

Course Catalog

Certificate Impact Program Courses

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European Business University of Luxembourg
Wiltz Campus | Online Campus

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INTRODUCTION

This is a full course syllabi for the undergraduate course below. Unless mentioned otherwise, course scheduling, course structure, as well as course evaluation are standardized for all undergraduate courses. Credits are expressed using the European Credit Transfer System. One European credit stands for 30 hours of workload. The EBU course load consists of 30-40 contact hours and 200-240 study hours. Contact hours include lectures, discussion forums and examinations and study hours include independent study, practical work and research.

One Business Certificate Program semester consists of 13 weeks of class sessions and exam sessions.

The credit system used also remains fully compatible with the American educational system using semester and semester credit hours. The typical 180 European credit requirement for Bachelor programs is considered equivalent to 120 American semester credit hours and 180 American semester credit hours.

COURSE PLANNING

The total number of courses offered is dependent on the total credit study plan requirements of enrolled students. Students plan their courses according to course availability and prerequisites. Some of the courses have required prerequisites.

A minimum of one course from each of the undergraduate specialization courses is offered. The total number of specialization courses offered per specialization is dependent on the total credit and course requirements of enrolled students. Students plan their courses according to course availability. None of the specialization courses have required prerequisites.

COURSE SCHEDULING

Courses are scheduled over the full duration of the semester and 10 weeks. Mid term exams take place in week 5 and final exams take place in week 13 of each semester.

COURSE STRUCTURE

Students are provided a strong theoretical foundation and are introduced to the various concepts in order to gain a thorough understanding of the subject all courses finish within one semester. Undergraduate courses consist of 39 contact hours, 1-2 midterm exam hours and 2 final exam hours. Contact hours are usually scheduled as 13 one (1) hour class sessions with one session per week for the duration of the semester and 2 hours of discussion forum per week formatter. The practical application and implementation of these specific concepts are methodically discussed during the various class sessions by means of real-life examples and comprehensive case studies.

COURSE CONTENT AND LEARNING OUTCOMES

All courses are undergraduate level and are taught according to a student centered approach. Course content listed should be regarded as indicative course content. Learning outcomes listed are reference points and should be regarded as intended learning outcomes for what students are expected to be able to do at the end of the course. Assessments done in the course should address these learning outcomes. The learning outcomes are established according to Benjamin Bloom's taxonomy for cognitive learning. Based on this framework, courses at undergraduate level address primarily the thinking processes: Knowledge, Comprehension, Application, and Analysis.

The overall learning of the courses at the undergraduate program corresponds to the level descriptors of the European Qualifications Framework (EQF) for first cycle qualification. The overall learning of the undergraduate programs aims at students obtaining a level according to the indications below.

The descriptor for the first cycle in the Framework for Qualifications of the European Higher Education Area agreed by the ministers responsible for higher education at their meeting in Bergen in May 2005 in the framework of the Bologna process corresponds to the learning outcomes for EQF level 6.

SETTING

- *Operational Context:* The learner operates in complex and unpredictable contexts, requiring selection and application from a wide range of largely standard techniques and information sources.
- *Autonomy and responsibility for actions:* The learner acts with minimal supervision or direction, within agreed guidelines taking responsibility for accessing support and accepts accountability for determining and achieving personal and/or group outcomes.

CHARACTERISTIC 1: KNOWLEDGE AND UNDERSTANDING

- Demonstrate and/or work with:
- An understanding of the scope and defining features of a subject/discipline/sector, and an integrated knowledge of its main areas and boundaries.
- A critical understanding of a range of the principles, principal theories, concepts and terminology of the subject/discipline/sector.
- Knowledge of one or more specialisms that is informed by forefront developments.

CHARACTERISTIC 2: PRACTICE: APPLIED KNOWLEDGE, SKILLS AND UNDERSTANDING

- Apply knowledge, skills and understanding:
- In using a range of the principal professional skills, techniques, practices and/or materials associated with the subject/discipline/sector.
- In using a few skills, techniques, practices and/or materials that are specialised and/or advanced.
- In practising routine methods of enquiry and/or research.
- To practise in a range of professional level contexts that include a degree of unpredictability.

CHARACTERISTIC 3: GENERIC COGNITIVE SKILLS

- Undertake critical analysis, evaluation and/or synthesis of ideas, concepts, information and issues in a subject/discipline/sector.
- Identify and analyse routine professional problems and issues.
- Draw on a range of sources in making judgements.

CHARACTERISTIC 4: COMMUNICATION, ICT AND NUMERACY SKILLS

- Use a wide range of routine skills and some advanced and specialised skills in support of established practices in a subject/discipline/sector, for example:
- Present or convey, formally and informally, information on standard/mainstream topics in the subject/discipline/sector to a range of audiences.
- Use a range of ICT applications to support and enhance work.
- Interpret, use and evaluate numerical and graphical data to achieve goals/targets.

CHARACTERISTIC 5: AUTONOMY, ACCOUNTABILITY AND WORKING WITH OTHERS

- Exercise autonomy and initiative in some activities at a professional level in practice or in a subject/discipline/sector.
- Exercise managerial responsibility for the work of others and for a range of resources.
- Practise in ways that show awareness of your own and others' roles and responsibilities.
- Work, under guidance, with specialist practitioners.
- Seeking guidance where appropriate, manage ethical and professional issues in accordance with

current professional and/or ethical codes or practices.

COURSE EVALUATION

Course evaluation: Study Load per 10 ECTS course	Total 270 hrs.
- Lectures: one hour per week for (13 weeks)	13 hours
- Self-directed content learning & preparation: 9 hours per week (13 weeks)	117 hours
- Specific assignments: 3 x 3-hour assignments	9 hours
- Formative Assessments/Research assignments	4 hours
- Course Preparation and Discussion Forums: 2.5 hours per day for 10 Weeks	125 hours
- Summative Assessments	2 hours

Course evaluation: Study Load per 5 ECTS course	Total 156 hrs.
- Lectures: one hour per week for (13 weeks)	13 hours
- Self-directed content learning & preparation: 9 hours per week (13 weeks)	78 hours
- Specific assignments: 3 x 3-hour assignments	9 hours
- Research assignments for Module	4 hours
- Course Preparation and Discussion Forums 2.5 hours per day for 10 Weeks	50 hours
- Summative Assessments	2 hours

Attendance to all class sessions and participation in all class discussions is mandatory and is part of the final grade for the course. Reading materials and discussion questions should be prepared by each student individually by the next class session. There should be graded weekly assignments. Formative assignments, where feedback is provided on the student's performance but the grade not included in the final grade, are also given throughout the course. Credits are only awarded upon successful completion of the entire course. Partial credit for partial completion of a course is not awarded.

We reserve the right to change the content of this catalog and to make changes to the academic curriculum at any time and without prior notice.

CODE: CP100 - BUSINESS MANAGEMENT I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course provides a survey of the business world. Topics include the basic principles and practices of contemporary business. Upon completion, students should be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects. The course covers the following topics: The Environment of Business; Business Ownership and Entrepreneurship; Management and Organization; Human Resources; Marketing; Finance and Investment.

COURSE OBJECTIVES

1. To identify and describe the influence of the environments created by the economy, technology, competition, diversity, global opportunities, and social responsibility.
2. To compare the advantages and disadvantages of the major forms of business ownership and discuss why many people are willing to accept the risks of entrepreneurship.
3. To understand the need for management in business organizations, the role of management in developing an organizational structure, and the process of producing products and services that satisfy customers.
4. To describe the management role of acquiring and retaining human resources and creating a supportive work environment.
5. To explain the marketing function and describe the concepts and processes involved in designing product strategy, promotion strategy, distribution strategy, and pricing strategy.
6. To explore the ways of using technology to manage information and to understand accounting's role in managing financial information.
7. To describe the financial management function and the role of money and financial institutions and to illustrate the concepts and processes involved in managing the acquisition and allocation of short term and long term funds.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Identify the potential marketing opportunities that are created by the population trends; Relate how business institutions operate in our modern-day political, social and economic

- environment;
2. Describe various business ownership forms;
 3. Acquire information about starting your own business;
 4. Explain management functions;
 5. Acquire a vocabulary for further study of business subjects;
 6. Describe the importance of marketing activities;
 7. Explain the challenges facing management;
 8. Identify basic long and short-term financial planning techniques;
 9. Describe how organizations protect themselves against potential losses;
 10. Identify and apply business laws as they affect business;
 11. Discuss international trade and markets.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L 1	Identify the potential marketing opportunities that are created by the population trends; Relate how business institutions operate in our modern-day political, social and economic environment	YES	✓			
L 2	Describe various business ownership forms, Acquire information about starting your own business;	YES			✓	
L 3	Acquire a vocabulary for further study of business subjects, Identify and apply business laws as they affect business	YES			✓	
L 4	Present or convey, formally and informally, information on standard/mainstream topics in the subject/discipline/sector to a range of audiences. Identify basic long and short-term financial planning techniques;	YES			✓	✓
L 5	Explain the challenges facing management; Explain management functions; Describe the importance of marketing activities; SCQF Level 9 characteristics. 1, 2, 3, 5	YES	✓		✓	✓

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- G. Pearson, The Rise and Fall of Management, Gower Publishing, 2009.
- Wren & A.G. Bedeian, The Evolution of Management Thought, 6th Edition, Wiley 2009.
- Atrill, P. & McLaney, E (2015) Accounting & Finance for Non-Specialists. Ninth Edition. Pearson.
- Boakes, K, Reading and Understanding the Financial Times. Second Edition. Prentice Hall, 2010.
- Willman, P. (2014) Understanding Management - the Social Science Foundations. Oxford University Press

CODE: CP101 - HUMAN RESOURCE MANAGEMENT I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The course will introduce students to the core of human resources function in organizations: acquiring, developing, motivating, and retaining people. The structure of HR policies and practices must enable employees to fully apply their skills to the achievement of organizational goals. Every essential element of the HR function - strategy, organizational design, policies, and programs - needs to align with HR and business strategy. In this course, the key elements of the HR function are discussed and students, using cases related to the experience of leading international companies to learn, how these key elements are related to organizational strategy. The course informs students about several key problems of contemporary global markets, which require essential changes of HR strategy, such as globalization, big data, dotcoms, and organizational alternatives to traditional business structures, such as Uber, Airbnb, Alibaba.

COURSE OBJECTIVES

Introduce students to the core of human resources function in organizations: acquiring, developing, motivating, and retaining people

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Discuss the key functions and defining characteristics of HRM as a mechanism to add a competitive advantage to the organisation.
2. Examine the resourcing strategies and processes that an organisation employs commenting on the contribution made by the HRM function to the process.
3. Illustrate the role of HRM in the process of performance management and the development of employees.
4. Apply theories of motivation, leadership and authority to address people-related issues in an organization - Analyze cases related to people management.
5. Identify trends and challenges for HRM in the global organizational context
6. Demonstrate the ability to work in diverse teams to provide effective solutions to HR problems.
7. Analyse and apply concepts to explore a range of problems and operational issues that may be encountered within the professional framework of HRM.

8. Apply knowledge to create, critique, and/or improve HR tools (e.g., a resume, a job ad, a performance evaluation sheet)
9. Evaluate evidence synthesised from a range of diverse sources and develop rational arguments supported by reliable and validated sources of information.
10. Demonstrate the ability to communicate (verbally and/or written) effectively and efficiently to the appropriate level, appreciating the context of HRM and the organisational / industry setting.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Discuss the key functions and defining characteristics of HRM as a mechanism to add a competitive advantage to the organisation. (Characteristic 1)	Yes	X			
L2	Examine the resourcing strategies and processes that an organisation employs commenting on the contribution made by the HRM function to the process. (Characteristic 1)	Yes	X			
L3	Evaluate evidence synthesised from a range of diverse sources and develop rational arguments supported by reliable and validated sources of information. (Characteristic 3)	Yes		X		
L4	Analyse and apply concepts to explore a range of problems and operational issues that may be encountered within the professional framework of HRM. (Characteristic 2)	No			X	
L5	Demonstrate the ability to communicate (verbally and/or written) effectively and efficiently to the appropriate level, appreciating the context of HRM and the organisational / industry setting. (Characteristic 5)	No				X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

CODE: CP102 - FINANCIAL ACCOUNTING I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Examines the development of financial statements, the objectives and purpose of financial statements including the underlying, methods, concepts, principles and measurement theories. Emphasizes the preparation, analysis and use of these statements to make operating, financial and investment decisions. Topics include understanding the operating cycle, receivables, inventories, plant and equipment, intangibles assets, liabilities, bonds, ownership and stockholders' equity. Special topics include the mathematics of present value theory, calculations and applications.

