



AMERICAN  
UNIVERSITY OF BEIRUT

FACULTY OF ARTS & SCIENCES

# Curriculum Revision in the Era of Artificial Intelligence

Hoda Baytiyeh  
AUB-FAS



## Why?

- The rapid acceleration of AI technologies requires higher education institutions to:

**Rethink and Redesign curricula**

- The goal is to ensure
  - **relevance,**
  - **academic integrity,**
  - **and future-ready competencies for learners.**



## How?

- Curriculum revision is not a superficial update
- it is a **systemic transformation** focused on aligning
  - learning outcomes,
  - pedagogies,
  - assessments,
  - and academic policies

with the **capabilities and challenges introduced by AI.**



# 1. AI Literacy for students

- Develop AI literacy outcomes that include:
  - Understanding AI concepts (machine learning, data, algorithms).
  - Creative application (using AI tools--solve real problems).
  - Critical analysis of AI bias, data ethics, social implications.
  - Responsible use (understand data privacy, academic integrity).



## 2. Faculty Capacity Building

- Professional Development: basic AI principles, ethical use, and practical classroom integration.
- Communities of Practice: Encourage teachers to share AI teaching practices and co-develop lesson plans.
- Co-Teaching with AI: Use AI tutors, graders, or adaptive platforms alongside human instruction.



### 3. Assessment Adaptation

- Move from memorization to competency-based assessment.
- Include AI-enhanced formative assessments (adaptive quizzes, personalized feedback).
- Authentic assessment
  - Case studies/scenarios
  - Evidence based practice
  - Reflection based on personal experience



## 4. Ethical & Policy Framework

- Involve students and Instructors in ethical discussions around AI.
- Develop clear guidelines for AI use in teaching and learning
  - transparency,
  - data privacy,
  - academic integrity.



## Stakeholders?

- The Center of Teaching and Learning
- The IT-ACAD
- Deans and Associates, Chairs of Departments
- Provost office

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## Major Steps?

- Syllabi (Academic Integrity)
  - Restrictive course policy
  - Permissive course policy, with acknowledgment
  - Conditional course policy, when explicitly permitted
- Instructors are using AI in teaching (ex: Notebooklm)
- Teaching prompting to students
  - How to communicate with AI
  - Students critique, compare, or correct AI output



## Major Steps?

- AI curriculum mapping (iDesign and QualityMatters)
- Integration in LMS (Moodle):
  - AI tutor (Startup-Zaker)
  - AI grading and Feedback
  - Integrating AI to avoid plagiarism
- Fund at FAS to Integrate AI into Teaching Practices  
<https://www.aub.edu.lb/fas/Pages/integratingai.aspx>



# Recommendations?

- No one-Size-fits-all
  - Context, Specialty, Curriculum, Tool...
- Continuous Evaluation (Pilot, Evaluate and Scale)
  - Lessons Learned (Observe and Analyse implications)
- Encourage Interdisciplinary Collaboration
  - Joint courses/research projects
  - AI-themed minors or certificates
  - Shared curriculum development



**Thank You!**

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Université Saint-Joseph de Beyrouth  
Faculté de langues et de traduction  
École de traducteurs et d'interprètes de Beyrouth

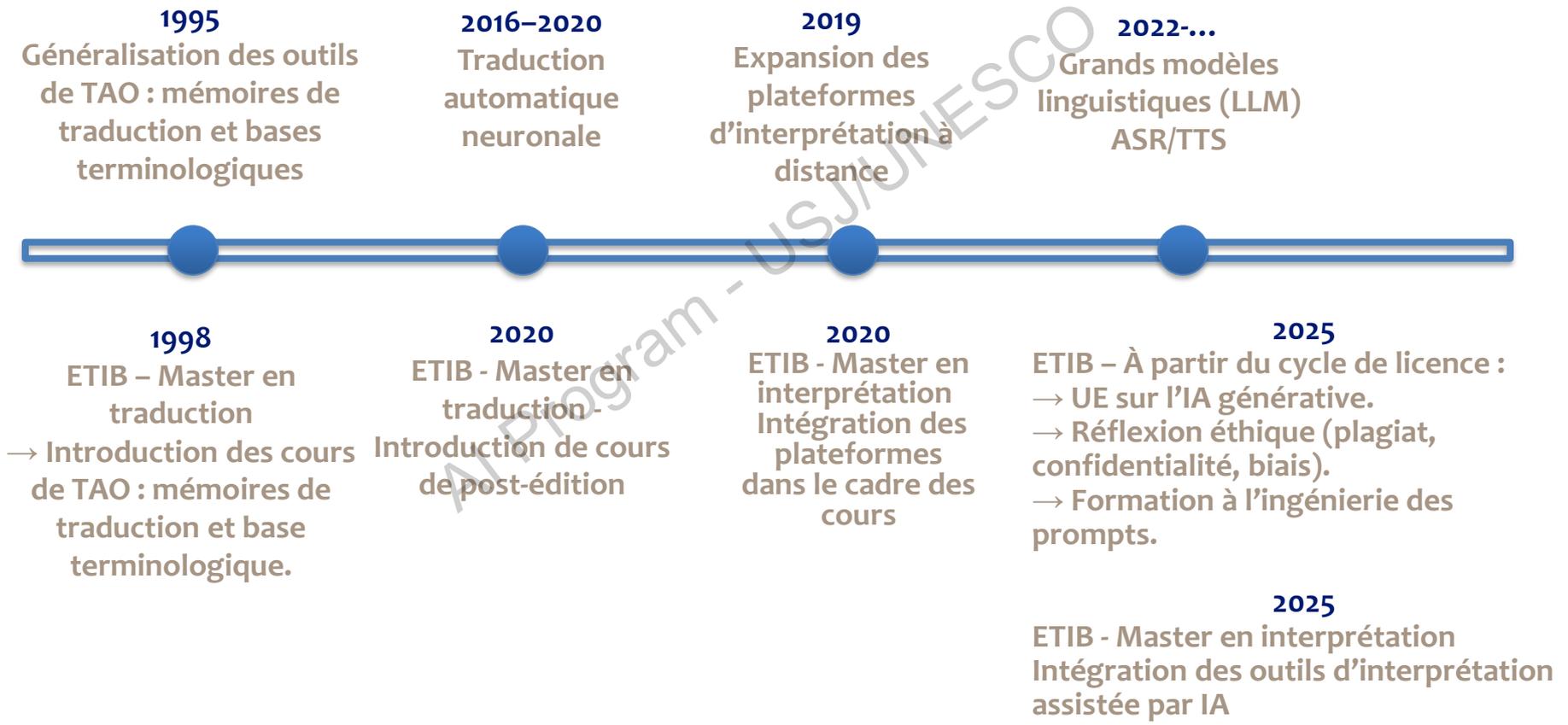
## Table ronde en ligne

Révision des programmes de formation à l'ère  
de l'IA dans des universités au Liban

Le cas de l'École de traducteurs et  
d'interprètes de Beyrouth (ETIB)



# Intégration proactive des technologies





## Revisiter les programmes : Un processus continu...

État des lieux pour redéfinir le profil de sortie / et le référentiel de compétences

- Perception du public à l'égard des professions langagières
- Profil des étudiants
- Performance des technologies
- Besoins du marché de l'emploi

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# Une démarche collaborative : Parties prenantes

## Commission de l'orientation stratégique du numérique et de l'intelligence artificielle de l'USJ

### Orientations stratégiques pour l'intégration de l'intelligence artificielle (IA) dans l'enseignement et l'apprentissage à l'Université Saint-Joseph de Beyrouth

L'USJ prend le parti de **ne pas interdire** l'utilisation des **IA génératives** et de former ses futurs diplômés à un **usage éclairé** qui favorise le développement de leur esprit critique et de leur créativité.

