

# Corporate Innovation (INNO)

## **INNO 1990. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

## **INNO 2206. Global Social Enterprise. (4 Hours)**

Designed to provide students with an in-depth exposure to entrepreneurship in the social sector, a rapidly growing segment of the global economy. Uses the case method to expose students to leading entrepreneurs who have developed and implemented business models to solve social problems such as extreme poverty, disease, illiteracy, and economic and social dislocation. Focuses on uniquely creative and driven people who have dedicated their lives to making a difference in the lives of others through values-based entrepreneurship.

## **INNO 2301. Innovation!. (4 Hours)**

Designed for students across the entire University who wish to learn about innovation—the creative process, the different types of innovation, how innovations are created, and how innovations can be transformed into commercial reality either as new products or new services and either in startups, existing corporations, and nonprofit entities. Offers students an opportunity to obtain the fundamental insight needed to understand the innovation process and to become a player in it.

**Attribute(s):** NUpath Creative Express/Innov

## **INNO 2304. Industry Disruption and Corporate Transformation. (4 Hours)**

Offers students an opportunity to learn several interrelated frameworks, concepts, and the language necessary to understand and analyze the origin and implications of industry disruptions and the difficulties experienced by incumbent firms as they seek to respond to the changes. Geared toward students who want to become innovation leaders in established companies and lead projects to create and launch new products or services, as well as students who plan to start their own businesses, particularly in high-technology sectors.

## **INNO 2414. The Social Impact of Business. (4 Hours)**

Studies business profitability for investors while sustainably serving its other stakeholders including customers, employees, communities, and the planet. Reviews stakeholder theory as a more sustainable alternative to the traditional focus on maximizing shareholder value. Topics covered include purpose or mission-driven business models (for example, certified B corporations and public benefit corporations); values-based corporate cultures and systems; transparent and accountable governance systems and practices; authentic leadership and moral decision making; sustainable business strategies and practices; and fair compensation structures including profit sharing, broad employee stock ownership, and thriving employee pay and benefits. Studies the impact businesses can have on reducing economic injustice and inequality. Course is based in innovative and entrepreneurial thinking that includes diverse subjects such as strategy, management, finance, law, philosophy, sociology, and psychology.

## **INNO 2990. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

## **INNO 3303. Digital Platform Strategies and Data-Driven Business Models. (4 Hours)**

Offers a comprehensive toolkit for analyzing, evaluating, or designing new digital, data-driven, and platform-based business models—distilling lessons from leading research and industry best practices. Beyond usual platform theories, addresses key issues of internal operations, ecosystem management, technology architecture, and how and where to deploy data science and AI. Engages students with in-the-cockpit decision making from the perspective of CEOs, product and technology managers, investors, and policymakers, helping students acquire powerful tools and concepts. Course content adheres to a foundation of timeless economic theory and strategic management principles. Offers students an opportunity to sharpen their economic and strategic reasoning, whether they are advanced students or beginners in these areas.

## **INNO 3308. Business Economic History of South Africa. (4 Hours)**

Covers the economic history of modern South Africa through lectures from faculty at the partner university in South Africa and also from the Northeastern professor. Includes the country's transition from apartheid to its present economic and political situation. Offers an opportunity to learn how South Africa has managed to overcome the struggles of its recent past and become one of the leading emerging economies of the world with a flourishing business community. Includes readings in and study of modern South African economics, law, history, politics, and culture.

**Attribute(s):** NUpath Societies/Institutions

**INNO 3309. Funding and Measuring Social Impact. (4 Hours)**

Examines the impact finance and impact measurement landscape. Impact-first innovation and entrepreneurship are rapidly growing segments of the global economy. Studies how impact-first solutions to complex social and environmental problems can be enabled by funding instruments from impact investing, philanthropy, and government aid. Introduces the impact finance and impact measurement landscape from the perspective of a founder. Students develop a theory of change, impact measurement framework, funding strategy, and impact narrative for an existing impact project that is ready to scale.

**INNO 3335. Product Innovation and Portfolio Management. (4 Hours)**

Covers the intersection of project management, product development, and product portfolio management. Focuses on how large corporations develop, manage, and commercialize new products and services. Explores the unique attributes of different industries, such as internet platform-based firms, service-based firms, traditional manufacturing firms, and healthcare.

**INNO 3520. Impact Investing and Social Finance. (4 Hours)**

Explores impact investing, a transformative way to work with money to achieve a more inclusive and sustainable economy. Large investors are entering the world of impact investing, a rapidly emerging space where social and ecological effects of finance are championed over maximizing shareholder value. New investment vehicles such as social impact bonds and Web exchanges are changing the role of financing institutions to better serve the needs of low-income populations around the world. Applies interdisciplinary frameworks, tools, and cases, with hands-on teamwork and guest speakers, to critically examine the field. Offers students an opportunity to learn to develop and test concepts that integrate social responsibility, sustainability, and mutual accountability into current financial and economic systems while expanding social capital markets.