COURSE OBJECTIVES

This course provides an introduction to financial accounting as the "language of business." It emphasizes the analysis and evaluation of accounting information from the perspective of both investors and managers in the processes of planning, decision-making, and control. The objective of the course is to provide an overview of financial accounting and external reporting, including the basic accounting concepts and principles, as well as the structure of the income statement, balance sheet, and statement of cash flows. The course covers the accounting for and the analysis of the most common and significant business transactions of a firm, such as credit sales, delivery of products and services, manufacturing processes and procurement, creation of operating infrastructure including production facilities, intellectual property, and goodwill, debt and equity financing, as well as other (potential) obligations towards customers, suppliers, or tax authorities.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Explain the purpose of accounting by mastering the language of business and accounting terminology. Understand the objectives and goals of accounting information systems and the role of financial statements.
2. Explain and differentiate between the methods of accounting and the accounting for merchandising companies and inventories.
3. Prepare the multi step income statement, explain the objectives and purposes of this statement and the articulation of this statement with the other components of the financial statements.
4. Prepare the statement of financial position, (the balance sheet), explain the objectives and purposes of

this statement and the articulation of this statement with the other components of the financial statements.

5. Identify and explain all of the fundamental accounts that comprise revenue, assets, liabilities and stockholders' equity.

6. Prepare the statement of cash flows, explain the objectives and purposes of this statement and the articulation of this statement with the other components of the financial statements.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Explain the purpose of accounting by mastering the language of business and accounting terminology. Understand the objectives and goals of accounting information systems and the role of financial statements.	NO	X		X	
L2	Identify and explain all of the fundamental accounts that comprise revenue, assets, liabilities and stockholders' equity	YES	X		X	
L3	Explain and differentiate between the methods of accounting and the accounting for merchandising companies and inventories.	YES	X		X	
L4	Prepare the multistep income statement, explain the objectives and purposes of this statement and the articulation of this statement with the other components of the financial statements,	YES	X			X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Jones, M. (2011) Creative accounting, fraud and international accounting scandals. • Wiley . Mallin, C. (2010) Corporate Governance, 2nd edition. OUP.
- Gray, R., & Bebbington, J. (2001) Accounting for the Environment.
- Sage Griffiths, I. (1995) New Creative Accounting: how to make profits what you want them to be. • Perks, R. (1995) Accounting and Society.

CODE: CP103 - BUSINESS ETHICS I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The course focuses on basic ethical viewpoints as a foundation and examines specific characteristics of business life through cases and examples. The fact that there is not one universal set of behaviors one considers ethical and no guidelines to follow to determine ethical behavior poses unique challenges to managers today. Yet, managers are faced daily with situations where individual values may conflict with those of teams or organizations. The course explores topics such as corporate responsibility and conflict of interest, employee rights, and advertising and information disclosure.

COURSE OBJECTIVES

1. Understanding the basic concepts of ethics and its role in business, entrepreneurship and economy
2. Apply ethical principles in the process of leadership and decision-making
3. Become familiar with the benefits of corporate social responsibility in the context of globalized economic and social relations
4. Identify consequences of unethical business activities
5. Be able to recognize the essential characteristics of "good society"

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able:

1. To understand main types of ethical violations and consequence of their influence on business practice, economy and society in general;
2. Prove criteria of employees' ethical behavior in decision making in conflict situations (cases of business ethics commissions);
3. To use decision-making models in ethical dilemmas and situations in the workplace;
4. To classify and define stakeholders interests in social, marketing problems of the company taking into account the ethical dilemmas of business;
5. To prove the need for practical realization of initiatives of CSR.

After taking the course of Business Ethics students should be able to:

1. Identify reasons of emergence of Business Ethics and CSR concepts and the main stages of their genesis;
2. Explore problems, opportunities and methods of formation of ethical and morality behavior

- of personnel;
3. Discuss possibilities of regulation of ethical violations and counteraction of corruption in the organization;
 4. Recognise the effects and potential of CSR
 5. Explain how to coordinate policy of CSR to abilities and the purposes of development of the organization, which competitive advantages of SCR are used by a company;
 6. Demonstrate the ability to appraise the ideas and arguments of academics and practitioners to assess the validity of the conclusions reached within the context of CSR and Business Ethics.
 7. Understand how the management of the company can stimulate successful interaction with shareholders and stakeholders;
 8. Develop the ability to judge the morality of business practices and recognize the importance of ethics in the business environment
 9. Develop an understanding of personal responsibility in decision making.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L 1	Identify reasons of emergence of Business Ethics and CSR concepts and the main stages of their genesis;	YES	X			
L 2	Explain how to coordinate policy of CSR to abilities and the purposes of development of the organization, which competitive advantages of SCR are used by a company;	YES	X			
L 3	Demonstrate the ability to appraise the ideas and arguments of academics and practitioners to assess the validity of the conclusions reached within the context of CSR and Business Ethics.	YES		X		
L 4	Develop the ability to judge the morality of business practices and recognize the importance of ethics in the business environment	YES			X	
L 5	Develop an understanding of personal responsibility in decision making.	YES				X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

- 55% - Classwork (review questions, homework, weekly quizzes, and other related activities)
 5% - Merits
 40% - Final Exam

BIBLIOGRAPHY

- Hutchings, K. (2010) Global Ethics. An Introduction, Polity: Cambridge • Kevin Gibson, Ethics and Business: An Introduction. Cambridge University Press, 2007.

CODE: CP1/C - CASES IN GENDER EQUALITY(10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course offers an introduction to Women's and Gender Studies, an interdisciplinary academic field that explores critical questions about the meaning of gender in society. The primary goal of this course is to familiarize students with key issues, questions and debates in Women's and Gender Studies scholarship, both historical and contemporary. Gender scholarship critically analyzes themes of gendered performance and power in a range of social spheres, such as law, culture, education, work, medicine, social policy and the family.

COURSE OBJECTIVES

Throughout the semester, we will "question gender" in multiple ways:

- Why has gender been a primary organizing principle of society?
- How do "gendered scripts" for dress, appearance and behavior emerge among different social groups and in different societies and historical periods?
- How do we explain the sexual division of labor and the unequal social status of women and girls and those activities and roles deemed "feminine" in society?
- In what ways does gender intersect with race, ethnicity and sexuality?
- How do gendered structures of power and authority operate?
- What factors contribute to the formation and success of movements for and against gender equality and fluidity?

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Understand and engage with central debates in the field of Women's and Gender Studies.
2. Define and apply basic terms and concepts central to this field.
3. Apply a variety of methods of analyzing gender in society, drawing upon both primary and secondary sources.

4. Apply concepts and theories of Women's and Gender Studies to life experiences and historical events and processes.
5. Communicate effectively about gender issues in both writing and speech, drawing upon Women's and Gender Studies scholarship and addressing a public audience

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Understand and engage with central debates in the field of Women's and Gender Studies.	NO	X	X		
L2	Define and apply basic terms and concepts central to this field.	YES	X	X	X	X
L3	Apply a variety of methods of analyzing gender in society, drawing upon both primary and secondary sources.	YES	X	X	X	X
L4	Apply concepts and theories of Women's and Gender Studies to life experiences and historical events and processes.	YES	X	X	X	X
L5	Communicate effectively about gender issues in both writing and speech, drawing upon Women's and Gender Studies scholarship and addressing a public audience.	NO	X	X		X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Crawford, M. (2018). Transformations- Women, Gender, and Psychology. New York: McGraw-Hill Education.
- Grewa, I., & Kaplan, C. (2006). An Introduction to Women's Studies Gender in a Transnational World. New York: The McGraw-Hill Companies, Inc.
- Lyons, Sofia. "Explaining the Implicit Quota on Women Executives." New York Magazine, May 2015.
- Smedley, Tim. "The Evidence is Growing—There Really is a Business Case for Diversity." Financial Times, May 15, 2014.
- Hunt, Vivian, Dennis Layton, et al. "Why Diversity Matters?" McKinsey & Company, January 2015.

CODE: CP109 - WOMEN AND LEADERSHIP

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The objective of this course is to identify and demonstrate the nature and importance of female leadership. This course will start with discussions on various leadership theories as well as the leadership development, success of female leaders and what it means when a leader needs to be a good follower. This class will host 5 female guest speakers coming from various leadership backgrounds. The students will explore the character, personal attributes, and behaviours of effective female leaders.

COURSE OBJECTIVES

- To identify and demonstrate your understanding of the nature and importance of female leadership.
- To identify and discuss the importance of leadership theories.
- To discuss leadership development, succession of female leaders, why a leader needs to be a good follower.
- To identify and discuss the pitfalls leaders face, including team dynamics.
- To understand cross-cultural leadership differences.
- To explain the need for a leader to serve the role of a coach and a mentor for impacting global change.
- To discuss exchange-based relationships that reward followers.
- To acknowledge the importance and characteristics of leadership in small business, entrepreneurship, and governance
- To recognize the effects of charisma on motivating employees.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Define the term leadership with specific examples of different leadership styles with the focus in female leadership.
2. Understand the importance of divergent strategic leadership approaches
 - Analyse the leadership environment in the Trait Approach, through different personality traits and characteristics that are linked to successful female leadership.
 - Identify and classify the Skill Approach that focuses on certain abilities, knowledge, and skills of the leader.
 - Create real life cases with using the Behavioural and Situational approach in the business environment for women.
3. Describe the various elements of women in Society & Business; Explain the phenomena of
 - The Glass Ceiling
 - The Glass Cliff
 - The Glass Escalator
4. Recognize the importance of Authentic & Servant Leadership, the historical background, and the model of the used leadership in today's business environment, with a focus on the female perspective.
5. Select, analyse, and define female communication styles and the differences between female and male communication.
6. Develop a strategic plan or strategy for personal improvement in leadership skills and self-reflection on leadership practice.
7. Evaluate/analyse various female leaders throughout the course.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Knowledge and understanding of the leadership role and basic terminology.	Yes	X			
L2	Practice applied knowledge , use of techniques for improvement of personal leadership practice	Yes		x	x	

L3	Generic cognitive skills: being able to apply the divergent leadership approaches	Yes	x		x	
L4	Communication: present and convey information related to leadership concepts and apply them to real-world examples.	Yes	x	x		
L5	Autonomy and teamwork: exercise autonomy and initiative in some activities at a professional level and working with peers.	Yes			x	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

50% - Classwork (review questions, homework, weekly quizzes, and other related activities)

20% - Midterm Exam

30% - Final Exam

BIBLIOGRAPHY

- LEADERSHIP- Theory and Practice. 7th Edition. By Peter G. Northouse. Sage.

CODE: CP200 - CUSTOMER RELATIONS MANAGEMENT (5ECTS)

COURSE DETAILS

Course level: Undergraduate
Course category: Core requirement
Course credits: 5
Course duration: 13 weeks
Total contact hours: 19
Total exam hours: 2
Total study hours: 115
Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course examines customer relationship management (CRM) and its application in marketing, sales, and service. Effective CRM strategies help companies align business process with customer centric strategies using people, technology, and knowledge. Companies strive to use CRM to optimize the identification, acquisition, growth and retention of desired customers to gain competitive advantage and maximize profit. Anyone interested in working with customers and CRM technology and would like to be responsible for the development of any major aspect of CRM will find this course beneficial.

COURSE OBJECTIVES

Understand the fundamentals of CRM, which include:

- customer behavior, relationship marketing, customer satisfaction, loyalty, customer defection;
- key concepts, such as Sales Management, Closed Loop Marketing, Drip Marketing;
- CRM impact on sales and marketing strategies;
- data, information and technology;
- privacy, ethics: consumer and organization privacy concerns;
- ways unsatisfied customers may use Internet to bring disrepute to company brand and products;
- ways companies may use Technology including Internet to support corporate CRM strategy;

The role of CRM in managing customers as critical assets

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

Learning Outcomes: On successful completion of the course the candidate will be able to:	Assessed in this module?	A	B	C	D
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L1	Critically understand the different types of consumer buying behavior.	Yes	X	X	X	
L2	Recognize the stages of the consumer buying decision process and understand how the process relates to different types of buying decisions.	Yes	X		X	
L3	Explore and evaluate how personal factors may affect the consumer buying decision process.	YES	X	X	X	X
L4	Learn and understand about the psychological factors that may affect the consumer buying decision process.	Yes	X		X	X
L5	Understand why it is important for marketers to attempt to understand consumer buying behavior and the role of this behavior in marketing strategies.	Yes	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Principles of Customer Relationship Management by Baran, Galka, Strunk,
- SOUTHWESTERN [CENGAGE Learning], 2008
- Customer Relationship Management by Francis Buttle (2nd Edition), Elsevier Ltd., 2009

CODE: CP201 - BUSINESS FINANCE, I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	CP102 FINANCIAL ACCOUNTING, I & II
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course presents the foundations of finance with an emphasis on applications vital for corporate managers. We discuss most of the major financial decisions made by corporate managers both within the firm and in their interactions with investors. Essential in most of these decisions is the process of valuation, which will be emphasized throughout the course.