Étant consciente du potentiel de l'intelligence artificielle (IA) pour soutenir l'apprentissage et l'enseignement ainsi que des défis et des enjeux liés son usage, l'**USJ œuvre pour assurer le soutien nécessaire à toutes les parties prenantes** afin qu'elles soient en mesure *☺ d'utiliser les différentes formes d'IA de manière efficace, responsable et éthique*, dans le respect des règlements universitaires en vigueur.

Par conséquent, l'USJ prévoit l'**implémentation de mesures concrètes pour favoriser un ☺ usage efficace, responsable et éthique de l'IA dans les activités d'enseignement, d'apprentissage et de recherche**, à savoir, entre autres :



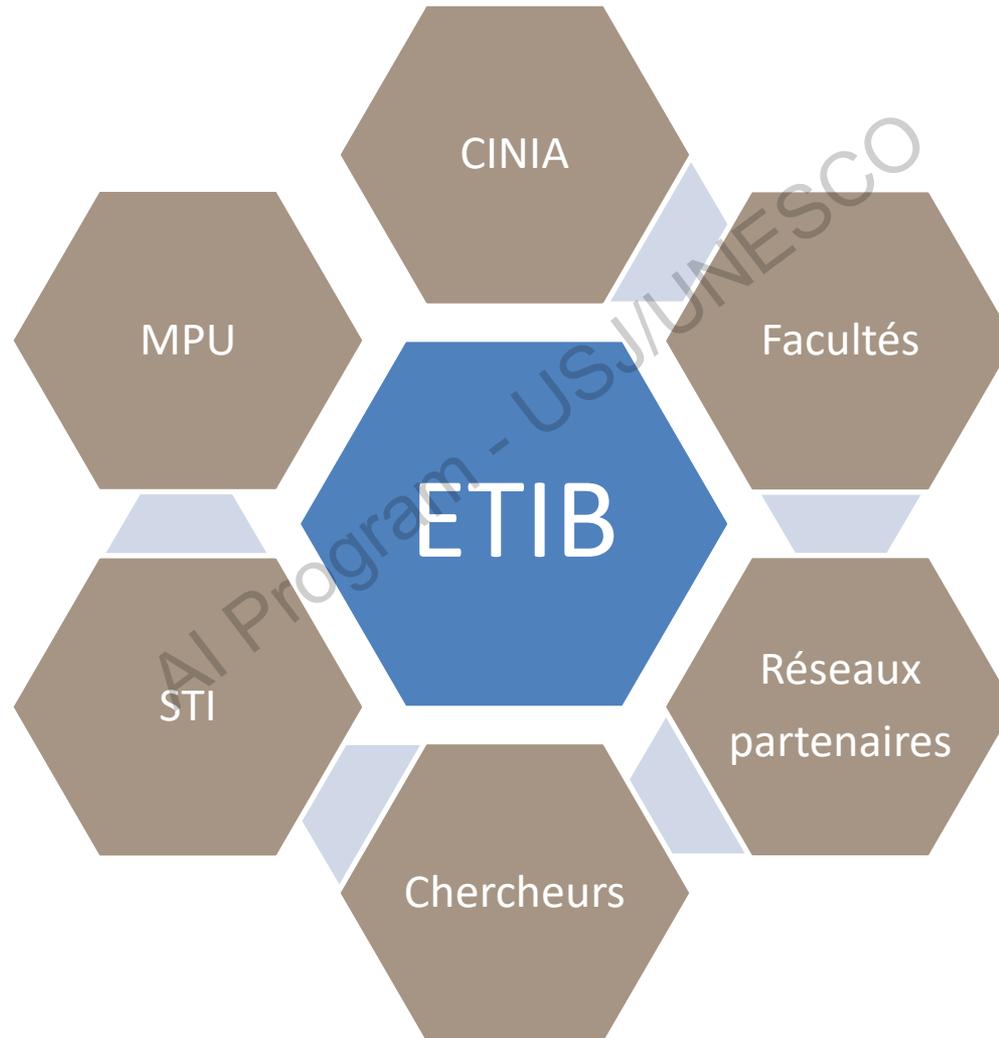
La mise en place d'une **cellule de veille** dans chaque faculté afin de revisiter les enseignements, les formations et les programmes en tenant compte de l'évolution des compétences attendues par le marché du travail à la lumière des développements fulgurants de l'IA, et ce, pour garantir l'insertion professionnelle des futurs diplômés.



La **formation des étudiants, des enseignants et du personnel administratif** aux principes de bases de l'IA et à son usage éclairé.



# Une démarche collaborative : Parties prenantes





## Changements majeurs

- **Encadrement** plus rigoureux des étudiants
- Développement des **compétences** intrinsèquement **humaines**
- **Intégration** des technologies de manière **proactive et raisonnée**
- **Alignement sur les référentiels de compétences** établis par les instances de référence 
- Perfectionnement des compétences (*upskilling*) des anciens diplômés et formation de futurs formateurs : **DU en ingénierie linguistique**
- **Recherche :**
  - **repenser** les méthodes d'**enseignement** et les modalités d'**évaluation** à l'ère de l'IA
  - **développer** des **outils d'intelligence artificielle adaptés** aux besoins de la formation



## 1ère recommandation

# Établir un état des lieux rigoureux

- Quelles sont les compétences réellement requises sur le marché ?
- Quels sont les besoins spécifiques des étudiants ?
- Quelles sont les ressources, les contraintes et qu'en est-il des défis ?
- Que font les autres institutions et qu'est-ce qui fonctionne ?



## 2ème recommandation

### Intégrer la technologie de manière proactive, critique et raisonnée

- Le risque n'est pas l'erreur commise par l'IA, mais la dépendance sans vigilance.
- Développer une **littératie critique de l'IA**, c'est se demander :
  - À quelle activité cognitive suis-je en train de renoncer ?
  - Quelles perspectives ou biais peuvent être invisibilisés ?
  - Quels risques en cas d'erreur ou d'« hallucination » non détectée ?
  - À qui profite réellement l'usage de cet outil ?
  - Ma confiance porte-t-elle sur le contenu... ou sur la technologie elle-même ?