**INNO 3990. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

**INNO 4225. Growth, Acquisitions, and Alliances. (4 Hours)**

Analyzes whether, why, and how multibusiness corporations expand their operations into new business areas by questioning decisions to grow organically or through mechanisms such as acquisitions or alliances. Uses rigorous case-based discussions, expert readings, and major current events to discuss issues related to the choice of make, buy, or partner. Evaluates how these different corporate entrepreneurial strategies are used to help firms be more competitive and innovative.

**INNO 4504. Integrated Studies in Corporate Innovation. (4 Hours)**

Offers students an opportunity to experience corporate innovation in the classroom. Corporate innovation involves an enterprise experimenting with modern practices, technology, strategies, and opportunities to make its existing business model more competitive in the current marketplace. Students, as a class, represent a specific firm and tackle these corporate innovation challenges by adopting a culture that embraces new technology and actively seeks out ways to enhance the firm's business model. With this proactive approach to corporate innovation, the students can visualize how enterprises can remain agile in the face of rising competition. The goal is to learn how corporations may even identify new opportunities before any startup has a chance to establish itself in the market.

**Prerequisite(s):** ENTR 2301 with a minimum grade of D- or INNO 2301 with a minimum grade of D-

**INNO 4506. Integrated Studies in Social Innovation and Entrepreneurship. (4 Hours)**

Takes a system thinking approach to understanding complex social and environmental problems at local, national, and international levels. Studies the role social innovators and entrepreneurs can play in fostering collaboration at the intersection of social impact, environmental sustainability, and profit maximization. Presents and collectively analyzes through discussion the emerging theories, practices, and frameworks for driving social and sustainable impact. Culminates in a team project where students integrate their learning to deconstruct a complex problem and develop a theory of change that drives sustainable and social impact at scale.

**INNO 4983. Special Topics in Innovation. (4 Hours)**

Examines areas of current interest and special topics in innovation. Employs a mix of lectures, cases, and projects. Topics depend on the instructor. May be repeated once.

**INNO 4990. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

**INNO 6200. Enterprise Growth and Innovation. (3 Hours)**

Explores the challenges and processes for harnessing technological innovation for new-business development. Integrates technology strategy, innovation in marketing, product development, and organization design for the purpose of enterprise growth. Through readings, cases, and exercises, studies how firms from different industries gain competitive advantage through distinctive products and services, and leverage their technologies and skills into new emerging markets. Also focuses on processes for conceiving, financing, and organizing new ventures.

**INNO 6217. Lean Innovation. (3 Hours)**

Explores how corporate venturing and entrepreneurial teams can quickly and effectively bring new concepts to market. Demonstrates how small technical teams can quickly investigate opportunity spaces, develop and select concepts, and translate these into prototypes. Other topics include industrial design thinking, project teams, prototyping, and commercialization of design. Explores the challenges and solutions to managing a technology-based product within an established corporation and details frameworks on how innovative projects can be inexpensively tested and deployed within the organization.

**INNO 6222. Competing in Dynamic, Innovation-Driven Markets. (3 Hours)**

Reviews the key theories and tools needed to understand how technological change creates new markets and prompts new business models, how technology-based firms can outcompete rivals in fast-growing markets characterized by high uncertainty, and how the evolution of technology in an industry affects the type of firm capabilities needed to succeed over time.

**INNO 6225. Acquisitions, Alliances, and Growth. (3 Hours)**

Offers students an opportunity to analyze whether, why, and how multibusiness corporations expand their operations into new business areas by questioning decisions to grow globally through mechanisms such as acquisitions or alliances. Uses rigorous case-based discussions, expert readings, and major current events to discuss issues related to the choice of make, buy, or partner. Offers students an opportunity to evaluate how these different corporate entrepreneurial strategies are used to help firms be more competitive and innovative.

**INNO 6226. Leading Digital Transformation in Organizations. (3 Hours)**

Examines how the global economy is being transformed by digital and information technologies. Companies increasingly use these technologies to develop and deliver products and services, interact with customers and stakeholders, operate their businesses more efficiently, and disrupt traditional business models with innovative digital solutions. Analyzes how digital technologies offer established companies opportunities to reduce costs, operate more quickly, and offer customers codesign and coproduction options. Studies how firms adapt to new conditions by adopting information technology and the barriers to entry inherent in every organization.

**INNO 6227. Digital Bias in Business. (3 Hours)**

Delves into the societal and ethical challenges companies increasingly face as they confront new technologies. Studies the origins of these challenges and explores how firms can address these important ethical and societal issues as they seek competitive advantage in the marketplace. Examines the unintended consequences of past technological advances and how firms, regulators, and society responded to similar issues in the past. Evaluates a range of current issues with new technologies and explores the extent to which lessons from the past can be applied to current debates. Explores how differences in incentives across organizations influence their stance on new technologies, including the range of solutions they consider when challenges do arise.