COURSE OBJECTIVES

This course focuses on providing theoretical and practical frameworks for understanding how investors, and more importantly, how company managers, can influence both the amount and risk of cash flows to enhance shareholder value. We will examine how managers should make investment, financing, and dividend decisions that enhance stockholders' investment value and why managements often don't make decisions that increase shareholder value.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Explain the role of the organisation's financial managers in realizing these strategic objectives.
2. Be able to describe and evaluate the different sources of corporate finance (e.g. equity, debt, retained earnings and so on ...), and be able to explain the relative advantages and disadvantages of each source.
3. Understand how risk and the cost of capital impact on investment appraisal, and explain how such factors affect the value of a capital project.
4. Explain how the corporation's capital structure, payout policy and risk policy impact upon investment decisions.
5. Have good understanding of, and be able to discuss current topical issues under debate in the world of corporate finance.

Learning Outcomes: On successful completion of the course the candidate will be able to:	Assessed in this module?	A	B	C	D
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L1	Explain the role of the organisation's financial managers in realizing these strategic objectives.	Yes	x	x	x	
L2	Be able to described and evaluate the different sources of corporate finance (e.g. equity, debt, retained earnings and so on ...), and be able to explain the relative advantages and disadvantages of each source.	Yes	x	x	x	x
L3	Understand how risk and the cost of capital impact on investment appraisal, and explain how such factors affect the value of a capital project.	Yes		x	x	
L4	Explain how the corporation's capital structure, payout policy and risk policy impact upon investment decisions.	Yes	x	x	x	
L5	Have good understanding of, and be able to discuss current topical issues under debate in the world of corporate finance.	Yes	x	x	x	x

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Jean Tirole, "The Theory of Corporate Finance", Princeton university press, 2006.
- Brigham, Houston. Essentials of Financial Management, 2nd Edition.
- Cengage Learning Asia. 2010.
- Brealey, Myers, Marcus. Fundamentals of Corporate Finance, 5th Edition.
- McGraw-Hill. 2007. Solely distributed by C&E Publishing.
- Keown, Martin, Petty, Scott. Financial Management Principles and Applications, 10th Edition. Prentice-Hall. 2005.

TERM II

CODE: CP202 - MACROECONOMICS, I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course introduces students to macroeconomics, the study of the economy as a whole. Macroeconomics applies the basic principles of economics to whole economic systems and the relationships among sectors of the economy. Topics include unemployment, inflation, national income and employment theory, government expenditures and taxation, the role of the banking system, and monetary and fiscal policies. The course emphasizes the development of conceptual tools to analyze the economic problems facing modern society.

COURSE OBJECTIVES

The course will cover the determination of income, employment, the price level, interest rates and exchange rates in the economy. The economy will be analysed in the short run (e.g. business cycle and stabilization policy) and in the long run (e.g. economic growth). The insights of Keynesian and classical theories will be integrated. During the course a variety of simple models will be presented. As macroeconomics is an empirical discipline the course will cover case studies and statistical data interpretation. Special attention will be given to current European developments.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Demonstrate knowledge of macroeconomic concepts by explaining them using appropriate terminology
2. Demonstrate knowledge of macroeconomic theories by analysing their assumptions and differences,
3. Demonstrate understanding of macroeconomic models by describing relationships among macroeconomic variables,
4. Demonstrate knowledge and understanding of current macroeconomic problems by applying theories to concrete cases,
5. Demonstrate and communicate an understanding of economic Policies,
6. Demonstrate and communicate an understanding of the European Union as an economic Bloc.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Demonstrate knowledge of macroeconomic concepts by explaining them using appropriate terminology	Yes	X	X	X	X
L2	Demonstrate knowledge of macroeconomic theories by analysing their assumptions and differences,	Yes	X	X	X	X
L3	Demonstrate understanding of macroeconomic models by describing relationships among macroeconomic variables,	Yes	X	X	X	X
L4	Demonstrate knowledge and understanding of current macroeconomic problems by applying theories to concrete cases,	Yes	X	X	X	X
L5	Demonstrate and communicate an understanding of economic Policies,	Yes	X	X	X	X
L6	Demonstrate and communication an understanding of the European Union as an economic Bloc	Yes	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Olivier Blanchard (2017). Macroeconomics, Seventh Edition, Pearson.
- Krugman and Wells, Eds., Macroeconomics 3 rd. ed, Worth Publishers, 2012

CODE: CP203 - THE GLOBAL ECONOMY (5 ECTS)

COURSE DETAILS

Course level: Undergraduate
Course category: Core requirement
Course credits: 5
Course duration: 13 weeks
Total contact hours: 19
Total exam hours: 2
Total study hours: 115
Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Exchange of goods, services and capitals across borders represent a significant share of most countries' gross domestic product. This course aims to teach BBA students the fundamentals of international trade in today's global business world, including the concepts and principles of international economics. Therefore, understanding the global business context and the current global challenges reveal to be the key to success in global commerce.

COURSE OBJECTIVES

The objectives of this course articulate around discovering the concepts and principles of International Trade, investigating the impacts of exchange rates and interest rates, and exploring the concept of the Balance of Trade.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Demonstrate an understanding of the global trade environment
2. Demonstrate a critical understanding of the concepts and principles of international trade
3. Identify and evaluate the exchange rates and interest rates impacts on global trade
4. Critically analyse the concept of balance of trade

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Demonstrate an understanding of the global trade environment	Yes	X	X		X

L2	Demonstrate a critical understanding of the concepts and principles of international trade	Yes	X	X	X	X
L3	Identify and evaluate the exchange rates and interest rates impacts on global trade	Yes	X	X		X
L4	Critically analyse the concept of balance of trade	Yes	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Schiller, B. And Gebhardt, K. (2016). The Economy Today. 14th Edition. McGraw Hill.
- Recommended articles are available on Moodle, listed under each session.

CODE: CP/2C - CASES IN FINANCE (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course uses case studies to give practical illustrations of financial problems. Students learn to deal with a range of cases systematically: identifying issues, determining possible impacts, evaluating proposals and producing solutions.

COURSE OBJECTIVES

To bring financial decisions from the business world to the classroom, through the case method approach, by helping students develop decision-making skills in unstructured, uncertain, and complex (i.e., realistic) situations.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. To apply theory to practical situations/cases
2. To develop and analyze a business plan based on a business case
3. To improve analytical skills
4. To learn the analytical frameworks used to assess decisions that entrepreneurs and managers face

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	To apply theory to practical situations/cases	Yes	X		X	
L2	To develop and analyze a business plan based on a business case	Yes		X	X	X
L3	To improve analytical skills	Yes	X	X		

L4	To learn the analytical frameworks used to assess decisions that entrepreneurs and managers face	Yes		X		X
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A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Case Studies in Finance: Managing for Corporate Value Creation by Bruner, Eades, Schill, 7th edition, New York, NY, 2014

CODE: CP/3C - CASES IN MARKETING (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Marketing is fundamental to the operations of any organisation whether it is a local family-run convenience store, a charity, a new online game or a product-diverse multinational enterprise. The course examines the fundamentals of marketing setting them within a contemporary context to which students can relate. This course provides students with marketing case study analysis, based on real-life examples of marketing approaches and strategies. Marketing is explored from an academic, practitioner and student (as a consumer) perspective. All require to a greater or lesser extent marketing activities. Moreover, each and everyone one of us engages, both consciously and subconsciously, with marketing messages throughout our daily lives. As marketing plays a crucial role both in our personal lives and that of a diverse range of organisations it is considered a fundamental module. However, marketing does not operate in isolation and therefore must be considered in relation to other functional activities such as finance.

COURSE OBJECTIVES

Introduce students to the core of marketing functions in organizations: promoting, communicating, launching new products and services, and creating loyal customers. Also the course aims to deliver content that explores the frameworks, ideas and concepts that underpin marketing and considers their relationship to practice.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Explain, using detailed examples, how the marketing mix operates within different organisational settings.
2. Critically evaluate, using detailed examples, how a range of external factors can influence/impact upon marketing operations.
3. Debate ethical issues relating to marketing operations.
4. Explain the relevance of branding to both products and services.
5. Evaluate evidence synthesised from a range of diverse sources.
6. Develop rational arguments supported by reliable and validated sources of information.
7. Engage in critical self-reflection to help identify both strengths and areas for further development.
8. Develop their communication skills.
9. Demonstrate their ability to be independent and take responsibility for their actions.
10. Develop their time management skills able to meet challenging deadlines.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Explain, using detailed examples, how the marketing mix operates within different organisational settings.	Yes	X			
L2	Critically evaluate, using detailed examples, how a range of external factors can influence/impact upon marketing operations.	Yes		X		
L3	Evaluate evidence synthesised from a range of diverse sources.	Yes		X		
L4	Develop their communication skills.	Yes			X	
L5	Demonstrate their ability to be independent and take responsibility for their actions.	Yes				X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, eweekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Calkins, Breakthrough Marketing Plans (Palgrave Macmillan, 2008)

CODE: CP300- QUANTITATIVE BUSINESS METHODS, I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	Year I and Year II courses
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

All Business Management students require the ability to deal with quantitative material, including the collection, collation and analysis of such data. This course introduces students to the quantitative techniques in business mainly centred on statistical aspects.

COURSE OBJECTIVES

This course aims to enhance your ability to analyse financial and economic data and thereby to assist in making business decisions. It is designed for those who have had little or no quantitative training in their undergraduate degree but who need mathematical and statistical skills for specialisations in the areas of Finance, Economics, Accounting and Business Strategy. That course has a lesser focus on mathematics and a greater focus on analysing textual data.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Describe basic statistical techniques for data collection, presentation and analysis.
2. Critically review the collection, presentation and analysis of data.
3. Understand and explain how to tackle business problems through the use of statistical techniques.
4. Apply statistical techniques to data.
5. Discuss the results of the application of statistical techniques to data in written reports and/or oral presentations.

Learning Outcomes: On successful completion of the course the candidate will be able to:	Assessed in this module?	A	B	C	D
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L1	Describe basic statistical techniques for data collection, presentation and analysis.	No	X		x	
L2	Understand and explain how to tackle business problems through the use of statistical techniques.	Yes	X	x		
L3	Critically review the collection, presentation and analysis of data.	Yes	x	X		
L4	Apply statistical techniques to data.	No	x	x		x
L5	Discuss the results of the application of statistical techniques to data in written reports and/or oral presentations.	No	x		x	

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- QUANTITATIVE METHODS FOR BUSINESS / Anderson, David Ray ; Sweeney, Dennis J ; Williams, Thomas Arthur. -- Cincinnati, Ohio: South-Western College Pub.
- STATISTICS / Hays, William L. -- Fort Worth: Harcourt Brace College
- STATISTICAL THINKING (Improving Business Performance) / Roger Hoerl and Donald D. Snee, Duxbury (Thomson Learning)
- APPLIED SIMULATION MODELING / Seils, Ceric and Tadikamalla, Duxbury Applied Series (Thomson Learning)
- MAKING HARD DECISIONS / Robert T. Clemen and Terence Reilly, Duxbury (Thomson Learning).
- DATA ANALYSIS & DECISION MAKING WITH MICROSOFT EXCEL, Al-bright, Winston and Zappe, (Thomson-Duxbury).
- Haeussler, E.F. Paul, R.S and Wood, R.J. 2018, Introductory Mathematical Analysis for Business, Economics and the Life and Social Sciences 14th ed., Pearson New International edition
- Swift, L. and Piff, S. 2014 Quantitative Methods for Business, Management and Finance, 4th ed Basingstoke: Palgrave Macmillan.

CODE: CP301 - MARKETING MANAGEMENT I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The objective of this course is to introduce students to the concepts, analyses, and activities that comprise marketing management, and to provide practice in assessing and solving marketing problems. Topics include marketing strategy, segmentation- targeting and positioning, customer behavior, market research, competitive analysis and the marketing mix planning and development (product management, pricing, promotion, distribution and salesforce management).

COURSE OBJECTIVES

To enhance the student's knowledge about marketing theories, principles, strategies and concepts and how to apply them.

To provide the students with marketing analysis tools to identify the firm opportunities.

To allow the students to apply marketing concepts and theories to real marketing situations.