## 3ème recommandation Cultiver l'expertise humaine

- Véritable avantage concurrentiel
- Renforcer le « muscle » avant de recourir à l'outil

*“Every AI output needs a human who can interpret it for a specific context, a specific audience, a specific set of stakes. Someone who understands what the model produced and why it might be wrong. Someone who can bridge the gap between what the machine says and what the situation requires. That skill set draws on linguistics, ethics, data literacy, contextual reasoning, and the kind of relational intelligence that lets you know when to trust the output and when to override it”*

Illingworth, Sam (February 27, 2026). “Stop Calling Them Soft Skills: Why Judgement, Empathy and Critical Thinking are the Skills AI Cannot Replace”, Slow AI, <https://theslowai.substack.com/p/stop-calling-them-soft-skills-human-skills-ai>



## Conclusion

Repenser les programmes, c'est :

- **accompagner** une transformation cognitive, technologique et économique
- **former** des professionnels capables d'utiliser les technologies sans s'y soumettre
- **valoriser** les débouchés émergents pour restaurer l'attractivité de la profession.

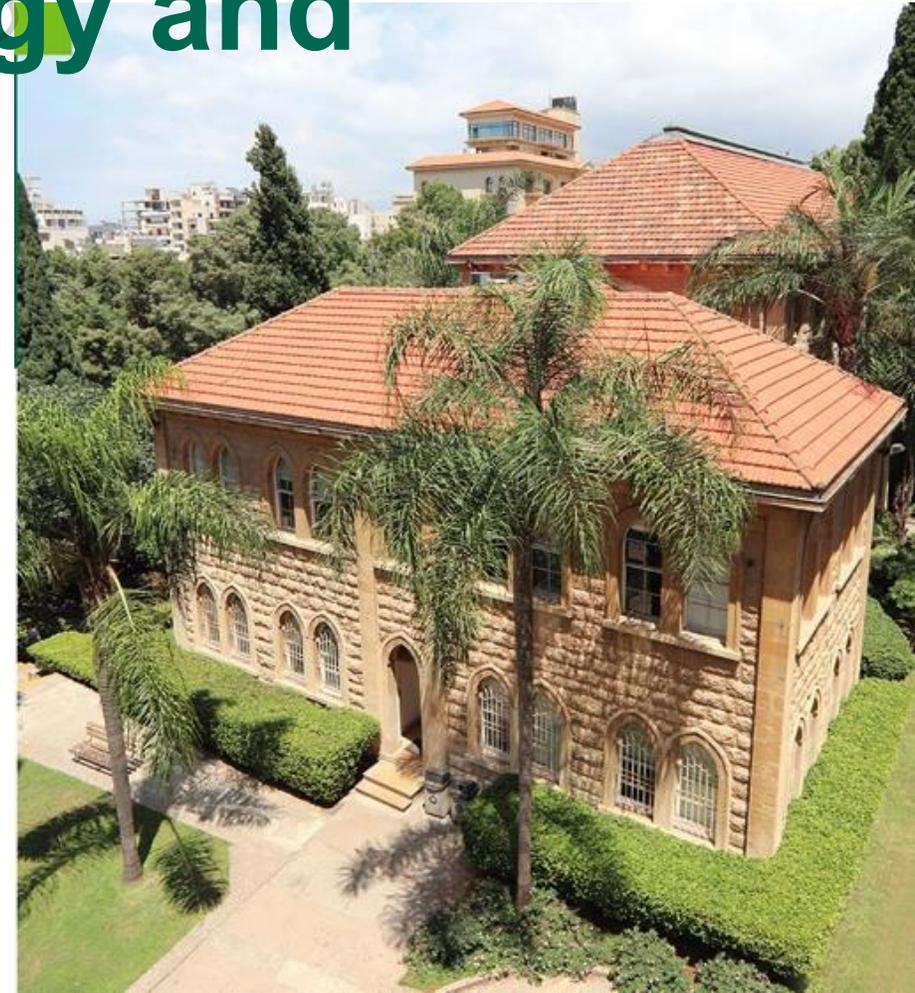
“Every technological revolution in history has made the world richer, healthier and more comfortable. But **transitions are always hard. What matters next is how societies can help everyone to be the boss of the machines – not their servants.**”

Foucart, R. (21 January 2026). Why AI has not led to mass unemployment, in *The Conversation*, <https://theconversation.com/why-ai-has-not-led-to-mass-unemployment-273405>

# AI Across Disciplines: The School of Arts and Sciences AI Strategy and Roadmap

**Haidar Harmanani**

Dean, School of Arts and Sciences





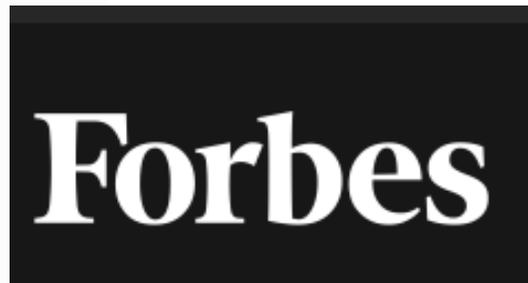
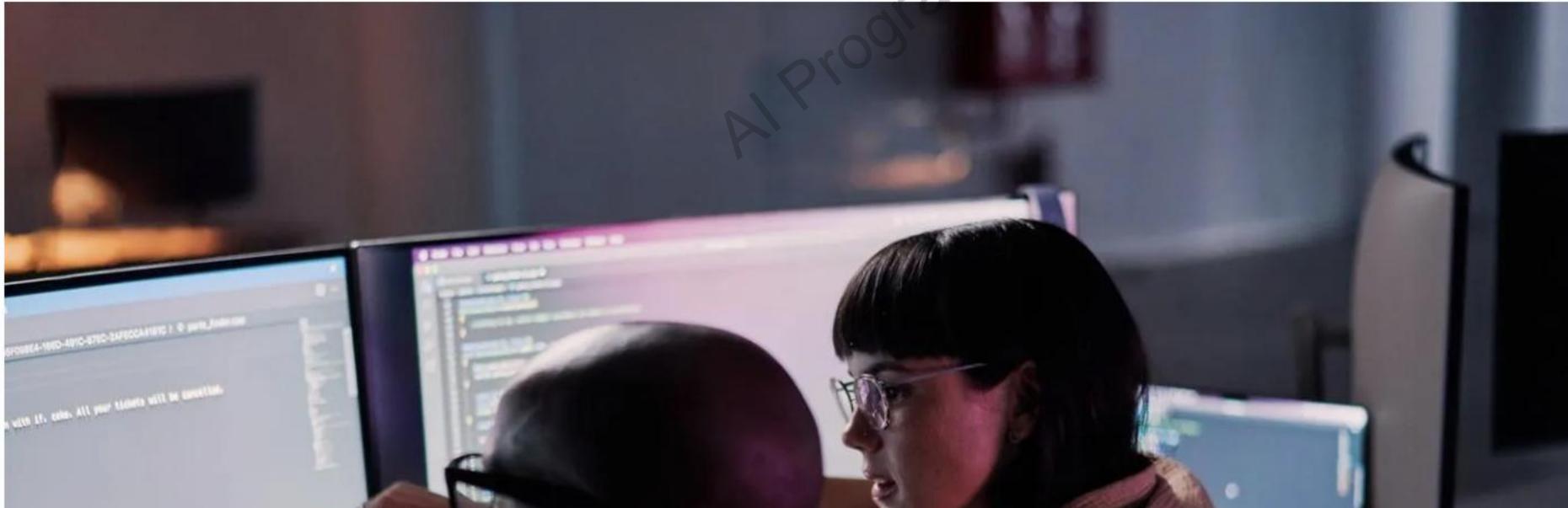
# Agenda