**INNO 6230. Platform Innovation. (3 Hours)**

Provides a business perspective on how to design and optimize platform-based business models for growth, value creation, and innovation and a practical analytical toolkit of theories, concepts, and frameworks. Uses case studies from various industries. Many of today's growth enterprises and startups are organized as platforms. Platforms facilitate other actors and support interactions among a wider "ecosystem" of users, services, suppliers, etc., and they have potential for massive growth and value creation. High returns to successful platform business models lead companies to learn to act like platforms. Technology trends toward digitization, big data, automation, etc., accelerate these trends. Aimed at people looking to work within existing companies or those interested in starting or growing new platforms.

**INNO 6240. Strategic Disruption Residency 1. (1 Hour)**

Examines how organizations invest in new technologies to gain a competitive edge. Exposes students to different methods used to improve core business performance through strategic planning, technology road mapping, and market analysis. Offers students an opportunity for hands-on experience with formulating and implementing strategic plans.

**INNO 6241. Strategic Disruption Residency 2. (1 Hour)**

Emphasizes the importance of how to market and sell new products or services, both for internal and external applications. Offers students an opportunity to acquire a comprehensive understanding of how to design strategic revenue strategies that focus on how value is determined and revenues are matched against expense investments. Guides students to explore the challenges and solutions to implementing new innovation processes that leverage digital technologies and collaborative cultures. Includes a mix of research topics, cases, and hands-on learning.

**Prerequisite(s):** INNO 6240 with a minimum grade of C-

**INNO 6242. Strategic Disruption Residency 3. (1 Hour)**

Explores the policies and procedures germane to the internal operation of a technology-driven organization. Emphasizes the principles of risk management and quality control, training and documentation requirements, standards design, and IT support systems. Focuses on choosing, developing, and using operational metrics and analytics to govern a technology-driven operation and mining business intelligence from internal and external sources for use in running that operation.

**Prerequisite(s):** INNO 6241 with a minimum grade of C-

**INNO 6250. Integrated and Applied Technology Leadership Project. (2 Hours)**

Offers three executive seminars in which students build "chapters" that comprise their Integrated and Applied Technology Leadership (IATL) project. Primarily examines the technical and managerial challenges of implementing complex technology-based products—from system modeling, integration of modules, requirements verification, and formal specifications to the definition and overall coordination of the development team's efforts. Covers multiple product environments. Pairs students with mentors based on initial project proposal. Regular meetings with mentors offer students opportunities to refine the project and reinforce the business needs. May be repeated twice.

**INNO 6252. Business Opportunities in Sustainable Smart City Initiatives. (3 Hours)**

Explores technology's role in addressing urban sustainability. Examines the impact of technology, designing profitable smart city projects, and key factors influencing corporate involvement in these initiatives. Studies the navigation of public sector processes for mutual benefit. Topics include smart traffic, safety, housing, the environment, education, healthcare, economic development, and tourism.

**INNO 6253. Managing the Metaverse. (3 Hours)**

Explores the foundations of the metaverse and its impact on technology, society, and commerce. Analyzes the historical context, augmented and virtual reality, alternate realities, and the potential for a fully realized metaverse. Utilizes transmedia storytelling as a lens to understand how these dimensions shape the human experience and offers opportunities for creative and profitable interactions.

**INNO 6254. Technology and the Law. (3 Hours)**

Introduces the intersection of law and technology, focusing on legal principles impacting business decisions. Examines how to make informed choices and collaborate with lawyers. Emphasizes understanding key legal issues, effective interaction with legal professionals, and fostering the capability to discuss and explain issues within business teams.

**INNO 6300. Managing a Technology-Based Business. (3 Hours)**

Covers topics specific to managing a business or a strategic business unit within a firm. Considers the special issues related to technology-based firms. Topics include creating a culture, operations planning, staffing for technical excellence, dealing with technology vendors, dealing with advisers, supply chain management, and writing operations plans. Open to first-year graduate students.

**INNO 6318. Innovation Driven Strategy. (2 Hours)**

Introduces a number of entrepreneurship and innovation topics, including innovation and entrepreneurship as a value-creating activity for economies and firms; types of innovation (technological, process, products, business models); fundamentals of product development (design thinking, rapid prototyping, ethnography); startup creation and articulating a value proposition; the role and traits of the entrepreneur; maximizing odds of success and minimizing odds of failure; growing the startup and creating a market; finding or creating the right niche; pivoting and judo strategy; lean startup approach; innovation in established firms and resistance to change; organizational inertia; business model change; and technological discontinuities.