To identify the marketing mix strategies that companies are applying in real-world situation

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Define the term marketing and explain its role and importance in an individual firm and the overall economy.
2. Understand the importance of strategic marketing and know the basic outline for a marketing plan:
 - Analyze the external environment to identify opportunities or challenges to a business.
 - Identify and classify marketing segments and targets, demonstrating the use of marketing research techniques.
 - Create and use a mission statement, SWOT, Ansoff analysis and SMART goals.
3. Describe the elements of the marketing mix (4Ps & 7PS of marketing):

- Product: Explain the use of product mix and life cycle in a marketing strategy
 - Place / Marketing Channels: Identify different marketing channels and develop distribution strategies.
 - Promotion / Communication: Describe the role of advertising and public relations in marketing a product or service and link it with the IMC (integrated Marketing Communication).
 - Pricing: List and explain a variety of pricing objectives.
4. Recognize the importance of marketing in an organization, how marketing relates to other business functions, and the role of marketing in society at large.
 5. Select, analyze and define a target market for a selected product or service.
 6. Develop a marketing plan or strategy for a product or service (e.g., company objectives, marketing objectives, target market(s), advertising/ communication, pricing, distribution, product/ service development, evaluation of competitors, contingency plans, budget, etc.)
 7. Evaluate/analyze the marketing strategy for an existing product or services.
 8. Know the basic marketing concepts and theories.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Knowledge and understanding of the marketing role and basic marketing terminology.	Yes	X			
L2	Practice applied knowledge , use of techniques internal and external analysis.	Yes		x	x	
L3	Generic cognitive skills: being able to apply the market research methods – quantitative and qualitative	Yes	x		x	
L4	Communication: present and convey information related to marketing concepts and apply them to real-world examples.	Yes	x	x		
L5	Autonomy and teamwork: exercise autonomy and initiative in some activities at a professional level and working with peers.	Yes			x	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- R. Kerin, S. Hartley & W. Rudelius, Marketing, 11th edition, Irwin/McGraw-Hill.

CODE: CP302 - COMMUNICATION SKILLS, (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Business Communication Skills gives you a clear insight into what constitutes effective oral and written business communication in a fast-paced global business environment, and provides you with the opportunity to develop your own workplace communication skills. The course is highly interactive and task-oriented. Case analyses, simulations, written assignments and individual and team presentations will allow you to practise the theories and key concepts introduced during the course. Peer and lecturer feedback will give you a clear picture of your present communication skills, and an indication of how you can enhance your performance

COURSE OBJECTIVES

The following objectives based on previous thoughts of the business communication faculty affect us:

1. Listen, read and comprehend
2. Paraphrase and summarize information
3. Distinguish between facts, assumptions, and opinions
4. Respond appropriately in a clear and concise fashion (oral and written)
5. Synthesize information from different sources
6. Organize information to support conclusions
7. Use an appropriate format and business writing style and apply conventions to Standard English
8. Document and cite sources to avoid plagiarism.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

By the end of the course you will be able to:

1. analyse audiences and define objectives to create targeted messages
2. write coherent and convincing, reader-friendly business documents
3. craft clear, focused and engaging business presentations
4. critically assess your own and others' business communications

Learning Outcomes: On successful completion of the course the candidate will be able to:	Assessed in this module?	A	B	C	D
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L1	analyse audiences and define objectives to create targeted messages	Yes	X	x	x	x
L2	write coherent and convincing, reader-friendly business documents	Yes	x	x	x	x
L3	craft clear, focused and engaging business presentations	Yes	x	x	x	x
L4	critically assess your own and others' business communications	Yes	x	x	x	x

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Mary Ellen Guffey and Dana Loewy, Business Communication: Process & Product, 9th edition.

CODE: CP303-PRODUCTION AND OPERATIONS MANAGEMENT I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course is an introduction to the concepts, principles, problems, and practices of operations management. Emphasis is on managerial processes for effective operations in both goods-producing and service-rendering organization. Topics include operations strategy, process design, capacity planning, facilities location and design, forecasting, production scheduling, inventory control, quality assurance, and project management. The topics are integrated using a systems model of the operations of an organization.

COURSE OBJECTIVES

This course provides a general introduction to operations management. Operations management is the design and control of business processes, that is, the recurring activities of a firm. Along with finance and marketing, operations is one of the three primary functions of a firm. At the risk of being simplistic, one may say that marketing generates the demand, finance provides the capital, and operations produces the product or delivers the service. More generally, operations spans the entire organization: COOs are in charge of R&D, design/engineering, production operations, marketing, sales, support and service. This course aims to (1) familiarize you with the major operational problems and issues that confront managers, and (2) provide you with language, concepts, insights and tools to deal with these issues in order to gain competitive advantage through operations.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Develop an understanding of and an appreciation for the production and operations management function in any organization.
2. To understand the importance of productivity and competitiveness to both organizations and nations.
3. To understand the importance of an effective production and operations strategy to an organization.
4. To understand the various production and operations design decisions and how they relate to the overall strategies of organizations.
5. To understand the importance of product and service design decisions and its impact on other design decisions and operations.
6. Obtain an understanding of quality management practice in organizations and how total quality management and six-sigma facilitate organizational effectiveness.
7. To understand the relationship of the various planning practices of capacity planning, aggregate planning, project planning and scheduling.

8. To understand the roles of inventories and basics of managing inventories in various demand settings.
9. To understand contemporary operations and manufacturing organizational approaches and the supply-chain management activities and the renewed importance of this aspect of organizational strategy.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Gaining an appreciation of the strategic importance of operations and supply chain management in a global business environment	Yes	X	x	x	x
L2	Being able to describe the impact of operations and supply chain management on other functions within a firm, as well as on the competitive position of the firm	Yes	x	x		
L3	Developing a working knowledge of the concepts and methods related to designing and managing operations and to create value along the supply chain.	Yes	x	x		
L4	Learning a skill set for continuous improvement	Yes	x	x		x
L5	Enable learners to recognise the role of technology & strategy in operations management	Yes	x	x		

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Operations Management by William J. Stevenson. Eighth Edition, Irwin / McGraw-Hill, 2005.
- Jacobs, F.R. & R.B. Chase. (2010). Operations and Supply Chain Management (13th edition). Boston: McGraw-Hill Irwin.
- G. Cachon and C. Terwiesch. Matching Supply with Demand: An Introduction to Operations Management (3rd Ed). McGraw-Hill. 2013

CODE: CP304 - STRATEGIC MANAGEMENT I & II (10 ECTS)

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course introduces the key concepts, tools, and principles of strategy formulation and competitive analysis. It is concerned with managerial decisions and actions that affect the performance and survival of business enterprises. The course is focused on the information, analyses, organizational processes, and skills and business judgment managers must use to devise strategies, position their businesses, define firm boundaries and maximize long-term profits in the face of uncertainty and competition. Strategic Management I & II is an integrative and interdisciplinary course. It assumes a broad view of the environment that includes buyers, suppliers, competitors, technology, the economy, capital markets, government, and global forces and views the external environment as dynamic and characterized by uncertainty. In studying strategy, the course draws together and builds on all the ideas, concepts, and theories from your functional courses such as Accounting, Economics, Finance, Marketing, Organizational Behavior, and Statistics. The course takes a general management perspective, viewing the firm as a whole, and examining how policies in each functional area are integrated into an overall competitive strategy. The key strategic business decisions of concern in this course involve selecting competitive strategies, creating and defending competitive advantages, defining firm boundaries and allocating critical resources over long periods. Decisions such as these can only be made effectively by viewing a firm holistically, and over the long term

COURSE OBJECTIVES

To develop your capacity to think strategically about a company, its business position, how it can gain sustainable competitive advantage and formulate plans to ensure organizational viability.

To develop skills using strategic and functional level analytical tools in a variety of companies and industries to facilitate the development and implementation of effective business strategy.

To integrate and synthesize knowledge gained in business core courses into a comprehensive approach to managing a multifunctional business organization.

To organize and present strategic and operational information appropriate to professional standards and practices.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

1. Analyze the main structural features of an industry and develop strategies that position the firm most favorably in relation to competition and influence industry structure to enhance industry attractiveness.
2. Recognize the different stages of industry evolution and recommend strategies appropriate to each stage.
3. Appraise the resources and capabilities of the firm in terms of their ability to confer sustainable competitive advantage and formulate strategies that leverage a firm's core competencies.
4. Demonstrate understanding of the concept of competitive advantage and its sources and the ability to recognize it in real-world scenarios.
5. Distinguish the two primary types of competitive advantage: cost and differentiation and formulate strategies to create a cost and/or a differentiation advantage.
6. Analyze dynamics in competitive rivalry including competitive action and response, first-mover advantage, co-opetition and winner-take-all and make appropriate recommendations for acting both proactively and defensively.
7. Formulate strategies for exploiting international business opportunities including foreign entry strategies and international location of production.
8. Make recommendations for vertical changes in the boundary of the firm based on an understanding of the advantages of vertical integration and outsourcing and the factors that determine the relative efficiency of each.
9. Make recommendations for horizontal changes in the boundary of the firm based on an understanding of the conditions under which diversification creates value.
10. Demonstrate the ability to think critically in relation to a particular problem, situation or strategic decision through real-world scenarios.
11. Recognize strategic decisions that present ethical challenges and make appropriate recommendations for ethical decision-making.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Analyze the main structural features of an industry and develop strategies that position the firm most favourably in relation to competition and influence industry structure to enhance industry attractiveness.	Yes	X			
L2	Recognize the different stages of industry evolution and recommend strategies appropriate to each stage.	Yes		x		
L3	Appraise the resources and capabilities of the firm in terms of their ability to confer sustainable competitive advantage and formulate strategies that leverage a firm's core competencies.	Yes		x		
L4	Demonstrate understanding of the concept of competitive advantage and its sources and the ability to recognize it in real-world scenarios.	Yes	x			

L5	Distinguish the two primary types of competitive advantage: cost and differentiation and formulate strategies to create a cost and/or a differentiation advantage.	Yes			X	
L6	Analyze dynamics in competitive rivalry including competitive action and response, first-mover advantage, co-opetition and winner-take-all and make appropriate recommendations for acting both proactively and defensively.	Yes		X		
L7	Formulate strategies for exploiting international business opportunities including foreign entry strategies and international location of production.	Yes			X	
L8	Make recommendations for vertical changes in the boundary of the firm based on an understanding of the advantages of vertical integration and outsourcing and the factors that determine the relative efficiency of each.	Yes				X
L9	Make recommendations for horizontal changes in the boundary of the firm based on an understanding of the conditions under which diversification creates value.	Yes				X
L10	Demonstrate the ability to think critically in relation to a particular problem, situation or strategic decision through real-world scenarios.	Yes			X	
L11	Recognize strategic decisions that present ethical challenges and make appropriate recommendations for ethical decision-making.	Yes			X	

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

- Dess, G. G., Lumpkin, G. T., Eisner, A. B., McNamara, G. 2013. Strategic Management: Creating Competitive Advantages, 7th Edition, McGraw-Hill International Edition, McGraw-Hill/Irwin.
- Hill, C. W. L. & Jones, G. R. 2008. Strategic Management: An integrated approach, 8th Edition, Houghton Mifflin

CODE: CP309 - BUSINESS & SUSTAINABILITY

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The essence of the course is to learn the basic concepts and principles in relation to Sustainability Science and how this relates to business. On the one hand, environmental aspects such as water, climate, waste, energy, agriculture and biodiversity will be touched upon. The course then explores how environmental problems are closely related to social aspects. Lastly, different approaches and tools that companies can use to integrate corporate sustainability in their business practices, such a Circular Economy principles and Design Thinking, will be discussed.

COURSE OBJECTIVES

1. Understand the basic concept of Sustainable Development, the environmental, social and economic dimensions
2. Understand the history of Sustainable Development
3. Explore the people-planet-profit concepts and how they apply to various real-life sustainability challenges
4. Problematize the role of business in society and explain the business case for sustainability
5. Discuss approaches, methods and tools available to companies to contribute to sustainability
6. Analyze and evaluate how different corporate sustainability initiatives are implemented by companies to become more sustainable

LEARNING OUTCOMES

After taking the course of Business & Sustainability students should be able to:

1. Give a clear overview of the concept of sustainable development, its history and complexity, and give examples of various ways to operationalize it
2. Understand that achieving sustainability solutions needs contributions from different perspectives, stakeholders and worldviews.
3. Understand the Sustainable Development challenge for companies, their responsibility and their potentials for action
4. Understand the role of the circular economy within sustainability

5. Identify approaches, methods and tools available to companies to contribute to sustainability
6. Analyze and evaluate how different corporate sustainability initiatives are implemented by companies to become more sustainable

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Give a clear overview of the concept of sustainable development, its history and complexity, and give examples of various ways to operationalize it	YES	X			
L2	Understand that achieving sustainability solutions needs contributions from different perspectives, stakeholders and worldviews.	YES	X	X		
L3	Understand the Sustainable Development challenge for companies, their responsibility and their potentials for action	YES	X			
L4	Understand the role of the circular economy within sustainability	YES	X			
L5	Identify and discuss approaches, methods and tools available to companies to contribute to sustainability	YES			X	X
L6	Analyze and evaluate how different corporate sustainability initiatives are implemented by companies to become more sustainable	YES		X	X	

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

SPECIALIZATION COURSES

SPECIALIZATION COURSE

CODE: CP104 - INTRODUCTION TO PYTHON

COURSE DETAILS

Course level: Undergraduate

Course category: Core requirement

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Students will review Python with this introductory course and familiarize themselves with programming. Carefully crafted by EBU, upon completion of this course students will be able to write Python scripts, perform fundamental hands-on data analysis using the Jupyter- based lab environment, and create their own projects.

