BUSI 30: EMERGING TECHNOLOGIES & BUSINESS

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2025
Units:	4
Hours:	4 lecture per week (48 total per quarter)
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU/UC
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	Not Repeatable

Student Learning Outcomes

- Students will evaluate emerging technologies through a structured framework that examines what the technology is, how it functions at a non-technical level, and its potential to transform business operations, workforce dynamics, and strategic positioning.
- Students will analyze the ethical, legal, and societal implications of emerging technologies in business, with attention to equity, data privacy, labor impacts, and the historical and contemporary effects on marginalized communities.
- Students will develop and present a strategic business proposal for the adoption of an emerging technology, integrating forecasting models, risk assessment, and return on investment while communicating clearly to diverse stakeholders.

Description

This course offers a comprehensive exploration of how emerging technologies - such as generative artificial intelligence, a hallmark of the 2020s - and other pivotal innovations influence business and society. The course structure is designed to introduce students to the essentials of each technology, explaining what it is and how it operates in non-technical terms; discuss the significance of these technologies to society (the "so what" factor), emphasizing their potential for transformative impacts; and analyze how these technologies affect business strategies, concepts, and functions. The course aims to equip students with a strategic framework for understanding and evaluating the integration of new technologies in business, fostering a deep appreciation for both the opportunities and challenges they present. With a curriculum that adapts to include the latest technological advancements, students will continually engage with the most cutting-edge topics, ensuring their learning remains relevant and impactful. This dynamic approach prepares students not just to adapt to the changing technological landscape, but to actively shape it.

Course Objectives

The student will be able to:

1. Explain the significance and impact of emerging technologies on business.
2. Identify and evaluate key emerging technologies and their applications in various business contexts.
3. Examine and analyze how key emerging technologies function operationally in a business context without requiring deep technical knowledge.
4. Critically assess and evaluate the impact of key emerging technologies on business strategy, operations, competitive environments, and employment, considering both opportunities and challenges.
5. Examine strategic plans for the adoption and integration of emerging technologies in business operations.
6. Understand the ethical, legal, and societal implications of emerging technologies.
7. Review innovative business models that leverage new technologies for competitive advantage.
8. Review strategic approaches for leveraging emerging technologies to enhance business innovation and sustainability, and apply a systematic framework to evaluate their impacts on business and society.

Course Content

1. Introduction to emerging technologies
   a. Definitions and characteristics of key technologies such as generative artificial intelligence (AI), blockchain, and internet of things (IoT)
   b. Historical development and future potential
2. Technological frameworks and models
   a. Overview of strategic frameworks used to assess technological adoption
   b. The Technology Adoption Curve
   c. The Technology Acceptance Model (TAM) and its applications
   d. The Gartner Hype Cycle and how it relates to technology maturity and business application
3. Functional operations of technologies
   a. Non-technical explanations of how key technologies work
   b. Case studies demonstrating functional applications in business
4. Strategic impact analysis
   a. Analyzing the impact of technologies on business strategy and competitive environments
   b. SWOT analysis tailored to technological innovations
   c. Porter's Five Forces Analysis in the context of new technological advancements
5. Business and societal implications
   a. Discussion on the ethical, legal, and societal implications of adopting new technologies
   b. Consideration of privacy, security, and data governance issues
   c. Impacts on labor markets and employment trends
6. Strategies for technology integration and management
   a. Best practices for integrating and managing technology in business settings
   b. Change management strategies for technological adoption
   c. Developing a technology roadmap aligning with business goals
7. Sustainability and innovation
   a. Exploring how emerging technologies can drive sustainable business practices
   b. Innovation theories and models, such as disruptive innovation and blue ocean strategy

   c. Case studies on how businesses have successfully leveraged emerging technologies for growth and sustainability
8. Evaluation frameworks
   a. Applying a structured three-part framework to evaluate technology impacts: identification, analysis, and synthesis
   b. Metrics and KPIs for measuring technology adoption success
   c. Return on investment (ROI) calculations for technology projects

Lab Content

Not applicable.

Special Facilities and/or Equipment

When taught as an online/hybrid distance learning section, students and faculty need ongoing and continuous internet and email access.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Project-based assessments
Presentations
Written assignments
Examinations
Simulation exercises
Peer review

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Interactive lectures
Case study analysis
Workshops and hands-on sessions
Guest lectures and industry panels
Flipped classroom components
Virtual reality (VR) and augmented reality (AR) experiences

Representative Text(s) and Other Materials

Schilling, Melissa. Strategic Management of Technological Innovation. 2023.

Jelassi, Tawfik, Albrecht Enders, and Helmut Krcmar. Strategies for e-Business: Concepts and Cases on Value Creation and Digital Business Transformation. 2020.

Stark, John. Digital Transformation of Industry: Continuing Change. 2020.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

1. Case study analysis: Students will analyze real-world case studies focusing on businesses that have adopted or plan to adopt emerging technologies. For each case, students will evaluate the strategic decisions made by the company, assess the operational and market impacts of the technology, and propose improvements based on business strategy frameworks, such as SWOT analysis and Porter's Five Forces. Recommendations should address how the company could better leverage the technology for competitive advantage or risk mitigation.
2. Data-driven technology analysis: Students will collect and analyze data on an emerging technology, such as AI, blockchain, or IoT. They will interpret market trends, investment data, and adoption rates to understand the business potential and implications of the technology. Using tools like Excel or Tableau, students will create visualizations and a report discussing how businesses can leverage the technology based on the data analyzed.
3. Technology integration proposal: Students will develop a strategic proposal for integrating an emerging technology into an existing business. The proposal must address the potential business benefits, risks, and social implications of adopting the technology. Students will provide an implementation timeline and include a risk analysis to identify challenges the business may face during integration. This assignment encourages students to think strategically about how technology can transform business models and create competitive advantages.
4. Research and presentation assignment: Students will select an emerging technology of their choice, conduct independent research on its applications in business, and create a 5-7 minute video presentation. The presentation should explain the technology, discuss its potential impact on business, and offer examples of how companies might use it to create value. This assignment will help students communicate complex technological concepts in a clear and engaging way.
5. Discussion board participation: Each week, students will participate in online discussions based on prompts related to the week's topic on emerging technologies. They are required to respond to the discussion questions and engage with at least two classmates' posts by providing thoughtful feedback or additional insights. These discussions will explore how emerging technologies influence business strategy, operations, and societal issues, encouraging students to think critically and exchange ideas with their peers.
6. Industry expert interviews: Students will interview an industry professional working with an emerging technology (e.g., AI, blockchain, IoT) to gain real-world insights into its business applications. They will prepare questions, conduct the interview, and submit a written report summarizing the interview and reflecting on how the technology impacts the business and its broader societal effects. The report should include the expert's perspectives on the challenges and opportunities of adopting the technology.

Discipline(s)

Business