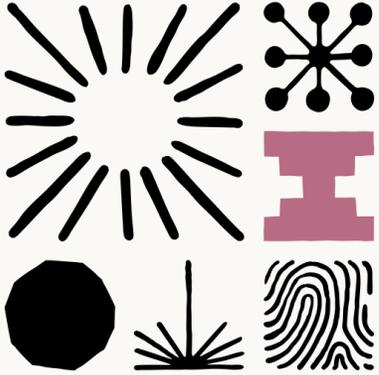
- Why AI matters now
- How AI is changing education
- Implications for universities
- SoAS' philosophy toward AI
- Concrete strategy
- Implementation roadmap
- Impact and outcomes

# AI Writes Over 25% Of Code At Google—What Does The Future Look Like For Software Engineers?

By [Jack Kelly](#), Former Contributor. © Jack Kelly covers career growth, job market and workplace trends.

Published Nov 01, 2024 at 06:30am EDT





# Building a C compiler with a team of parallel Claudes

Published Feb 05, 2026

We tasked Opus 4.6 using agent teams to build a C Compiler, and then (mostly) walked away. Here's what it taught us about the future of autonomous software development.

*Written by Nicholas Carlini, a researcher on our Safeguards team.*

I've been experimenting with a new approach to supervising language models that we're calling "agent teams."

With agent teams, multiple Claude instances work in parallel on a shared codebase without active human intervention. This approach dramatically expands the scope of what's achievable with LLM agents.

To stress test it, I tasked 16 agents with writing a Rust-based C compiler, from scratch, capable of compiling the Linux kernel. Over nearly 2,000 Claude Code sessions and \$20,000 in API costs, the agent team produced a 100,000-line compiler that can build Linux 6.9 on x86, ARM, and RISC-V.

Enabling long-running Claudes

Running Claude in parallel

Lessons from programming with Claude agent teams

Stress testing the limits of agent teams

Looking forward

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# ■ Is it Only About Computing?

## Claude's Cycles

Don Knuth, Stanford Computer Science Department  
(28 February 2026; revised 02 March 2026)

Shock! Shock! I learned yesterday that an open problem I'd been working on for several weeks had just been solved by Claude Opus 4.6 — Anthropic's hybrid reasoning model that had been released three weeks earlier! It seems that I'll have to revise my opinions about “generative AI” one of these days. What a joy it is to learn not only that my conjecture has a nice solution but also to celebrate this dramatic advance in automatic deduction and creative problem solving. I'll try to tell the story briefly in this note.

Here's the problem, which came up while I was writing about directed Hamiltonian cycles for a future volume of *The Art of Computer Programming*:

Consider the digraph with  $m^3$  vertices  $ijk$  for  $0 \leq i, j, k < m$ , and three arcs from each vertex, namely to  $i^+jk$ ,  $ij^+k$ , and  $ijk^+$ , where  $i^+ = (i+1) \bmod m$ . Try to find a general decomposition of the arcs into three directed  $m^3$ -cycles, for all  $m > 2$ .

# ■ Proposition

- AI is to support student's learning rather than replace it

- **Human-Centered AI Education**

- AI augments human thinking
- Students must critically evaluate AI outputs
- AI-free spaces remain essential

- **Awareness of Biases and Limitations of AI Systems**

- **Students and instructors should:**

- Treat AI outputs as proposals, not truths
- Critically examine generated content for bias, missing perspectives, and factual errors
- Discuss how these biases arise and how they may affect marginalized groups



# ■ School Strategy



Research  
and  
Scholarship



Academic  
Programs



AI Infusion  
Across the  
Curriculum



# ■ Academic Programs

*We have invested in structured programs that reflect both rigor and applicability*



Online MS in Applied AI

MS in Data Science

BS in AI (pending MEHE's approval)

BS in Data Science (pending MEHE's approval)

Minor in Applied AI and Data Science

Two graduate certificates in AI and Data Science

An AI track of five courses in the BS in Computer Science

Introduced a required AI course in the LAS

# ■ AI Infusion Across the Curriculum: Strategy

## AI Across The Curriculum

Integrate AI in ways that are ethical, responsible, and inclusive

## AI as a Learning Partner

Create an educational environment where AI supports learners and educators in reaching their full potential

## Human-AI Learning Experiences

Build capacity and competencies to prepare learners for meaningful human-AI interactions

# ■ Curriculum Structure

- Every program has well defined student outcomes
- **Student Outcomes are measured through performance criteria**
  - Typically 4-6 performance criteria per outcome
  - **Granular and systematic measurement** of student achievement
- **Courses have outcomes that map directly to performance criteria**

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# ■ AI Infusion Across the Curriculum: How?

- **A School-led task force reviewed courses across disciplines.**
  - Identified opportunities to meaningfully integrate AI concepts and tools
  - Proposed interdisciplinary minors
- **The emphasis was on relevance and disciplinary context**
- **59 courses were identified across all programs to be updated in addition to the design of new courses in non computing majors**
  - Revise course learning outcomes
  - Revise performance criteria that feed into the program student outcomes
  - Revise assessments and activities
  - Introduce new modules