Learning Objectives:

- Write a Python program by implementing concepts of variables, strings, functions, loops, conditions
- Understand the nuances of lists, sets, dictionaries, conditions and branching, objects and classes

CONTENT

Lesson 1 - Python Basics

Lesson 2 - Python Data Structures

Lesson 3 - Python Programming Fundamentals

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
		L1	Write a Python program by implementing concepts of variables, strings, functions, loops, conditions	YES	x	x

L2	Understand the nuances of lists, sets, dictionaries, conditions and branching, objects and classes	YES	x	x	x	x
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A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, weekly quizzes, and other related activities)
5% - Merits

40% - Final Exam/Project

BIBLIOGRAPHY

Bibliography: TBD

CODE: CP108 - PLUTUS/HASKELL I

Course level: Undergraduate

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	PRIOR PROGRAMMING EXPERIENCE IS RECOMMENDED, eg PYTHON, JAVA, C++
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Students will develop their functional programming skills in the languages Haskell and Plutus. This will help make them competent smart contract programmers; adept at changing the world through the creation of new systems and decentralised applications in the Cardano Ecosystem. The course opens a door of opportunity to work in the early development of Cardano; the fastest growing Cryptocurrency. Which aims to bank the unbanked and create new financial systems for emerging world markets.

The course will teach you the core principles of how to code in both Haskell and Plutus. Modules will cover the building blocks of Haskell and Plutus, including functions and data types, type classes, monads, template Haskell, using the Plutus Playground, The Marlowe Playground, the Extended UTXO model, working with Plutus on and off the chain, minting policies, state machines, the Plutus application framework, as well as case studies and practical exercises.

Prerequisites: While you do not need to be an expert in formal methods, programming experience and a general aptitude for logical and mathematical thinking are highly desirable.

COURSE OBJECTIVES

To gain an understanding of functional programming in Plutus.

To understand the transformative power of blockchain technology

To develop competent smart contract developers

COURSE OUTCOMES

Theoretical introduction to Cryptocurrency, Blockchain, and Cardano.

Develop an understanding of the invention of decentralized consensus through proof-of-work, and the difference between proof-of-work and proof-of-stake.

Technical overview of Functional Programming Haskell and Plutus.

Practical introduction to functions and data types, type classes, monads, template Haskell, using the Plutus Playground, The Marlowe Playground, the Extended UTXO model, working with Plutus on and off the chain, minting policies, state machines, the Plutus application framework in case studies and practical exercises.

CODE: CP306 - FUNDAMENTALS OF BLOCKCHAIN TECHNOLOGIES

Course level: Undergraduate

Course category: Core requirement

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The goal of this course is to empower students on how to work within and competently understand the changes occurring in Fintech. This course will allow students to effectively learn the use of digital cryptocurrencies. In this course, the student will develop an appreciation and understanding of how to apply their knowledge as a technical and operational skill to enable and impact business and economic spheres through a total grasp of the interoperability that has driven the interest and adoption of cryptocurrencies in business and government.

COURSE OBJECTIVES

In learning about the disruptive force of Fintech, students will apply themselves in a project-based approach to learning that builds upon a foundational understanding of the Blockchain. They will apply this learning to real-world challenges and questions in order to fully understand the benefits, limits and disruptive force of the Blockchain.

LEARNING CONTENT AND OUTCOMES

When the course is complete students be able to:

- Competently engage in digital currency purchases
- Understand the implications of the blockchain in finance
- Engage employers in the beneficial cost efficiencies of the blockchain
- Adopt the crypto technology to a bespoke corporate requirement

Unit 1: Overview of the technology

- Basic technical description of blockchain technology
- History and achievements

Unit 2: Cryptographic hashes

- Item Definition
- SHA 256/DSHA256/SHA3
- Encryption
- Digital signatures

Unit 3: How Bitcoin works

- Blockchain structure
- Distributed consensus

Unit 4: Bitcoin ecosystem

- Hard soft forks
- Wallets hot/cold
- Exchanges
- Mining

Unit 5: Beyond Bitcoin

- Decentralization
- Private blockchains
- Altcoins
- Smart contracts

Unit 6: Digital currency challenges

- Scalability
- Identity
- Proposed solutions

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Competently engage in mock digital currency purchases	YES	X	X	X	X
L2	Understand the implications of the blockchain in finance	NO	X	X	X	X
L3	Engage employers in the beneficial cost efficiencies of the blockchain	NO	X	X	X	X

L4	Adopt the cryptotechnology to a bespoke corporate requirement	YES	X	X	X	X
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A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

Bibliography: Bitcoin and Cryptocurrency Technologies" by Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller and Steven Goldfeder

CODE: CP307 - MOBILE APPLICATION DEVELOPMENT

Course level: Undergraduate

Course category: Core requirement

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	Prior Programming Experience is Recommended eg. Python, Java, C++ CP108 PLUTUS/HASKELL (recommended)
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course is concerned with the development of applications on mobile and wireless computing platforms. Android will be used as a basis for teaching programming techniques and design patterns related to the development of standalone applications and mobile portals to enterprise and commerce systems.

Emphasis is placed on the processes, tools and frameworks required to develop applications for current and emerging mobile computing devices. Students will work at all stages of the software development life-cycle from inception through to implementation and testing. In doing so, students will be required to consider the impact of user characteristics, device capabilities, networking infrastructure and deployment environment, in order to develop software capable of meeting the requirements of stakeholders. Upon completion, students should be able to create basic applications for mobile devices.

COURSE OBJECTIVES

1. To facilitate students to understand android SDK
2. To help students to gain a basic understanding of Android application development
3. To inculcate working knowledge of Android Studio development tool

LEARNING CONTENT AND OUTCOMES

At the end of this course, students will be able to:

1. Identify various concepts of mobile programming that make it unique from programming for other platforms,
2. Critique mobile applications on their design pros and cons,
3. Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces,
4. Program mobile applications for the Android operating system that use basic and advanced phone features, and
5. Deploy applications to the Android marketplace for distribution.

OUTLINE OF INSTRUCTION

1. Introduction
 - a. Introduction to Mobile Computing
 - b. Introduction to the Android Development Environment
2. Factors in Developing Mobile Applications
 - a. Mobile Software Engineering
 - b. Frameworks and Tools
 - c. Generic UI Development
 - d. Android User
3. More on UIs
 - a. VUIs and Mobile Apps
 - b. Text-to-Speech Techniques
 - c. Designing the Right UI
 - d. Multichannel and Multimodal UIs
4. Intents and Services
 - a. Android Intents and Services
 - b. Characteristics of Mobile Applications
 - c. Successful Mobile Development
5. Storing and Retrieving Data
 - a. Synchronization and Replication of Mobile Data
 - b. Getting the Model Right
 - c. Android Storing and Retrieving Data
 - d. Working with a Content Provider
6. Communications Via Network and the Web
 - a. State Machine
 - b. Correct Communications Model
 - c. Android Networking and Web
7. Telephony
 - a. Deciding Scope of an App
 - b. Wireless Connectivity and Mobile Apps
 - c. Android Telephony
8. Notifications and Alarms
 - a. Performance
 - b. Performance and Memory Management
 - c. Android Notifications and Alarms
9. Graphics
 - a. Performance and Multithreading
 - b. Graphics and UI Performance
 - c. Android Graphics and
10. Multimedia
 - a. Mobile Agents and Peer-to-Peer Architecture
 - b. Android Multimedia

11. Location

- a. Mobility and Location Based Services
- b. Android

12. Putting It All Together (as time allows)

- a. Packaging and Deploying
- b. Performance Best Practices
- c. Android Field Service App

13. Security and Hacking (as time allows)

- a. Active Transactions
- b. More on Security
- c. Hacking Android

14. Platforms and Additional Issues (as time allows)

- a. Development Process
- b. Architecture, Design, Technology Selection
- c. Mobile App Development Hurdles
- d. Testing

Assessments.

- 55% - Classwork (review questions, homework, essay, and other related activities) 5%
- Merits
- 40% - Final Exam

REFERENCE BOOKS:

Lauren Darcey and Shane Conder, "Android Wireless Application Development", Pearson Education, 2nd ed. (2011)

Reto Meier, "Professional Android 2 Application Development", Wiley India Pvt Ltd 2.

Mark L Murphy, "Beginning Android", Wiley India Pvt Ltd 3.

Android Application Development All in one for Dummies by Barry Burd, Edition: I

CODE: CP100 GESTION D'ENTREPRISE

Course level: Undergraduate

Course category: Core requirement

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

APERÇU DU COURS

Ce cours propose un tour d'horizon du monde de l'entreprise. Les sujets incluent les principes et pratiques de base des affaires contemporaines. À la fin, les étudiants doivent être en mesure de démontrer une compréhension des concepts commerciaux comme base pour étudier d'autres sujets commerciaux. Le cours couvre les sujets suivants : L'environnement des affaires ; Propriété d'entreprise et entrepreneuriat ; Gestion et Organisation ; Ressources humaines; Commercialisation; Finances et Investissement.

OBJECTIFS DU COURS

1. Identifier et décrire l'influence des environnements créés par l'économie, la technologie, la concurrence, la diversité, les opportunités mondiales et la responsabilité sociale.
2. Comparer les avantages et les inconvénients des principales formes de propriété d'entreprise et discuter des raisons pour lesquelles de nombreuses personnes sont prêtes à accepter les risques de l'entrepreneuriat.
3. Comprendre le besoin de gestion dans les organisations commerciales, le rôle de la direction dans le développement d'une structure organisationnelle et le processus de production de produits et de services qui satisfont les clients.
4. Décrire le rôle de gestion consistant à acquérir et à conserver des ressources humaines et à créer un environnement de travail favorable.
5. Expliquer la fonction marketing et décrire les concepts et les processus impliqués dans la conception de la stratégie produit, de la stratégie de promotion, de la stratégie de distribution et de la stratégie de prix.
6. Explorer les façons d'utiliser la technologie pour gérer l'information et comprendre le rôle de la comptabilité dans la gestion de l'information financière.
7. Décrire la fonction de gestion financière et le rôle des institutions monétaires et financières et illustrer les concepts et les processus impliqués dans la gestion de l'acquisition et de l'allocation de fonds à court et à long terme.

CONTENU ET RÉSULTATS D'APPRENTISSAGE

À l'issue du cours l'étudiant sera capable de :

1. Identifier les opportunités de marketing potentielles créées par les tendances démographiques ; Raconter

comment les institutions commerciales fonctionnent dans notre environnement politique, social et économique moderne ;

2. Décrire diverses formes de propriété d'entreprise ;

3. Acquérir des informations sur le démarrage de votre propre entreprise ;

4. Expliquer les fonctions de gestion ;

5. Acquérir un vocabulaire pour une étude plus approfondie des sujets d'affaires;

6. Décrire l'importance des activités de marketing ;

7. Expliquer les défis auxquels est confrontée la direction ;

8. Identifier les techniques de base de planification financière à court et à long terme ;

9. Décrire comment les organisations se protègent contre les pertes potentielles ; 10. Identifier et appliquer les lois commerciales dans la mesure où elles affectent les affaires ;

11. Discutez du commerce et des marchés internationaux.

CERTIFICATE IN EDUCATION COURSES

CORE COURSE

CODE: CE100 - EDUCATION IN CONTEXT: HISTORY, PHILOSOPHY AND SOCIOLOGY

COURSE DETAILS

Course level: Graduate

Course category: Core

Course Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion

Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation) Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course will examine the role of education across time and in different places in the world and the social and political influences that shaped the goals and structure of today's diverse educational systems. The contributions of classical and modern thinkers and their impact on contemporary education and the role and function of the teacher will be explored. Analysis of globalization and the nature of different educational systems and values will provide a context for reflecting on one's philosophy of education.

Required Textbook and Materials:

The main required textbooks for this course are listed below and can be readily accessed. There may be additional required/recommended readings, supplemental materials, or other resources and websites necessary for lessons; these will be provided for you in the course's General Information and Forums area, and throughout the term via the weekly course Unit areas and the Learning Guides.

This course does not contain a main textbook; resources to all required reading will be provided in the course Learning Guide for each week.

