

# 2026-2027 IEMS Course Proposal

## Humans, AI, and the Future of Decision-making

### Three Cross-Cutting Frameworks

The course is organized by level of analysis—individual, team, organization—but three overarching frameworks cut across levels, and students learn to apply them at each level:

1. The Jagged Frontier: AI capability is unevenly distributed across tasks. The frontier between what AI does well and what it does poorly is jagged, non-intuitive, and constantly shifting. At every level—individual workflow, team process, organizational system—the first diagnostic question is: *Where exactly is the frontier here, and do the people involved know where it is?*

2. Centaurs, Cyborgs, and Self-Automators: There are fundamentally different modes of human-AI integration. Centaurs maintain clean divisions of labor. Cyborgs deeply interleave human and AI contributions. Self-automators delegate entire roles to AI. At every level, the second diagnostic question is: *What mode of integration are we using, is it the right one, and what does it demand of the humans involved?*

3. Substitute, Enlarge, Reconfigure (SER): AI can replace existing processes (Substitute), expand what's possible within existing structures (Enlarge), or fundamentally transform how decisions are made—requiring complementary co-inventions in roles, relationships, and routines (Reconfigure). At every level, the third diagnostic question is: *Where are we on the SER spectrum, where should we be, and what co-inventions are needed to get there?*

The course's power lies in applying all three lenses simultaneously. For any human-AI decision system, students learn to ask: Do we understand the frontier? Have we chosen the right integration mode? And are we stuck in substitution when the situation calls for reconfiguration?

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### Part I: Foundations

The course opens by establishing the three frameworks that students will apply throughout. The jagged frontier concept reveals that AI capability is unevenly distributed across tasks in non-intuitive ways, and that the first skill of AI-enabled decision-making is learning to map where AI excels and where it fails. The performance paradox—high performers sometimes hurt, low performers lifted—challenges naive assumptions about who benefits from AI. Importantly, the frontier isn't just jagged across isolated tasks; tasks are interdependent, and AI's reliability on one task often depends on what happened upstream and what's expected downstream.

Students then learn three fundamentally different modes of human-AI integration: centaurs (clean division of labor), cyborgs (deep interleaving), and self-automators (full delegation). Alongside these, the SER spectrum reveals that substitution is easy but captures the least value; enlargement expands capacity within existing structures; and reconfiguration transforms the system but requires complementary co-inventions—not just in tools and processes, but in how people work together. The foundational question becomes: why do most people, teams, and organizations get stuck in substitution?

## Part II: The Individual

The course turns to how individuals navigate AI-enabled decision-making. Personal frontier mapping reveals that each person faces a different frontier depending on expertise and domain. Students explore automation bias (over-trusting AI inside the frontier) and algorithm aversion (rejecting AI even where it performs well). When to be a centaur, when to be a cyborg, when to self-automate—and what personal capacities each demands.

How people learn where the frontier is: rarely through solitary experimentation, but through conversation with peers—hearing what worked, what failed, what surprised them. People with broader, more diverse professional connections tend to develop more accurate mental maps of the frontier faster.

Applying SER at the individual level, students examine what happens when AI substitutes for a task (easy, limited value), enlarges what individuals can tackle (more value, same role), and reconfigures what the job *is* (highest value, greatest difficulty). Reconfiguration at the individual level raises questions of identity threat, deskilling vs. reskilling, and the co-inventions required: new skills, new professional identity, new ways of demonstrating value. When AI reconfigures a role, it changes not just tools but who the person collaborates with, who they turn to for guidance, and how they signal expertise.

## Part III: The Team

Teams face a collective frontier distinct from any individual member's. Transactive memory systems—the team's collective sense of who knows what—shape how teams navigate the frontier. When AI enters the team, it becomes a new source of knowledge, but unlike a human teammate it doesn't signal its limitations the same way, doesn't build trust through repeated interaction, and its capabilities shift when models update. When teams fail to map the frontier collectively, everyone assumes someone else is checking AI's work.

The choice of integration mode plays out differently at the team level. Centaur teams specialize roles between AI-mediated and human-judgment tasks. Cyborg teams have all members integrating AI, requiring new coordination mechanisms. The emergent "AI translator" role—someone who bridges between those working closely with AI and those relying on human judgment—becomes a critical team function.

Applying SER at the team level: substitution loses tacit knowledge exchange; enlargement hits coordination limits; reconfiguration demands co-inventions in communication norms, feedback loops, and role definitions. Collective intelligence—when AI improves it and when it degrades it—becomes a central concern, particularly the risk of teams converging on AI outputs at the expense of diverse perspectives.

In complex operations, teams work in interdependent systems. If one team reconfigures around AI while connected teams remain in substitution mode, the interfaces between them become friction points—a dynamic that a team-by-team view would miss.

## Part IV: The Organization

Organizations face a systemic frontier shaped by data infrastructure, regulatory context, and culture. The frontier is political—different units may assess AI reliability differently, and those assessments reflect interests as much as evidence. AI adoption doesn't spread uniformly; it follows patterns of influence and connection within the organization. Early adopters pull colleagues along, people who bridge across silos spread practices, and isolated pockets may never hear about what's working elsewhere.

At the organizational level, the integration mode choice becomes a design decision with enterprise-wide consequences. Centaur organizations maintain clear divisions between AI-driven and human-driven functions. Cyborg organizations integrate AI throughout, requiring organization-wide competencies and standards. Substitution remains the organizational default—and consistently disappoints. Enlargement expands what the organization can do but leaves structures intact and eventually hits limits. Reconfiguration transforms the organization itself: new business models, decision architectures, accountability structures—and the complementary co-inventions in incentives, hiring, governance, and culture that make it possible. Reconfiguration often requires new collaborations between people who never previously worked together and new boundary-spanning roles, which is why it's harder than simply adopting new technology. Algorithmic management—when AI makes decisions about people—serves as a revealing case study.

## Part V: Governance, Ethics, and the Integrated View

The course concludes by examining fairness and bias as organizational design challenges, transparency and explainability in context, and the labor implications of self-automation at scale. A central insight: substitution thinking at one level constrains reconfiguration at others.

When an AI-augmented decision goes wrong, responsibility is typically distributed across many actors—those who contributed data, built models, set parameters, interpreted outputs, and took action. Effective governance requires making this shared responsibility visible rather than assuming a single point of accountability.

## Sample Readings

1. Mollick, E. (2024). *Co-Intelligence: Living and Working with AI*. Portfolio/Penguin.
2. Iansiti, M. & Lakhani, K. (2020). *Competing in the Age of AI: Strategy and Leadership When Algorithms and Networks Run the World*. Harvard Business Review Press.
3. Dell'Acqua, F., McFowland, E., Mollick, E., Lifshitz-Assaf, H., Kellogg, K., Rajendran, S., Kraymer, L., Candelon, F., & Lakhani, K. (2023). Navigating the Jagged Technological Frontier. Harvard Business School Working Paper No. 24-013.
4. Randazzo, S., Lifshitz-Assaf, H., Kellogg, K., Dell'Acqua, F., Mollick, E. R., Candelon, F., & Lakhani, K. R. (2025). Cyborgs, Centaurs and Self-Automators: The Three Modes of Human-GenAI Knowledge Work and Their Implications for Skilling and the Future of Expertise. Harvard Business School Working Paper No. 26-036. Available at SSRN: <https://ssrn.com/abstract=4921696>