**INNO 6400. Enterprise Growth and Innovation. (2 Hours)**

Explores the challenges and processes for harnessing technological innovation for new-business development. Integrates technology strategy, marketing innovation, product development, and organization design for the purpose of enterprise growth. Uses readings, cases, and exercises to study how firms from different industries gain competitive advantage through distinctive products and services and leverage their technologies and skills into new emerging markets. Focuses on processes for conceiving, financing, and organizing new ventures.

**INNO 6401. Blockchain AI and IT. (3 Hours)**

Covers the design of blockchains and their applications in healthcare, media, financial services, information security, supply chain logistics, and enterprise systems. Introduces the technology underlying blockchains and related implications for IT, analytics, business models, and business processes. Studies a variety of topics within the domain of blockchain technology and its enablement of machine learning. Demonstrates and shares business implications through faculty-led discussion and synthesis. Readings, content, and lectures are context and raw materials.

**INNO 6402. Creating Value in the Experience Economy. (3 Hours)**

Introduces students to ideas, frameworks, and design principles for creating greater economic value for consumers and in B2B situations. Explores the full "Progression of Economic Value" beginning with fungible commodities (the basis of the agrarian economy), to tangible goods (the industrial economy), to intangible services (last century's service economy), shifting into memorable experiences—the basis of the experience economy.

**INNO 6403. Cybersecurity Response Policy and Practice. (3 Hours)**

Introduces the tools needed to build, deliver, and implement a cybersecurity strategy, obtain board consensus around the proposed strategy, and develop an associated "cyber playbook" to respond to security incidents. Focuses on cybersecurity strategy and risk framework from the perspective of the board and executive team. Offers students an opportunity to transition from a strategy and planning perspective to driving cybersecurity tactically with security teams and the business, including security awareness and integration of security controls. Examines how to apply tactical knowledge of incident response and reporting via a scenario-based experiential exercise with role-playing in a simulated cybersecurity crisis situation derived from real-world scenarios.

**INNO 6404. Database Platform Design. (3 Hours)**

Offers students an opportunity to enhance their technology leader skills by developing a working knowledge of data technology concepts such as NoSQL, Hadoop, and distributed processing. Explores metaconcepts to overcome common stumbling blocks and foster collaboration between technology and analysts when defining new work. Students work in groups and individually to experience the frustrations and resolutions of developing a business requirements document for an analytics project. Requires students to present group deliverables each week and to participate in discussions that focus on the process of working on both sides of relationships with technology leads and business users.

**INNO 6405. Enterprise Information Security: Threats and Defenses. (3 Hours)**

Examines tactical orientation following identification of a security threat, at the point of requiring immediate analysis and response to mitigate damage and loss to an organization. Reviews the strategic design of a connected defensive structure built of tools, procedures, and integrations. Focuses on business model relationships to security threat profiles, including managing vulnerability introduced through mergers and acquisitions and active directory migrations. Studies service and administrative account management and other aspects of network design and management. Offers students an opportunity to investigate recent/current cases and to devise countermeasures aimed at incident prevention and effective cyber incident response management and monitoring.

**INNO 6406. Leading Disruptive Change in a Digital Economy. (3 Hours)**

Focuses on the impact of information technology on an organization's transformative objectives. Studies concepts relating to how to integrate IT as the key driver for business process change, for continuous improvement in incremental gains, and for selective reengineering to effectuate substantial breakthroughs in process performance. Offers students an opportunity to develop an understanding of how technology has a push effect on an organization's processes and of the various factors that must be in synch to facilitate such an effect.

**INNO 6408. Raising Capital. (3 Hours)**

Explores multiple strategies for students to launch new ventures as entrepreneurs or intrapreneurs. Focuses on the assessment of business models, funding strategies, team building approaches, and go-to-market examples for new ventures. Offers students an opportunity to draw upon previous academic and professional experience in cross-disciplinary ideation, finance, business strategy, law, market research, and organizational behavior to actualize new venture ideas. Culminates in a new venture pitch to mentors and peers who may include serial entrepreneurs, venture capitalists, startup advisors, and individuals with C-level corporate experience.

**INNO 6409. Innovation Portfolio Management. (4 Hours)**

Focuses on the strategic and tactical aspects of managing product innovation and portfolios within diverse organizational contexts. Explores methodologies such as stage-gate, lean startup, and agile practices while analyzing challenges in industries ranging from manufacturing to healthcare. Key topics include opportunity identification, customer needs analysis, technology roadmapping, and financial planning.

**INNO 6411. Product Innovation Management. (1 Hour)**

Explores advanced principles in product innovation management. Focuses on integrating design thinking, innovation strategy, and portfolio management. Through experiential learning, offers students an opportunity to develop skills in assessing product life cycle stages, aligning innovation portfolios with strategic goals, and applying metrics for data-driven decision making.

**INNO 6962. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.