LEARNING CONTENT AND OBJECTIVES:

By the end of this course students will be able to:

- Examine the changing role of educational and instructional models (active learning, critical thinking), multiculturally, and/or overtime.
- Explore classical and modern philosophies and their impact on contemporary education.
- Explain the concept of education and its relationship with philosophy
- Analyze the globalization and the nature of different educational systems and values to reflect one's philosophy of education.
- Examine the global, social, and political influences that shaped the goals and structure of today's diverse educational systems.
- Understand the meaning and nature of educational sociology, sociology of education, and social organization
- Explain group dynamics, social interaction, social change, and the contribution of education to these aspects.

Course Schedule and Topics:

This course will cover the following topics.

Unit 1 – History and Purpose of Schooling in the European and International Context

Unit 2 – Historical Global Foundations of Education

Unit 3 – Philosophical Foundations of Education:

- Relationship Between Education and Philosophy
- Areas, of Philosophy and their Educational Implication
- Metaphysics, Epistemology and Axiology.
 - Western Schools of Philosophy and their Educational Implication: Idealism, Naturalism, Realism and Pragmatism-their contribution to present day education.
 - Modern Concept of philosophy: Logical analysis, Logical Empiricism, positive Realism and their Educational Implication.

Unit 4 – Global Philosophical Foundations in Education

Unit 5 – Sociological Foundations of Education

- Meaning, Nature and Scope of Education sociology
- Relationship between Sociology and Education
- Meaning and Nature of Educational Sociology and Sociology of education
- Education-as a social sub-system-specific characteristic
- Education and community with special reference the International

Community

Unit 6 – Social & Political Issues

Unit 7 – Global Standings and Perspectives

Unit 8 – The Role of Educators in a Changing World

Introduction to Philosophy of Education Relationship Between Education and Philosophy Areas, of Philosophy and their Educational Implication- Metaphysics, Epistemology and Axiology. Western Schools of Philosophy and their Educational Implication: Idealism, Naturalism, Realism and Pragmatism-their contribution to present day education. Modern Concept of philosophy: Logical analysis, Logical Empiricism, positive Realism and their Educational Implication.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Examine the changing role of educational and instructional models (active learning, critical thinking), multiculturally, and/or overtime.	N	X			
L2	Explore classical and modern philosophies and their impact on contemporary education.	Y	X	X		
L3	Explain the concept of education and its relationship with philosophy	Y	X	X		
L4	Analyze the globalization and the nature of different educational systems and values to reflect one's philosophy of education.	N	X	X		
L5	Examine the global, social, and political influences that shaped the goals and structure of today's diverse educational systems.	N	X		X	X
L6	Understand the meaning and nature of educational sociology, sociology of education, and social organization	Y	X			
L7	Explain group dynamics, social interaction, social change, and the contribution of education to these aspects.	Y	X		X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits

40% - Final Exam

BIBLIOGRAPHY

TBA

CODE: CE101 TEACHING FOR DIVERSE AND INCLUSIVE CLASSROOMS

COURSE DETAILS

Course level: Graduate

Course category: Core

Course Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion

Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100

Preparation) Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course provides students an opportunity to explore how diversity is manifested among organizational leaders, staff, and stakeholders in today's education environment in the context of policies, systems, histories, structures, and legislation. Participants will examine organizational and professional access and equity in the contexts of culture, ethnicity, race, sexual orientation, ability, and gender. Students will then apply the knowledge they gain from these explorations to the framing, analysis, and generation of solutions to contemporary educational problems. Through the assignments and resources, this course will address the tools for engagement by addressing the use of language and defining terms (and why they matter), sharing perspectives, looking at evidence and theories, employing a variety of strategies meant to increase understanding and participation, and then critiquing them all.

LEARNING CONTENT AND OBJECTIVES:

1. Define broadly the constructs of diversity, equity, access and retention.
2. Explain the historical basis for and evolution to present time of and diversity policy in education.
3. Analyze some of the equity effects of expanding access to education.
4. Be able to distinguish opinions about causes of the achievement gap from research findings.
5. Understand basic theories of identity development and the ways in which these theories are in flux.
6. Understand how one's sense of self can vary with context.

7. Describe what is typically meant by the labels “gifted,” “special education” and “learning disability,” and discuss strategies and challenges involved in categorizing students in this way.
 8. Describe challenges facing staff and students who are the subject of these differences and their organizational responses.
9. Distinguish between sex, gender identity and expression, and sexual orientation as constructs.
10. Understanding similarities among different religions and how employees might experience the workplace differently based on their spiritual and religious identity.
11. Understanding civic belonging of immigrants.
12. Understanding globalization of education, controversies regarding globalization and the relationships between globalization, education, technology, and migration.

By the end of this course students will be able to:

- Articulate key analytical constructs (such as race, ethnicity, gender, ability, sexual orientation, Socio- Economic Status) and how their individual and combined effects impact instruction, assessment, and leadership.
 - Articulate the levels at which diversity and responses to diversity occur: individual, group, institutional, and structural.
- Analyze your own and others’ experiences in various environments and how meaning-making can vary by the communities with which one affiliates and by personal and collective histories within the larger society.
 - Analyze how perceptions of difference contribute to disparate educational opportunities and work environments.
 - Analyze how you communicate values, intentionally and unintentionally, to communities through your choices of instructional practice, program and policy implementation, and resource distribution.
 - Create a Statement of Problem paper that includes a synthesis of current practice and research about a topic related to diversity.
 - Apply strategies and pedagogies for engaging groups in discussions that involve looking at the difference while tackling problems related to inequities in educational and professional outcomes and experiences.
 - Evaluate institutional and structural policies and recommend strategies that could move institutions toward more equitable experiences and outcomes.
 - Apply strategies to engage, verbally and in writing, your professional communities in considering access to and outcomes for your organization.

Course Schedule and Topics:

This course will cover the following topics:

Unit 1: Introduction: diversity, equity, access and retention

Unit 2: Achievement Gap and equity effects of expanding access to education
Unit 3: Basic theories of identity development

Unit 4: Race and

Ethnicity I Unit 5:

Race and Ethnicity

II Unit 6: Ability

Unit 7: Language challenges and strategies

Unit 8: Gender, Sexual Orientation, identity and expression as

constructs Unit 9: Spirituality and Religious Identity

Unit 10: Understanding Immigration and Globalization of education

Learning Outcomes:		Assessed in this module?	A	B	C	D
On successful completion of the course the candidate will be able to:						
L 1	Articulate key analytical constructs (such as race, ethnicity, gender, ability, sexual orientation, Socio-Economic Status) and how their individual and combined effects impact instruction, assessment, and leadership.	N	X			
L 2	Articulate the levels at which diversity and responses to diversity occur: individual, group, institutional, and structural.	N	X		X	X
L 3	Analyze your own and others' experiences in various environments and how meaning-making can vary by the communities with which one affiliates and by personal and collective histories within the larger society.	N		X	X	X
L 4	Analyze how perceptions of difference contribute to disparate educational opportunities and work environments.	N			X	X
L 5	Analyze how you communicate values, intentionally and unintentionally, to communities through your choices of instructional practice, program and policy implementation, and resource distribution.	N			X	X

L 6	Create a Statement of Problem paper that includes a synthesis of current practice and research about a topic related to diversity.	Y			X	X
L 7	Apply strategies and pedagogies for engaging groups in discussions that involve looking at the difference while tackling problems related to inequities in educational and professional outcomes and experiences.	Y			X	X
L 8	Evaluate institutional and structural policies and recommend strategies that could move institutions toward more equitable experiences and outcomes.	Y			X	X
L 9	Apply strategies to engage, verbally and in writing, your professional communities in considering access to and outcomes for your organization.	Y			X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits
40% - Final Exam

BIBLIOGRAPHY TBA

CODE: CE200 CONTEMPORARY GLOBAL CHALLENGES IN EDUCATION POLICY AND LEADERSHIP PRACTICE

COURSE DETAILS

Course level: Graduate
Course category: Core Course Course credits: 10
Course duration: 10 weeks
Total contact hours: 35 (10hrs Lectures + 25hrs Discussion Forum) Total exam hours: 2
Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation) Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The course prepares future school leaders to effectively administer education programs and meet the challenges they will face in Primary and Secondary education. It provides the opportunity for students to have a clear understanding of how policy works in education, how to analyze and formulate educational policies, and who the key interest groups and players are in the making of policy. The course will equip students with the ability to generate ideas about how to evaluate policy implementation and provide useful feedback to policymakers. Using a systems approach to understanding leadership, the course combines coursework with real-world experiential learning.

LEARNING CONTENT AND OBJECTIVES:

- Creating and Sustaining a Focus on Learning
- Creating and Sustaining a Culture of Continuous Improvement
- Creating and Sustaining Productive Relationships
- Creating and Sustaining Structures to Support an Effective School
- Managing Human Capital
- Self-Reflection and Professional Growth
- Professional Obligations
- Family and Community Engagement

Course Schedule and Topics:

This course will cover the following topics.

Unit 1: Sustaining a Focus on Learning:

Planning for school improvement; Monitoring student performance; Providing opportunities for teacher reflection; Short and long-term planning to facilitate student achievement.

Unit 2: Sustaining a Culture of Continuous Improvement:

Setting expectations for teacher and student performance; Developing teachers through observation, feedback, and professional development; Gathering and analyzing data relative to student learning; Considering diversity of learners, e.g. ethnicity, abilities, and socioeconomic status.

Unit 3: Sustaining Productive Relationships:

Creating an environment that respects all stakeholders; Establishing opportunities for discourse among stakeholders for decision making; Creating communication processes for partnering with teachers and students.

Unit 4: Sustaining Structures:

Aligning curriculum, instruction, and standards; Allocating resources and developing structures to support school goals for student learning.

Unit 5: Managing Human Capital:

Collecting data related to teacher performance; Using teacher performance data to support effective instruction; Developing leadership capacity among teachers.

Unit 6: Self-Reflection and Professional Growth:

Using feedback from various sources to improve leadership practices; Seeking opportunities for continuous growth in leadership.

Unit 7: Professional Obligations:

Modeling and advocating fair and equitable treatment of all students and their families; Modeling integrity and honesty while respecting confidentiality.

Unit 8: Family and Community Engagement:

Involving parents, families, and community in policy implementation and program planning; Involving parents, families, and community in school improvement efforts.

Connecting students and families to other social service and community agencies as needed.

Learning Outcomes: On successful completion of the course the candidate will be able to:	Assessed in this module?	A	B	C	D

L1	Creating and Sustaining a Focus on Learning	N	X	X		
L2	Creating and Sustaining a Culture of Continuous Improvement	Y	X	X		
L3	Creating and Sustaining Productive Relationships	N	X	X		
L4	Creating and Sustaining Structures to Support an Effective School	Y				
L5	Managing Human Capital	N			X	
L6	Self-Reflection and Professional Growth	Y		X		X
L7	Professional Obligations	Y			X	X
L8	Family and Community Engagement	N				X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits

40% - Final Exam

BIBLIOGRAPHY TBA

CODE: CE201 LEARNING THEORY AND IMPLICATIONS FOR INSTRUCTION

COURSE DETAILS

Course level: Graduate

Course category: Core
Course credits: 10
Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion Forum)
Total exam hours: 2
Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)
Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course is a study of human learning and cognitive organization and process. The content will provide an overview of the development of learning theory and cognitive models since the beginning of the scientific study of human learning and mental processes. Major theories concerning the learning process and their implications for the instructional process are investigated. The focus of the course will be the linkage between theory and educational practice. Attention will be given to the cognitive, affective, and sensory/psychomotor domains and implications for learning through different modalities. Contributions of neuroscience to understanding adolescent research are explored, and structural barriers to learning such as stereotype threat are discussed. Students will gain insights into the interplay of learner characteristics, prior experiences, the medium of instruction, and cultural influences and understand that learning is contextual, with no single theory universally applying to every student in every situation.

LEARNING CONTENT AND OBJECTIVES:

By the end of the course, the candidate will:

- Become conversant with basic assumptions, concepts, and principles of each theory.
- Grasp possible implications of each theory for different instructional settings.
- Compare and contrast a range of theories in a variety of settings and age groups.
- Create, revise, and begin to use your theory of learning.
- Reflect on how learning theories impact every aspect of your life.
 - Explain the interactions of students, teachers, and materials in classrooms and the implications of these interactions for classroom environments.
 - Describe contemporary learners along a continuum of characteristics, i.e., socio-economic status, ethnicity, gender, ability, among others, and discuss the implications of these characteristics for instruction in the contemporary classroom and in the future.
- Compare and contrast major theoretical positions on learning.
 - Recognize and articulate how their philosophies and preferences for learning influence their educational practices.
- Examine motivation and its implications for learning and classroom practices environments.
- Utilize self-assessment for self-improvement and self-enhancement as educational professionals.

Course Schedule and Topics:

This course will cover the following topics.

UNIT 1: Introduction; Learning and Teaching in the Classroom; Course Overview & Perspectives on Learning, theories of learning and their instructional applications in educational settings.