Program	Course No. / Name	AI Component / Description
Liberal Arts & Sciences <i>Required from all students</i>	LAS211: Prompting the Future with AI	General AI literacy: generative AI tools, creativity, ethics, and prompt design.
Undergraduate Research	HIE 350: Power of AI in Research	Use of AI tools (e.g., summarization, data visualization) in scholarly inquiry.
MS Biological Sciences	BIO681D: Health Informatics	General introduction to AI/ML and applications in biotechnology.
MS Biological Sciences	BIO681C : Drug Discovery and Development	Examples of the use of AI in the process of drug discovery and development.
Nutrition & Food Science	NUT356- Nutrition Status Assessment	AI for diet analysis; biochemical data interpretation using AI
Nutrition & Food Science	NUT357: Meal Planning	Added an activity on AI vs. Expert Contrasting and Analyzing Diet Plans
English	ENG381: Corpus Linguistics	Exposure to corpus-based text analysis and AI-adjacent language technologies.
Communication / Multimedia Journalism	Open Online Course	AI in journalism, generative media literacy, and critical use of AI tools in content creation.
Psychology and Education	EDU504	AI and assessment.
Psychology	PSY 466: Counseling Theories	<i>AI, Digital Counseling, and the Future of Therapy</i>  AI-powered mental health platforms and chatbots; ethics of AI in counseling; limits of AI in therapy (empathy and human connection)

# ■ Case Study: AI Integration in the Liberal Arts Curriculum

- **We examine one recent curricular change within the Liberal Arts and Sciences core**
- **Required for all LAU students**
  - Impacts nearly 10,000 students across LAU
- **Implemented through a new course: LAS 211 – Prompting the Future with AI**
- **Introduced last year and now fully embedded in the core curriculum**
- **Accompanied by AI-infused performance criteria across selected performance criteria**

# ■ LAS211: Prompting the Future with AI

- **Three Modules**
- **Foundations of AI introduces including large language models, prompt engineering, and no-code AI tools**
- **AI in Society**
  - Examine how AI systems are deployed across domains including creative industries, research and scholarship, healthcare, and social media
  - Case studies and guided labs to help students explore how AI can reinforce or mitigate social inequalities while shaping creativity, communication, and decision-making
- **AI and the Future of Work**
  - Situate AI literacy within professional and civic contexts
  - Focus on AI monetization, labor transformation, environmental impact, governance, and fiduciary responsibility.
  - Guide the students in discipline-specific AI within their anticipated career pathways

# AI-Infused Performance Criteria in Student Outcomes

- **Demonstrate knowledge, abilities and dispositions necessary for the continuing study of the worlds, peoples, arts, environments, literatures, cultures, sciences and institutions**
- **Performance Criteria (AI-Infused)**
  - Students will be able to use AI-assisted tools to synthesize information from multiple disciplinary perspectives in analyzing complex global or societal topics.
  - Students will be able to critically evaluate AI-generated insights and integrate them with scholarly sources to develop informed interpretations of cultural, scientific, or societal issues.

# AI-Infused Performance Criteria in Student Outcomes

- **Articulate ideas using a variety of contexts and modes of communication**
- **Performance Criteria (AI-Infused)**
  - Students will be able to use AI-supported tools to develop and present ideas effectively across multiple communication formats (written, visual, oral, or digital).
  - Students will be able to refine and improve communication products through iterative AI-assisted feedback while maintaining originality and academic integrity.

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# AI-Infused Performance Criteria in Student Outcomes

- **Apply ethical standards required to enter into the professional world**
- **Performance Criteria (AI-Infused)**
  - Students will be able to employ AI tools to identify, organize, and analyze relevant information sources when investigating individual or societal challenges.
  - Students will be able to critically assess the reliability and limitations of AI-generated information when integrating it into research or problem analysis.

# AI-Infused Performance Criteria in Student Outcomes

- **Integrate informational resources and technology in exploring individual and societal issues**
- **Performance Criteria (AI-Infused)**
  - Students will be able to demonstrate responsible and transparent use of AI tools, including appropriate attribution, verification, and disclosure.
  - Students will be able to identify ethical risks associated with AI technologies (e.g., bias, privacy, misinformation) and apply professional standards when using AI in academic or professional contexts.

# ■ Programming Using AI?

- **Modern Development Workflow**

- Prompt AI to generate code
- Review and validate outputs
- Edit and extend existing codebases

- **In software**

- AI produces most initial code
- Humans focus on understanding, correcting, and improving

- **Implication on our computer science program?**

- Code literacy (reading/editing) > pure code production

- **"It's no longer about chasing commas and spaces!"**

- **Education must focus on problem formulation and critical interpretation**

# ■ Programming Using AI?

## ■ Code as a Second Language

- An immersive course treats coding as a second language, engaging students from day one in a persistent virtual atelier where they write, break, and rewrite code in real-time collaborative environments.
- Students explore Python, learning through practice rather than lectures.
- AI pair-programmers serve as Socratic companions, prompting reflection, experimentation, and emergent creative work.
- By the end of the course, students will have developed a deep, hands-on fluency in multiple programming paradigms and a practice of collaborative, exploratory coding.

# ■ Faculty Development

- **AI integration will be supported by:**
  - Two school-wide AI teaching workshops per year
  - Three discipline-specific workshops annually
- **Target**
  - At least 5 faculty training events per year

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# ■ Implementation Plan

- **Roll out AI integration through a phased, two-year plan that combines:**
  - AI modules embedded in existing courses,
  - new AI-related courses where needed,
  - AI-infused minors/pathways across programs
- **Faculty development**
  - Identify training content and trainers
- **Progress tracking:**
  - Track number of courses with AI content, number of students reached by AI literacy initiatives, and faculty participation in AI-related training
- **Resource planning**
  - Budget lines cover course/module development, faculty development activities, and the software/tools/infrastructure required to support AI integration

# ■ AI Infusion Across the Curriculum: How?

- **Plan for interdisciplinary offerings include:**
  - LAS – Perspectives on Large Language Models
  - BIO – AI Literacy in Biology
  - NUT – AI in Nutrition and Food Systems
- **Target**
  - New AI-focused courses launched by Spring 2027

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# ■ AI-Supported Learning Pilots

- **Use ALEKS and other AI-based learning systems effective Fall 2026**
  - ALEKS adaptive learning in MTH101
  - Expansion to CHM200 and CHM209
  - AI-enabled learning tools in Psychology and other programs

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# ■ Conclusion

- **AI is becoming an essential component of disciplinary practice, and integrating it into the curriculum is critical to preparing students for emerging professional and research environments**
- **The School will systematically incorporate AI into 59 courses across multiple disciplines, embedding AI literacy, analytical skills, and responsible use of AI technologies throughout the undergraduate experience**
- **This initiative will be supported by faculty development, targeted course redesign, and interdisciplinary collaboration, ensuring that AI enhances—not replaces—core disciplinary knowledge**

THANK YOU



# Revision of Curricula in the Era of AI

A Strategic Roadmap for Lebanese Universities: Insights from USEK

Joseph Al Assad

# Point 1: Integrating AI into the Curriculum

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*Moving from Awareness to Applied Literacy*



# Harvard's Four Pillars of Integration

## Teach with AI

Pedagogical innovation, personalized learning, and automated assessment design.



## Learn with AI

Empowering students through AI literacy and critical reasoning skills.



