialization	3
	Specialization Course	3	Specialization	3
	Elective	3	Specialization	3
	Elective	3	Elective	3
	<b>Total</b>	<b>16</b>	<b>Total</b>	<b>15</b>
Year 4	Fall		Spring	
	Course	Credit	Course	Credit
	Professional Writing (PW)	3	HCAI490	3
	Specialization	3	Elective	3
	Specialization	3	Elective	3
	Elective	3	Elective	3
	Elective	3	Elective	2
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>14</b>
			<b>Total Credits</b>	<b>120</b>

## University of Maryland General Education Requirements Overview

### Fundamental Studies: 15 Credits

Fundamental Studies Academic Writing	3	AW
Fundamental Studies Professional Writing	3	PW
Fundamental Studies Oral Communication	3	OC
Fundamental Studies Mathematics	3	MA
Fundamental Studies Analytic Reasoning <sup>1</sup>	3	AR

<sup>1</sup> If a student passes an Analytic Reasoning course that requires a Fundamental Studies Math course as a prerequisite, then the Fundamental Studies Math course is considered to be fulfilled (e.g., students who place into and pass a calculus course, which counts for FS-AR, do not need to take a less advanced Math course to fulfill the FS-MA requirement).

### Distributive Studies: 25 Credits

Distributive Studies Natural Sciences	3	NS
Distributive Studies Natural Science Lab Course <sup>2</sup>	4	NL
Distributive Studies History and Social Sciences	6	HS
Distributive Studies Humanities	6	HU
Distributive Studies Scholarship in Practice <sup>3</sup>	6	SP

<sup>2</sup> A second DS-NL course can fulfill the DS-NS course requirement.

<sup>3</sup> Students learn and practice skills of critical evaluation and participate in the process of applying knowledge in the pursuit of a tangible goal. At least one course must be outside of the major.

### Big Question Courses: 6 Credits<sup>4</sup>

The signature courses of the UMD General Education program, Big Question courses investigate a significant issue in depth and demonstrate how particular disciplines and fields of study address problems.

Big Question Course	6	IS
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<sup>4</sup> Big Question credits may be double-counted with courses taken for the Distributive Studies requirement.

### Diversity: 4-6 Credits<sup>5</sup>

Diversity Understanding Plural Societies <sup>6</sup>		
Courses examine how diverse cultural and ethnic groups co-exist.	3-6	UP
Diversity Cultural Competence		
Courses help students develop skills to succeed in a diverse world.	0-3	CC

<sup>5</sup> These credits may be double-counted with courses taken for the Distributive Studies requirement.

<sup>6</sup> Students may take either two DV-UP courses or one DV-UP course and one DV-CC course.

## **\*College of Arts and Humanities (ARHU) Global Engagement Requirement**

To expand ARHU students' understanding of other cultures and languages in an increasingly global society, ARHU students must complete the "Global Engagement Requirement" (GE requirement). Learning another language produces deep knowledge of cultural and linguistic differences while opening pathways for common understanding.

Students who are proficient in a world language other than English will have the opportunity to demonstrate that in order to fulfill the GE requirement. Students who earn a Seal of Biliteracy through the State of Maryland will automatically fulfill the requirement; students who are native speakers will be able to take the World Language Placement in a proctored setting to complete the requirement. Students whose native language is not offered at UMD will also have the opportunity to demonstrate proficiency through an outside agency, either ACTFL or Avant.

Students who need to complete the GE requirement can do so in one of three ways:

### **Option 1: Study of a World Language**

Requirement: Students will take world language coursework at UMD according to their score on the World Language Placement. Please consult the ARHU website or an ARHU advisor for a list of the approved course sequences.

All courses in the sequence can be taken under the Pass-Fail grading method (standard registration deadlines and policies will apply). Notes: (a) First semester students and students on academic probation/dismissal are not eligible to take classes under the Pass-Fail grading method. (b) Students pursuing a major or minor in a language cannot take a class to be applied to the major/minor under the Pass-Fail grading method.

Options:

1. Students can take courses to the designated level of one language (i.e. GERS103 and GERS203).
2. Students can take one level of two different languages (i.e. ARAB101 and FREN103).

### **Option 2: Cultural Immersion through Study Abroad**

Requirement: Students will participate in a semester-long study abroad experience in a country where English is not the primary language. A learning contract is required prior to departure.

The study abroad experience must include:

1. At least the first year/elementary level language of the host country before or during the experience (or equivalent as determined by the ARHU World Language Placement policy);
2. A reflection component that will challenge students to assess their pre-departure, in-country and post-study abroad experience;
3. Depending on the location, students will need to participate in one of the following pre-approved engagement experiences:
  - a. Internship (45 hours on site during the semester abroad)
  - b. Service Learning (45 hours of participation during the semester abroad)
  - c. A living situation involving daily interaction with host nationals during the term (e.g., a pre-approved home stay with a host national family)
  - d. Completion of a series of ELMS modules throughout the study abroad experience
  - e. Other - an engagement experience approved in advance of departure

NOTE: Past study abroad experiences will not be considered retroactively.

### **Option 3: Individually-designed Engagement Experience**

Requirement: Students may also create an individually-designed experience that achieves the learning outcomes of the Global Engagement requirement.

This option must include at least a first year/elementary level language course before or during the experience (or equivalent as determined by the ARHU World Language Placement policy).

Options:

1. A pre-approved short- or long-term study abroad program that has been deemed appropriate for inclusion in this option by ARHU in conjunction with the Education Abroad Office (a learning contract is required prior to departure). Students proposing study abroad in an English-speaking country must choose to study a language that has significance to the historical or current culture of the host country (i.e. studying Gaelic in Scotland), in addition to finding an appropriate engagement activity where the language is emphasized. Students will need to research and discuss the intersection of the chosen language and culture in their learning contract.
2. Participation in/completion of the UMD Global Fellows Program.