UNIT 2: Behavioral Analysis; Behaviorism and the Information Processing Model in Classroom Practices; Theoretical Overview, Modeling, Self-Efficacy, & Self-Regulation; Pavlovian Conditioning, Watson, Guthrie, Skinner, Thorndike, and Bandura.

UNIT 3: Cognitive Analysis; Complex Cognitive Processes, Concept Learning & Conceptual Change, viewpoints, and applications regarding the teaching/learning process including Bruner and Ausubel.

UNIT 4: Social Analysis; Observational, Social Learning; Identify humanistic viewpoints and applications regarding the teaching/learning process including Rogers; Recognize the significance of social learning theory and its implication for teaching.

UNIT 5: Constructivist; Piaget's, Bruner's, & Vygotsky's

Theory. UNIT 6: Who's Who in Human Learning.

UNIT 7: The Adolescent Brain and Neuroscience; Identify concepts and procedures that enable students to process and store information.

UNIT 8: Understanding Learner Characteristics; Understand human growth and development issues and concepts for childhood and early adolescence.

UNIT 9: Multiple Approaches to Curriculum Design.

Learning Outcomes:		Assessed in this module?	A	B	C	D
On successful completion of the course the candidate will be able to:						
L1	Become conversant with basic assumptions, concepts, and principles of each theory.	Y			X	X
L2	Grasp possible implications of each theory for different instructional settings	N			X	X
L3	Compare and contrast a range of theories in a variety of settings and age groups.	N	X	X		
L4	Create, revise, and begin to use your theory of learning.	N	X	X		

L5	Reflect on how learning theories impact every aspect of your life.	N	X			
L6	Explain the interactions of students, teachers, and materials in classrooms and the implications of these interactions for classroom environments.	Y		X	X	
L7	Describe contemporary learners along a continuum of characteristics, i.e., socio-economic status, ethnicity, gender, ability, among others, and discuss the implications of these characteristics for instruction in the contemporary classroom and in the future.	Y		X		
L8	Compare and contrast major theoretical positions on learning.	Y	X			
L9	Recognize and articulate how their philosophies and preferences for learning influence their educational practices.	Y	X			X
L10	Examine motivation and its implications for learning and classroom practices environments.	N			X	X
L11	Utilize self-assessment for self-improvement and self- enhancement as educational professionals.	N			X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits
40% - Final Exam

BIBLIOGRAPHY

TBA

CODE: CE300 GAMES AND VIRTUAL SIMULATIONS FOR

LEARNING

COURSE DETAILS

Course level: Graduate

Course category: Core

Course Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion

Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100

Preparation) Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Today computer gaming is one of the fastest-growing areas of the information technologies industry as gamification has found a niche in the education, healthcare, health education, and military genres. The student will learn what cognitive processes happen in game playing, how gaming approaches can be applied to formal learning environments by understanding why people play games, why they like some games to others, how the game players interact with each other in a gaming environment, and gender issues. This course will explore the ever-evolving media and tools that will support human use, augment human learning and enhance communication at the individual and the social levels by having a more psychological and social focus rather than a technical one. Gamification has found a niche in the education, healthcare, health education, and military genres.

LEARNING CONTENT AND OBJECTIVES:

By the end of the course, the candidate will:

- Develop a theoretical understanding of cognitive, social and cultural aspects of computer games and simulations.

- Provide an understanding of the social, psychological, cultural and ethical issues associated with game design and use.
 - Understand the origins and philosophy of games and video games in human history.
 - Explain potentials of games on human psychology and learning.
 - Inquire good and bad effects of video games and simulations on players and learners.
 - Discover the areas that computer games can be used.
 - Understand basic design elements of video games and suggest some design issues by using theoretical foundations.
 - Evaluate the computer games with different perspectives.
 - Understand the trends of video games and simulation research.
 - Conduct a game research by considering the literature and analyze the data 1.
 - Offer a set of first-hand experiences which augment conceptual understanding of course content.

Course Schedule and Topics:

This course will cover the following topics.

UNIT 1: History of Computer Games: Theories and Concepts in Serious Game Design and Development

UNIT 2: Philosophy of the Games

UNIT 3: Philosophy of the Computer Games

UNIT 4: Psychology in the Games; Behavior and Motivation

UNIT 5: Player aggression, violence (emotional connections)

UNIT 6. Diversity in Game Culture

UNIT 7. Social Interaction and Online communities in Games and Virtual Environments

UNIT 8. Learning in Games and virtual environments (Commercial games, simulations, serious games and virtual environments)

UNIT 9. Design Issues of the Games

UNIT 10. Design Methods of the Games

UNIT 11. Assessment and Evaluation of the Games (Human Game Interaction, Usability, playability, heuristic evaluation of play, computer game criticism, game play analysis)

UNIT 12. Games and ethical issues.

UNIT 13. Trends & issues and future of educational game and simulations research (trends in conferences, journal papers, meta analyses)

Readings:

Unit 1

- Yilmaz, E., Cagiltay, K. (2005). History Of Digital Games in Turkey. Authors & Digital Games Research association DIGRA.
- The Video Game Revolution (video). <http://video.google.com/videoplay?docid=-4729348985218842392#>

Unit 2

- Huizinga, J. (1955). Homo Ludens A Study of the Play-Element in Culture. Beacon Press. Boston, USA
- And, M. (2003). Oyun ve Būgū. İstanbul: Yapı Kredi Yayınları.
- Caillois, R. (1958). Les jeux et les hommes (Man, play, and games). Librairie Gallimard, Paris.

Unit 3

- Jarvinen, A. (2007): Games without Frontiers, Theories and Methods for Game Studies and Design. PhD Thesis, University of Tampere, Finland.
- Djaouti, D., Alvarez, J., Jessel, J.P., Methel, G. & Molinier, P. (2008). A Gameplay Definition through Videogame Classification, International Journal of Computer Games Technology, Vol. 2008, Article ID 470350, 7 pages, 2008. doi:10.1155/2008/470350
- Elverdam, C. & Aarseth, E. (2007). Game Classification and Game Design: Construction Through Critical Analysis, Games and Culture, 2(1), 3-22
- Juul, J. (2003). The Game, the Player, the World: Looking for a Heart of Gameness, Keynote presented at the Level Up conference in Utrecht, November 4th-6th 2003, received on September 2010, from <http://www.jesperjuul.net/text/gameplayerworld/>

Unit 4

- Chen, J. (2007). Flow in Games (and Everything Else). Communications of the ACM. 50(4), 31- 34.

- Csikszentmihalyi, M (1990). *Flow : The Psychology of Optimal Experience*. Harper Perennial, London.
 - Falstein, N. (2005). Understanding fun-the theory of natural funativity. In Rabin, S. (Ed), *Introduction to Game Development*
- Malone & Lepper (1987). *Making Learning Fun: A Taxonomy of Intrinsic Motivations for Learning*. In Snow, R. & Farr, M. J. (Ed), *Aptitude, Learning, and Instruction Volume 3: Conative and Affective Process Analyses*. Hillsdale, NJ: Lawrence Erlbaum Associates.
 - Snow, R., & Farr, M. Cognitive-conative-affective processes in aptitude, learning, and instruction: An introduction. In R. Snow & M. Farr (Eds.), *Conative and affective process analysis (Vol. 3, 1987, pp. 1-10)*. Hillsdale, NJ: Erlbaum Associates.

Unit 5

- Mandatory readings of Carnagey, N. L. & Anderson, C. A. (2004). Violent video game exposure and aggression. *Minerva Psichiatr.*(45), p. 1-18.
- Goldstein, J. (2000). Effects of electronic games on children. *Electronic Games*. p.1-16
 - Griffiths, M. (1999). Violent video games and aggression: A review of literature. *Aggression and Violent Behavior*, Vol. 4, No. 2, pp 203-212.
- Grodal, T. (2000). Video Games and the Pleasure of Control. in: D. Zillmann & Peter Vorderer, (Eds.). *Media entertainment: The psychology of its appeal (pp 197-213)*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Weber, R., Ritterfield, U. & Kostgina, A. (2006) Aggression and Violence as Effects of Playing Violent Video Games? In P. Vorderer & J. Bryant (Eds.), *Playing Video Games: motives, responses and consequences (pp. 347-361)*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.

Unit 6

- Williams, D., Martins, N., Consalvo, M., Ivory, J., 2009. The virtual census: Representations of gender, race and age in video games. *New Media & Society* 11 (5), 815-834
- Weisman, S. (1983). Computer games for the frail elderly, *Gerontologist*, vol. 23 (4), pp. 361– 363, 1983
 - Noble, R. , Ruiz, K., Destefano, M., and Mintz, J. (2003).“Conditions of Engagement in Game Simulation: Contexts of Gender, Culture and Age, Level Up: Digital Games Research Conference. Eds. Marinka C. & Joost R.DIGRA: Utrecht University, 2003.
- Subrahmanyam K. & Greenfield, P.M. 1998. Computer games for girls: What makes them play? In Cassell, J. & Jenkins, (Ed.), *From Barbie to Mortal Combat: Gender and Computer Games*. Cambridge, MA: MIT Press

Unit 7

- Axelsson, A.-S., & Regan, T. (2002). How Belonging to an Online Group Affects Social Behavior - a Case Study of Asheron's Call. Redmond, Washington: Microsoft Research
- Cole, H. & Griffiths, M. (2007) Social Interactions in Massively Multiplayer Online Role- Playing Gamers, *Cyberpsychology & Behavior*, Vol. 10, No. 4, pp. 575 – 583.

- Manninen T. (2000) Interaction in Networked Virtual Environments as Communicative Action - Social Theory and Multi-player Games. In proceedings of CRIWG2000 Workshop, October 18-20, Madeira, Portugal, IEEE Computer Society Press
- Tamborini, R., & Skalski, P. (2006). The role of presence in the experience of electronic games. In P. Vorderer & J. Bryant (Eds.), *Playing video games: Motives, responses, and consequences* (pp. 225–240). Mahwah, NJ: Lawrence Erlbaum Associates

Unit 8

- Becker, K. (2006). Pedagogy in Commercial Video Games. In D. Gibson, C. Aldrich & M. Prensky (Eds.), *Games and Simulations in Online Learning: Research and Development Frameworks*: dea Group Inc
- Gee, J. P. (2005). Good video games and good learning. *Phi Kappa Phi Forum*. 2005;85(2), 33–7.
 - Lieberman, D. A. (2006). What can we learn from playing interactive games? In P. Vorderer & J. Bryant (Eds.), *Playing video games—Motives, responses, and consequences* (pp. 379–397). Mahwah, NJ: Lawrence Erlbaum Associates, Inc
- Ritterfeld, U. & Weber, R. (2006). Video Games for Entertainment and Education. In P. Vorderer & J. Bryant (Eds.), *Playing Video Games-Motives, Responses, and Consequences* (pp. 399-413). Mahwah, NJ: Lawrence Erlbaum, Inc.

Unit 9

- Barry, I. (2005). Game Design. In Rabin, S. (Eds). *Introduction to Game Development* (pp. 99-160). Hingham, MA: Charles Rive Media, Inc
- Adams, E. (2010). *Fundamentals of Game Design* (2nd Ed). New Riders: Berkeley, CA. Chapter 12 -

General Principles of Level Design

- Gunder, A. (2003). As if by magic: On Harry Potter as a novel and a computer game. In M. Copier & J. Raessens (Eds): *Level up: Digital games research conference*. Utrecht: Utrecht University.
- Dondlinger, M. J. (2007). Educational video game design: A review of the literature [Electronic Version]. *Journal of Applied Educational Technology*, 4, 21-31

Unit 10

- Pagulayan, R. J., Keeker, K., Wixon, D., Romero, R. L., & Fuller, T. (2003). User-centered design in games. In J. A. Jacko & A. Sears (Eds.), *The Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies and Emerging Applications* (pp. 883-906). Mahwah, NJ: Lawrence Erlbaum Associates
- Kaplan Akilli, G. & Cagiltay, K. (2006). An Instructional Design/Development Model for the Creation of Game-like Learning Environments: The FIDGE Model, In M. Pivec (Ed.), *Affective and emotional aspects of human computer interaction: Game-based and innovative learning approaches* (pp. 93-112). Amsterdam, Netherlands: IOS Press.
- Scaife, M. and Rogers, Y. (1999). Kids as informants: Telling us what we didn't know or confirming what we knew already, in A. Druin (Ed.), *The design of children's technology* (pp.29-50).Morgan Kaufmann, San Francisco, CA

Unit 11

- Federoff, M.A. (2002). *Heuristics and Usability Guidelines for the Creation and Evaluation of Fun in Video Games*. MS Thesis, Department of Telecommunications, Indiana University, Bloomington, Indiana, USA, 2002

- Laitinen, S. (2005, Jun 6). Better Games Through Usability Evaluation and Testing. retrieved from http://www.gamasutra.com/features/20050623/laitinen_02.shtml
- Cornett S. (2004). The Usability of Massively Multiplayer Online Roleplaying games: Designing for New Users. Proceedings of the SIGCHI conference on Human factors in computing systems, 6(1), pp 703-710
- Jørgensen, A.H. (2004). Marrying HCI/Usability and Computer Games: A Preliminary Look. In Proceedings of NordiCHI. pp. 393-396.