## Work with AI

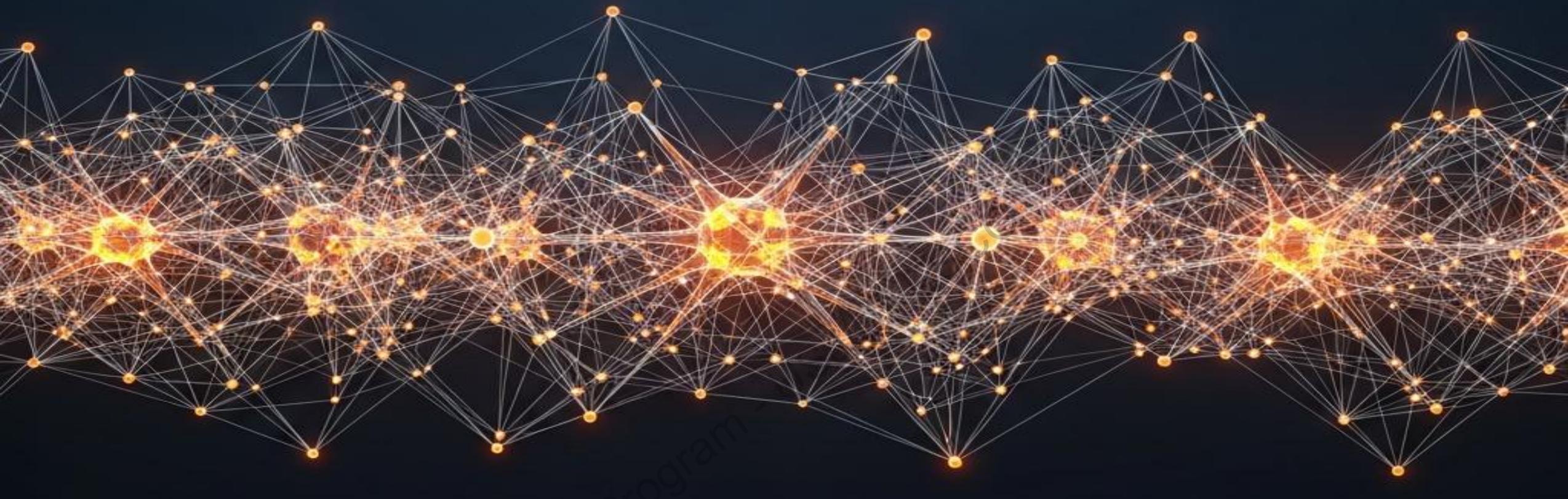
Administrative efficiency, report automation, and operational streamlining.



## Research with AI

Accelerating literature reviews, data analysis, and manuscript preparation.



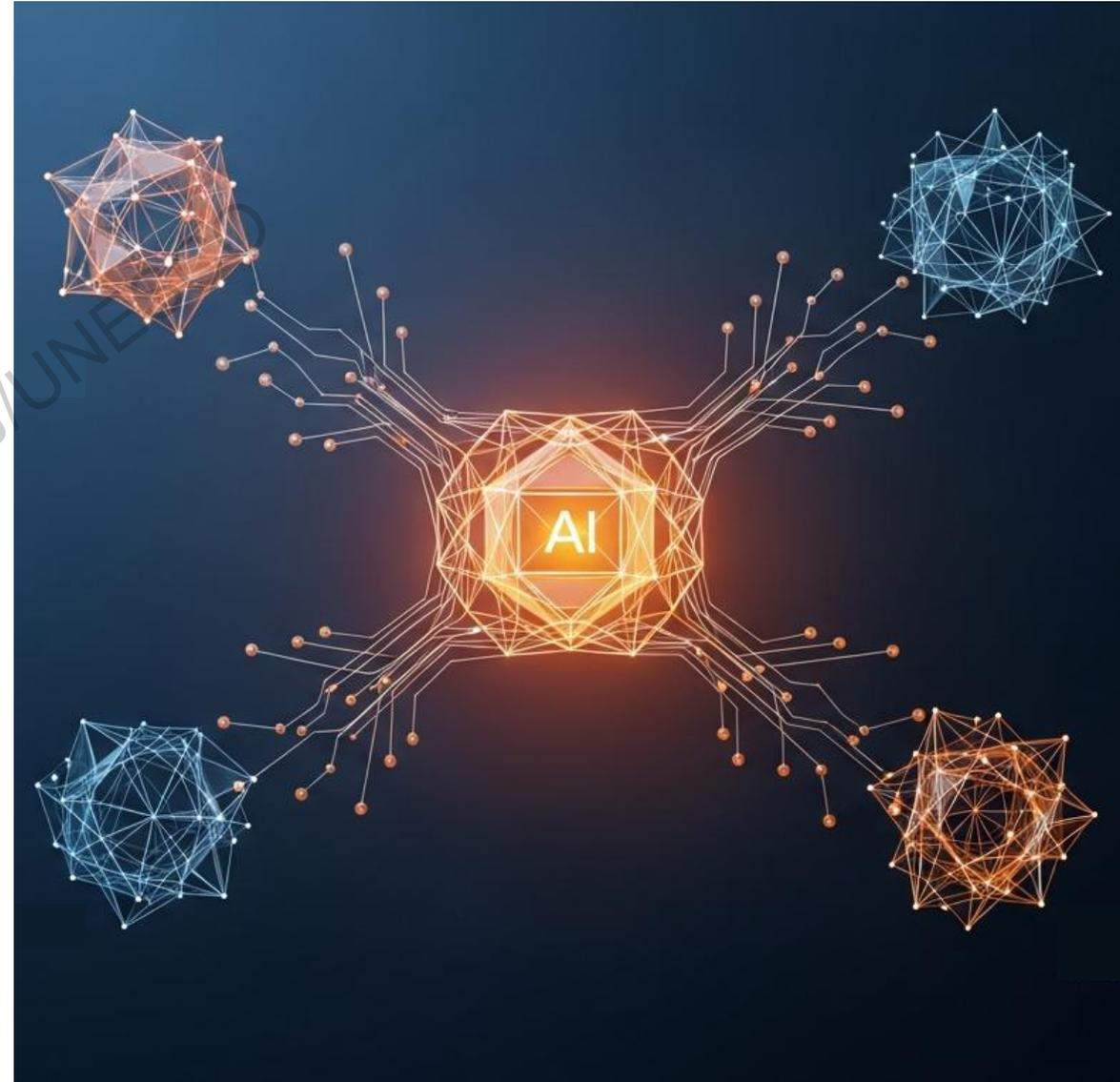


## Point 2: The Stakeholder Ecosystem

*Driving Institutional Readiness Collaboratively*

# Collaborative Leadership

- Provost Office: Strategic vision.
- Industry Committee: Market Requirement & Readiness.
- Multidisciplinary Taskforce: Committee for AI Responsibility & Ethics.
- AI Champions: Faculty mentors.





