

IS3542: GENERATIVE ARTIFICIAL INTELLIGENCE FOR BUSINESS

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Generative Artificial Intelligence for Business

Subject Code

IS - Information Systems

Course Number

3542

Academic Unit

Information Systems (IS)

College/School

College of Business (CB)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

CB2240 Introduction to Business Programming in Python

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

This Generative Artificial Intelligence for Business course explores the practical applications and implications of generative AI (e.g., ChatGPT, a state-of-the-art large language model) in the context of business. Students will learn how to leverage generative AI techniques to develop intelligent conversational agents, automate customer interactions, enhance decision-making processes, and drive value in various business domains. The course will cover theoretical foundations, hands-on practical exercises, and case studies to provide students with a comprehensive understanding of generative AI and its impact on business innovations.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Describe the theoretical foundations and principles of generative AI and conversational agents	30%	x		
2	Explore the potential applications of large language models (e.g., ChatGPT) in different business domains.	20%	x	x	
3	Design practical skills to design, train, and evaluate generative AI models for business applications.	30%	x	x	
4	Analyze and assess the ethical and legal considerations associated with generative AI in business.	10%	x	x	
5	Critically evaluate the impact of generative AI and large language models on business strategies and customer experience.	10%	x	x	

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Seminars Students will engage in seminars about concepts, frameworks, strategies and applications of Generative AI and conversational agents are introduced and discussed.	1, 2, 3, 4	3 hours per week

2	Case Studies	Students will engage in the effective use of large language models (e.g., ChatGPT) in the different business domains discussed and analyzed by students.	1, 2, 3, 4	3 hours per week
3	Hands-on Exercises	Students will engage in developing the practical skills of designing, training, and evaluating generative AI models for different applications. Analyze and assess the ethical and legal considerations associated with generative AI in business. Apply generative AI techniques to automate customer interactions and support business decision-making	3, 4	3 hours per week
4	Project	Students will participate in group projects to demonstrate the ability to effectively use generative AI models in different business domains.	1, 2, 3, 4, 5	3 hours per week

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks ("- for nil entry)	Allow Use of GenAI?
1	Participation and Exercises: Each exercise consists of impromptu quizzes, paired/ small group discussions, role-plays, self reflection, or student presentations to assess students' understanding of the chosen topics and their abilities to apply their skills.	1, 2, 3, 4, 5	10	-	No

2	Group Project: A group project, which includes a project report and/or a presentation, will be assigned to let students apply generative AI concepts and techniques to plan, develop, and/or evaluate the generative AI and large language models on a selected business domain.	1, 2, 3, 4, 5	40	-	Yes
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Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Assessment Rubrics (AR)**Assessment Task**

AT1: Participation and Exercises

Criterion

Ability to accurately describe all key generative AI concepts and conversational agents; Capability to creatively and effectively apply large language models in different business domains; Capability to creatively and effectively design, train, and evaluate generative AI models for different business applications; Ability to analyze and assess the ethical and legal considerations associated with generative AI in business; Capability to creatively and effectively apply generative AI techniques to automate customer interactions and support business decision-making; Ability to critically evaluate the impact of generative AI and large language models on business strategies and customer experience.

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

AT2: Group Project

Criterion

Ability to accurately describe all key generative AI concepts and conversational agents; Capability to creatively and effectively apply large language models in different business domains; Capability to creatively and effectively design, train, and evaluate generative AI models for different business applications; Ability to analyze and assess the ethical and legal considerations associated with generative AI in business; Capability to creatively and effectively apply generative AI techniques to automate customer interactions and support business decision-making; Ability to critically evaluate the impact of generative AI and large language models on business strategies and customer experience.

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

AT3: Examination

Criterion

Ability to accurately describe all key generative AI concepts and conversational agents; Capability to creatively and effectively apply large language models in different business domains; Capability to creatively and effectively design, train, and evaluate generative AI models for different business applications; Ability to analyze and assess the ethical and legal considerations associated with generative AI in business; Capability to creatively and effectively apply generative AI techniques to automate customer interactions and support business decision-making; Ability to critically evaluate the impact of generative AI and large language models on business strategies and customer experience.

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

Introduction to Generative AI for Business

- Overview of generative AI and its applications in business
- Definition and significance of generative AI
- Large language models and their applications in business
- Ethical and legal considerations in generative AI

Understanding large language models (e.g., ChatGPT)

- Overview of large language model architecture and capabilities
- Comparison of generative AI models and chatbot frameworks
- Sequence generation models (e.g., LSTM) and Reinforcement learning for generative AI
- Limitations and challenges of using generative AI techniques in business contexts

Designing Conversational Flows and User Experiences

- Conversational design principles and best practices
- Defining user intents and system responses
- Handling complex user queries and maintaining context

Training and Fine-tuning large language Models

- Dataset preparation and preprocessing
- Model architecture design and training strategies
- Evaluation metrics for generative AI models
- Transfer learning and fine-tuning a large language model for specific business domains
- Fine-tuning and optimization techniques

Integrating large language models into Business Applications

- Deployment options for chatbots in various business platforms
- Integrating chatbots with existing customer service systems
- Managing scalability, security, and privacy concerns

Ethical and Legal Considerations in Chatbot Deployment

- Bias, fairness, and transparency in generative AI
- Intellectual property and copyright considerations
- Privacy and data protection issues
- Regulatory frameworks and guidelines

Case Studies and Industry Applications

- Generative AI in marketing and advertising
- Generative AI for product design and customization
- Generative AI in financial modeling and forecasting
- Generative AI for personalized user experiences
- Generative AI for decision support and knowledge management

Innovation and Future Trends in Generative AI

- Emerging trends and advancements in generative AI and chatbot technology
- Implications for business innovation, customer experience, and workforce augmentation
- Ethical and societal considerations of advanced generative AI techniques

Practical Projects and Hands-on Exercises

- Implementing generative AI models using popular frameworks and libraries
- Solving business problems through generative AI projects
- Presenting and discussing project outcomes and insights
- Evaluating and optimizing system performance through real-world scenarios

Reading List

Compulsory Readings

Title	
1	Nil

Additional Readings

Title	
1	Nil