

IE 101 | Innovation and Entrepreneurship 101

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CHAPTER 00 | ORIENT Introduction: IE 101 and the Project Journey

CHAPTER PURPOSE: Use this book to run a successful innovation or venture project class. The goal is simple: help students move from an uncertain idea to a stronger story, better evidence, a working demonstration, and a clearer next step.

Figure 5. Every innovation project is a journey from today toward a target opportunity.

What this book is for

IE 101 is for courses where students must do innovation, not only discuss it. The course may be an entrepreneurship course, an innovation challenge, a company capstone, a technical venture studio, a research translation course, or a practically oriented science and technology project class. The book gives the instructor a sequence. It gives the student a way to act.

Where the method comes from

The concepts in this book draw on 17 years of teaching, experimentation, research, and program development at UC Berkeley. That work included the Berkeley Method of Entrepreneurship, co-created and co-authored with colleagues, as well as Innovation Engineering, Data-X, engineering leadership programs, venture and challenge labs, and many industry-facing programs developed by Ikhtlaq Sidhu and collaborators at Berkeley. The common lesson was direct: students learn innovation best when they work on real projects, receive feedback, build evidence, and change their thinking as they execute.

Why students and instructors can trust it

The material has been tested with Berkeley students, engineers, founders, executives, visiting scholars, and partner organizations. Programs connected to this work have involved companies such as Google, Yahoo, Amazon, Cisco, SAP, VMware, Samsung, and other technology firms, as well as universities and institutions including UC Berkeley, IE University, Lund University, the University of Jyväskylä, BI Norwegian Business School, Prague University of Economics and Business, Qatar Foundation, SRM, and others. This matters because innovation education should not be based only on opinion. It should be based on repeated practice across people, projects, and contexts.

The journey frame

Every innovation project is a journey. A team begins with what it knows today. It moves toward a target opportunity involving new users, new markets, new technology, or a new product. Good plans and smart teams can still fail because the path is uncertain. The course therefore uses a simple discipline: learn while you execute, and execute while you learn. Each week the team should improve the story and also produce evidence from customers, stakeholders, prototypes, demos, technical tests, or traction.

What the project must produce

The final output is not only a slide deck. A strong project produces a clear narrative, NABC, customer or stakeholder evidence, product design, a demo or MVP, learning from execution, and a credible next-step plan. In some courses the project may become a venture. In others it may become a capstone result, a research prototype, or a corporate innovation proposal. In all cases, the project should become more real each week.

Selected Background

The Berkeley Method of Entrepreneurship papers, co-authored with colleagues, describe entrepreneurship education as a holistic approach built around infrastructure, mindset, and tactics, with learning organized inductively through experience.

The original Innovation Engineering book organized these ideas into a practical framework for project execution, story development, innovation leadership, and technical behavior.

Data-X extended the approach into applied data science, AI, and venture-style projects, with students learning tools and concepts while building real projects.

IE 101 adapts these lessons for instructors who need a compact course text and project guide for 10- to 14-week innovation classes.

Program Background Cases

Sutardja Center at Berkeley

The Sutardja Center for Entrepreneurship & Technology at UC Berkeley became a practical laboratory for teaching innovation to engineers, scientists, founders, and technical leaders. The Center connected courses, venture projects, industry partners, executive education, and visiting scholars. It also provided the institutional setting in which the Berkeley Method of Entrepreneurship and related innovation leadership methods were co-developed, tested, and refined.

Data-X and X-Labs

Data-X showed how a technical course could teach tools and execution at the same time. Students learned data science, AI, and applied technology concepts while building projects with venture relevance. The model later influenced focused X-Labs in areas such as data, blockchain, and alternative foods. The lesson for IE 101 is direct: teach the concept, ask the team to apply it, then use the project result to improve the next concept.

From Berkeley to IE

The same project-first logic now informs work at IE University's School of Science and Technology. IE 101 uses IE as a play on words: Innovation and Entrepreneurship 101, and also a bridge to the author's current work as Dean and Professor at IE. The book is meant to be useful in Madrid, Berkeley, Silicon Valley, company capstones, challenge courses, and any classroom where students must learn by making an innovation more real.

Case Use

Use the Sutardja Center back story and Data-X as background examples. They show how project-based learning, technical work, entrepreneurship, industry connection, and mindset development came together in practice.