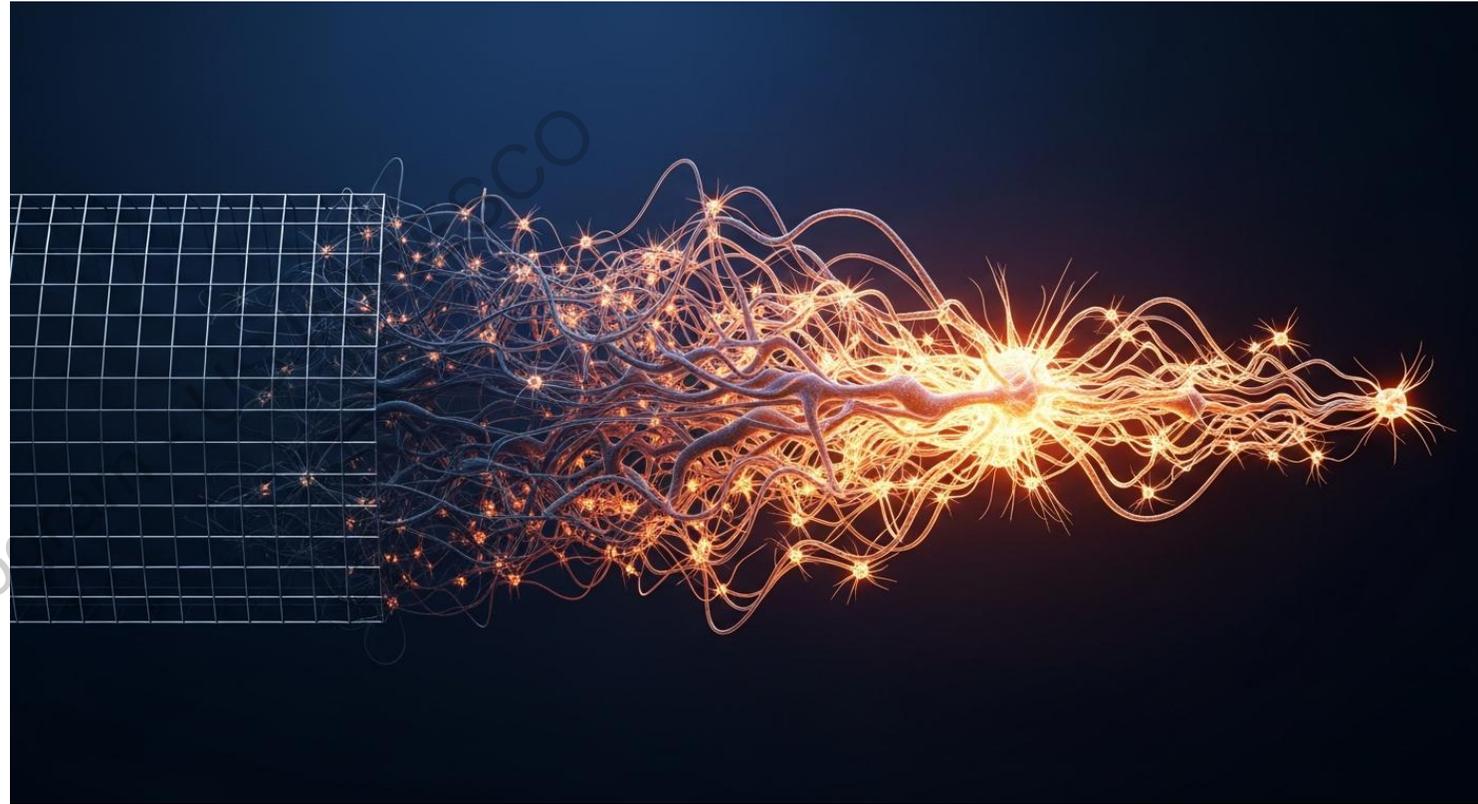
## Point 3: Main Challenges

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*Overcoming the 'Fear of the Unknown'*

# Structural & Pedagogical Shifts

- Ethical AI Framework.
- Assessment Redesign.
- Digital Infrastructure.
- Legislative Evolution.
- Mindset Evolution.





## Point 4: Major Changes Required

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*From Infrastructure to Redesign*

# The 4-P Implementation Roadmap

## Policy

Ethical foundations and disclosure protocols.



## People

Faculty Fellowships and AI Champions.



## Practice

Integrated classrooms and assessment redesign.



## Platforms

Licensed tools and centralized Knowledge Hub.



# Strategic Approach



## **AI Taskforce Formation**

Cross-faculty representation under the Office of the Provost



## **Comprehensive AI Readiness Assessment**

Faculty, student, and administrative surveys with interviews



## **Ethical AI Policy Development**

Risk-based governance framework aligned with UNESCO principles



## **Faculty Development: Teach with AI**

Two-tiered certification program with AI Ambassadors



## **Student AI Literacy: GenAI Foundations Course**

Mandatory general education with Pearson VUE certification

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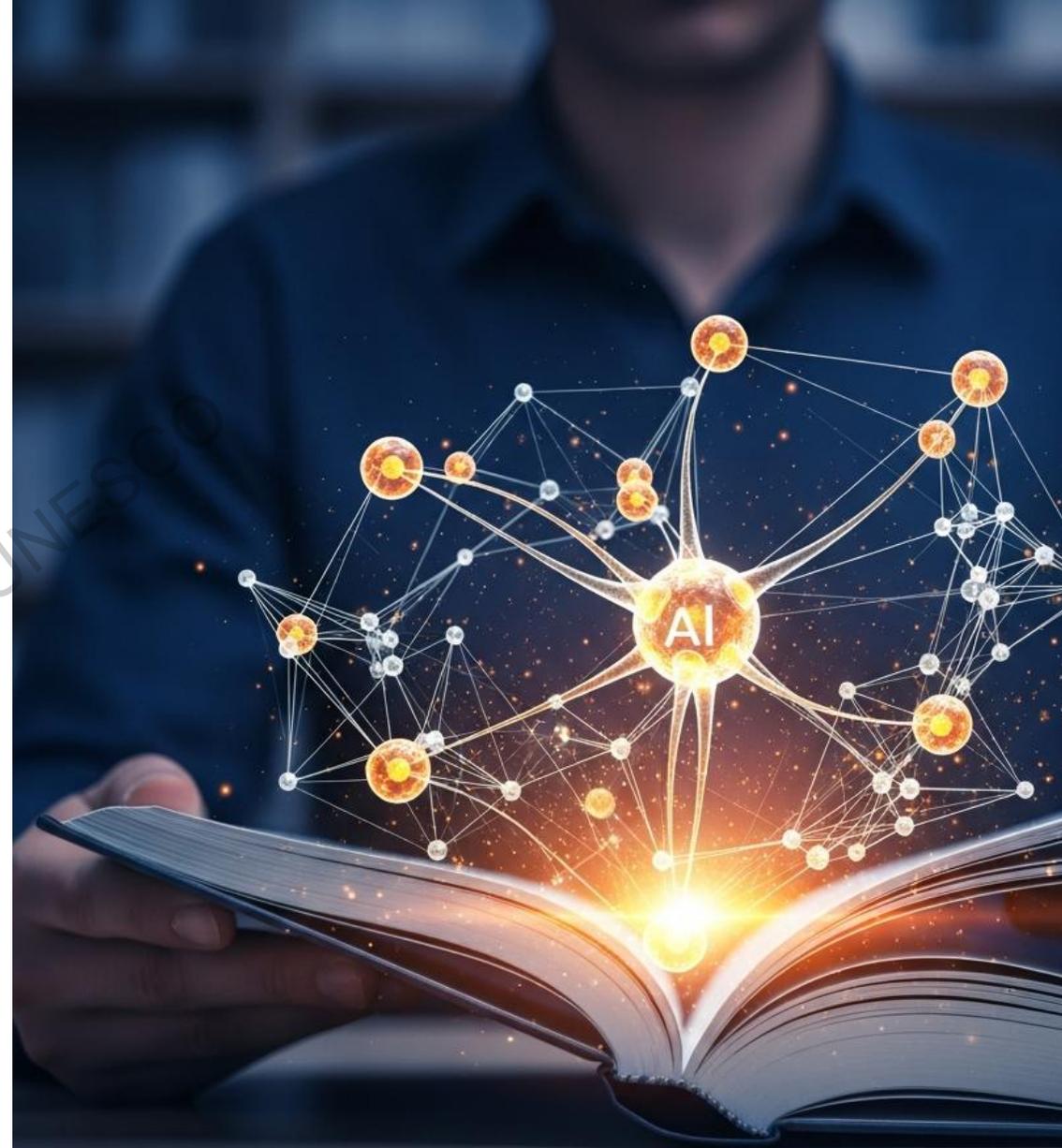
# Faculty Readiness Insights

# 86%

Believe AI will  
significantly impact  
Higher Ed

## Key Survey Outcomes:

- 91% support AI prohibition in exams.
- 78% already require AI disclosure.
- 3.62/5 Training Need Score.



# AI Integration at USEK

## Three main pillars:

- *AI literacy across disciplines*
- *AI-enhanced teaching practices*
- *Redesign of learning and assessment*



# Course Focus: GEIT215 AI Foundations



- Hands-on Generative AI (3 Credits)
- Different Models: Transformers, GANs, and VAEs.
- Skills: Advanced Prompt Engineering.
- Ethics: IP, bias, and data privacy.
- Application: Industry-aligned labs.

# AI Masterclass at USEK

- *AI-assisted research and literature review*
- *AI-based course preparation*
- *AI-supported design and simulations*
- *AI-driven student projects*



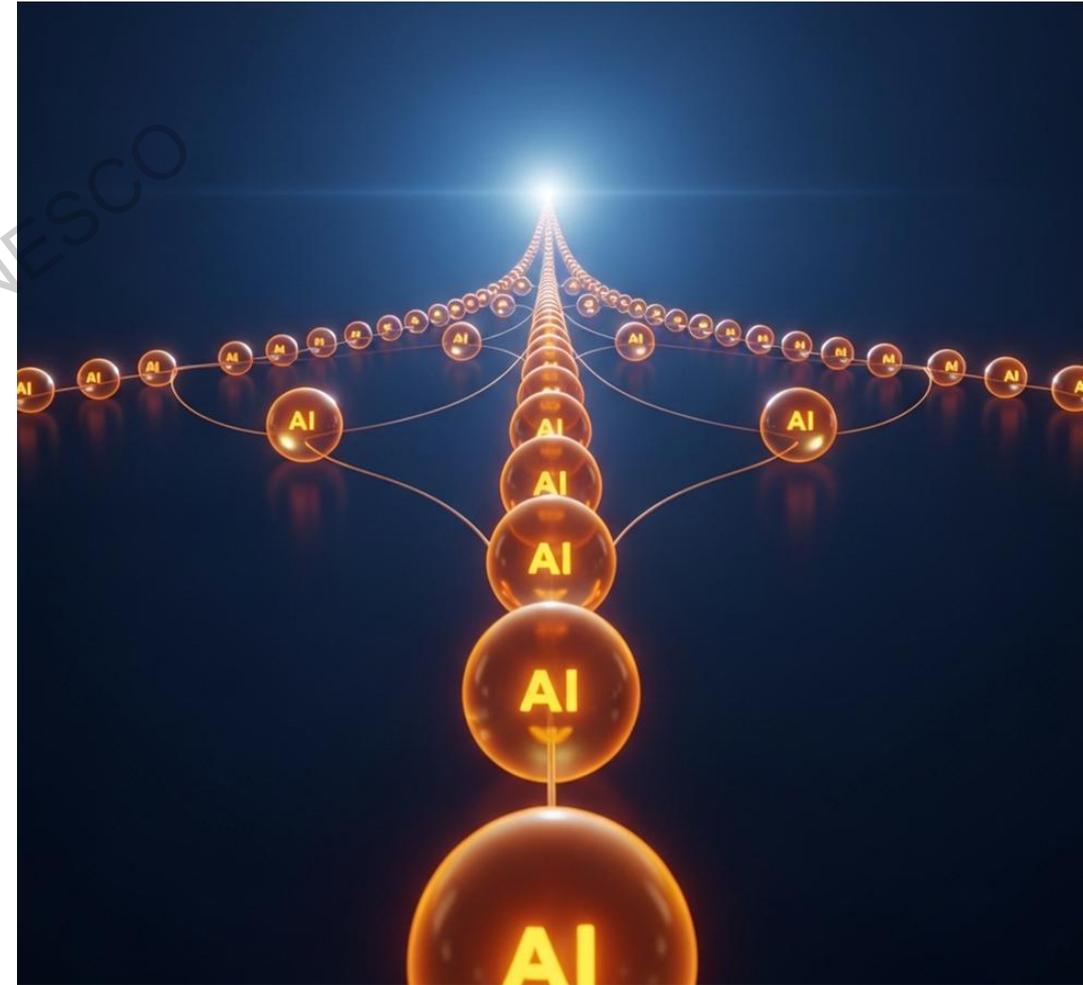
# Major Curriculum Changes



- AI literacy as a core competency
- Shift from content to skills
- Project-based and experiential learning
- AI integration across all disciplines

# Recommendations

- *Establish AI governance structures*
- *Invest in faculty development*
- *Develop ethical AI frameworks*
- *Encourage experimentation and innovation*



# At The End...



"A wealth of information creates a poverty of attention."

**Herbert Simon 1977**

The goal is to graduate students who will be stepping from AI Literacy to AI Fluency and tomorrow to AI nativity

# Thank You!

Joseph Al Assad