Unit 12

- Sicart, M. (2009). the Ethics of Computer Games, MIT Press:Cambridge, MA (Chapter 2)
- Sicart, M. (2009). the Ethics of Computer Games, MIT Press:Cambridge, MA (Chapter 4)
 - Zagal, J. P. (2009). Ethically Notable Video Games: Moral Dilemmas and Gameplay, Proceedings of Digital Games Research Association (DiGRA), retrieved on April, 20 2010 from <http://www.digra.org/dl/db/09287.13336.pdf>

Learning Outcomes:		Assessed in this module?	A	B	C	D
	On successful completion of the course the candidate will be able to:					
L1	Develop a theoretical understanding of cognitive, social and cultural aspects of computer games and simulations.	N	X	X		
L2	Provide an understanding of the social, psychological, cultural and ethical issues associated with game design and use.	N	X	X		
L3	Understand the origins and philosophy of games and video games in human history.	N	X	X		
L4	Explain potentials of games on human psychology and learning.	N			X	X

L5	Inquire good and bad effects of video games and simulations on players and learners.	N			X	X
L6	Discover the areas that computer games can be used.	N			X	X
L7	Understand basic design elements of video games and suggest some design issues by using theoretical foundations.		X		X	X
L8	Evaluate the computer games with different perspectives.	Y		X	X	
L9	Understand the trends of video games and simulation research.	N	X	X		
L10	Conduct a game research by considering the literature and analyze the data 1.	Y	X	X		
L11	Offer a set of first-hand experiences which augment conceptual understanding of course content.	Y	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits
40% - Final Exam

BIBLIOGRAPHY

TBA

CODE: CE301 CURRICULUM DESIGN AND INSTRUCTIONAL DECISION MAKING

COURSE DETAILS

Course level: Graduate

Course category: Core

Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion

Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100

Preparation) Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

In this course, students will learn to develop a curriculum and to evaluate it knowledgeably by engaging in curriculum design. The course will consider current issues in curriculum design and curriculum leadership. The major design frameworks for the development of curricula will be explored, including how decisions should be made about curriculums. Students will conduct mapping, at the primary and secondary levels of education for International school systems.

LEARNING CONTENT AND OBJECTIVES:

By the end of the course, the candidate will:

- To develop a significant piece of curriculum for one grade and subject.
- To understand and use curriculum design and evaluation frameworks.
 - To critically examine issues in curriculum development and evaluation, including the roles of various stakeholders in decision-making about curriculum, the pros and cons of a national curriculum, and the characteristics of quality learning experiences.
 - To understand and how to structure curriculum and create learning experiences that are broadly impactful for students.

Course Schedule and Topics:

This course will cover the following topics.

UNIT 1: What is curriculum: Introductions; Syllabus and course requirements; What is curriculum? Curriculum and the goals of education

UNIT 2: Considering the goals of Primary and Secondary education in the development of curriculum; Graduation goals and learning progressions; Subjects and strands for Primary and Secondary education

UNIT 3: Backward design and the politics of curriculum decision-making; Intro to standards and using standards to develop goals;

UNIT 4: Standards, standardized tests, and curriculum; Identifying priority standards and supporting standards

UNIT 5: Organizing curricula around thinking and conceptual understanding; The thinking curriculum; Using Bloom's Taxonomy to identify levels of thinking skills

UNIT 6: Essential questions and unit themes; standards infrastructure, including anchor standards, priority goals, and supporting standards

UNIT 7: Assessment and acceptable evidence; Determining acceptable evidence of attainment; Summative and formative assessment; Intro to rubrics and scoring guides;; Outcome, evidence, criteria, task, rubric, use of results

UNIT 8: Planning learning experiences; the role of experience in education

UNIT 9: Designing experiences for all learners, and planning lessons

UNIT 10: Curriculum Evaluation

Learning Outcomes:		Assessed in this module?	A	B	C	D
On successful completion of the course the candidate will be able to:						
L1	To develop a significant piece of curriculum for one grade and subject.	Y			X	X
L2	To understand and use curriculum design and evaluation frameworks.	Y	X		X	X
L3	To critically examine issues in curriculum development and evaluation, including the roles of various stakeholders in decision-making about curriculum, the pros and cons of a national curriculum, and the characteristics of quality learning experiences.	N		X		

L4	To understand and how to structure curriculum and create learning experiences that are broadly impactful for students.	Y	X		X	X
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A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits

40% - Final Exam

BIBLIOGRAPHY

TBA

CODE: CE102 ASSESSMENT AND EVALUATION

COURSE DETAILS

Course level: Graduate

Course category: Core

Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion

Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100

Preparation) Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The concepts of measurement and evaluation as applied to behavioral sciences. How to measure the outcome of the teaching-learning process in Education. Cognitive, affective and psychomotor measurements. Teacher-made and standardized tests for Education. Interpretation and treatment of the outcomes of the measurements. Formative and summative evaluation. Alternative evaluation strategies. Using measuring tools to find desired properties (reliability, validity, usefulness). The measurement approaches are based on traditional tools (written exams, short response examinations, multiple-choice tests, oral poll and homework). Measurement on multi-dimensional tools (observations, interviews, research papers, research projects, self-assessment, attitudes scales). Assessment of learning outcomes.

LEARNING CONTENT AND OBJECTIVES:

By the end of the course, the candidate will:

1. Mention the purposes of measurement and evaluation.
2. Describe the historical development of testing and evaluation.
3. Enumerate the importance and functions of tests in education.

4. Explain the concept of educational objectives
5. Discuss the taxonomy of educational objectives.
6. Describe the domains of educational objectives.
7. List the uses of classroom tests.
8. List the types of tests used in the classroom.
9. Enumerate the advantages and disadvantages of subjective and objective testing. 1
10. Explain test administration and scoring
11. Estimate and interpret the reliability of a test.
12. Explain the validity of a test as an instrument
13. Describe the problems of grading tests.
14. Explain quality control in the grading system.
15. Develop a variety of item formats including multiple-choice and constructed response items
16. Develop answer keys and scoring rubrics for different item formats

Upon successful completion of the course, students should be able to:

1. Know how to develop relevant educational assessment
2. Describe fundamental aspects on the quality of assessment procedures
3. Evaluate tests and items using statistical and qualitative methods
4. Incorporate meaning into test score scales using both norm-referenced and criterion-referenced procedures
5. Use standard setting techniques to set "passing scores" and other performance standards on tests

6. Develop appropriate documentation to properly communicate the quality of an assessment
7. Understand the utility of educational assessments within the broader context of educational policy and decision making
8. Use the results of standardized tests to help make decisions about students and educational systems
9. Identify flaws in educational assessments
10. Develop a sense for the ethical issues in educational measurement and evaluation
11. Become successful decision makers, lifelong learners and adaptive
12. Be culturally sensitive and empathetic
13. Communicate effectively through written and electronic means
14. Locate relevant information from a variety of sources and assimilate, interpret and apply knowledge

Course Schedule and Topics:

This course will cover the following topics.

Week 1: Overview Of Testing, Measurement, Assessment And Evaluation

Week 2: Meaning Of Testing, Types Of Tests, Uses Of Tests, Function And Purpose Of Testing, Characteristics Of Effective Tests, Steps Involved In A Test Construction

Week 3: The Concept Of Measurement, Measurement Scales (Nominal, Ordinal, Ratio And Interval

Scales) Week 4: Types Of Items, Table Of Specifications Matching Objectives With Item Types

Week 5: Bloom's Revised Taxonomy Of Objectives Educational Objectives, Basic Concepts In Assessment, Types Of Assessment, Teacher Made, Standardized, Authentic Assessments

Week 6: 8 Item Analysis Methods Item Discrimination, Item Difficulty, Distracter

Analysis Week 7: Types Of Validity Content, Construct, Criterion Related

Week 8: Representation Of Scores (Normal Distribution, Measures Of Central Tendency And Variation)
Mean, Median, Mode, Range, Standard Deviation, Range

Week 9: Understanding Test Results Test Evaluation Grading System

Week 10: Computer Based Testing (Cbt), Historical Details Of Adaptive Testing

Learning Outcomes:		Assessed in this module?	A	B	C	D
On successful completion of the course the candidate will be able to:						
L1	Mention the purposes of measurement and evaluation.	N		X		
L2	Describe the historical development of testing and evaluation.	N	X	X		
L3	Enumerate the importance and functions of tests in education.	N	X	X		
L4	Explain the concept of educational objectives	N	X	X		
L5	Discuss the taxonomy of educational objectives.	N	X	X		
L6	Describe the domains of educational objectives.	N	X	X		
L7	List the uses of classroom tests.	N	X	X	X	X
L8	List the types of tests used in the classroom.	N	X	X	X	X

L9	Enumerate the advantages and disadvantages of subjective and objective testing. 1	N	X	X	X	X
L10	Explain test administration and scoring	N		X		
L11	Estimate and interpret the reliability of a test.	N		X		
L12	Explain the validity of a test as an instrument	N		X		
L13	Describe the problems of grading tests.	N		X		
L14	Explain quality control in the grading system.	N		X		
L15	Develop a variety of item formats including multiple-choice and constructed response items	Y			X	X
L16	Develop answer keys and scoring rubrics for different item formats	Y			X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits

40% - Final Exam

BIBLIOGRAPHY TBA

CODE: CE103 CREATING POSITIVE CLASSROOM

ENVIRONMENTS

COURSE DETAILS

Course level: Graduate

Course category: Core

Course Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion

Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100

Preparation) Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course will draw on a variety of theoretical and practical perspectives, principles and research to provide students with a depth and breadth of knowledge that will enable professional decision-making and practice in establishing classroom management through positive behavioral support and ensuring student engagement in learning in Primary and Secondary classrooms through a variety of tools, including the use of digital literacies. The impact of the physical environment, transitions, procedures, norms and expectations on managing behavior will also be explored.

LEARNING CONTENT AND OBJECTIVES:

By the end of the course, the candidate will:

- Demonstrate an ability to engage students effectively in the learning process.
- Develop and maintain a positive learning environment in the classroom
- Plan, manage and deliver productive lessons.

- Use both high-tech and low-tech evidence-based strategies and tools to address the diverse learning needs of students and maintain learning engagement
- Manage difficult behaviors and create a safe and productive learning environment

Course Schedule and Topics:

This course will cover the following topics.

UNIT 1: Elements of Classroom Management & The Positive Classroom; A discussion of broad educational theories and philosophies. Why they are important to practitioners. How to build an educational and classroom management philosophy grounded in theory and evidence.

UNIT 2: Creating & Implementing Rules & Procedures; Creating and sustaining an effective school-wide behavior system. Emphasis of a behavior system on preventing problems and providing a comprehensive, consistent structure. How these systems differ across primary and secondary schools. An example of one model and how it can be used to form a philosophy as well as an evidence-based system. Positive Learning Framework.

UNIT 3: Diversity Issues in the Classroom; Culturally responsive behavior management. How to include students who identify as ethnically diverse, migrant, refugee, indigenous, LGBTI, as well as those involved in out of home care.

UNIT 4: Communication, Collaboration, & Rapport; Quality of teacher-student relationships and school home communication. Underpinning values –ethics of care (care for learners/care about learning). Establishing a positive classroom climate/ethos. Role of teacher communication/discourse in expressing/constituting cooperative student relations. Building positive relationships, understanding childhood and adolescence, knowing your students.

UNIT 5: Curriculum, assessment, and pedagogy. Best practices (Bloom’s Taxonomy), Understanding that meeting key student academic needs significantly increases student motivation, learning, and on-task behavior. Developing methods for ensuring these needs are met within your classroom. Bullying. Professional Reflexivity.

UNIT 6: Trauma informed practice. The neurosequential model. Social and pedagogical implications of ICT on personalized and group learning. Ethical use of and access to reputable material, and curation. Staying safe online, cyberbullying and plagiarism.

UNIT 7: Supporting students with intellectual disability and emotional and behavioral disabilities in the inclusive Primary and Secondary classroom settings.

UNIT 8: Discipline Challenges; Responding to students in regard to the escalation cycle. Tier 3 behavioral interventions.

UNIT 9: Understanding the place and significance of classroom organization in the development of best practice classroom management plans. Analyzing classroom organization strategies to identify their theoretical underpinnings. Recognizing and appreciating a diversity of classroom organization strategies.

UNIT 10: Professional Reflexivity Components of Classroom Management Plans.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Demonstrate an ability to engage students effectively in the learning process.	N		X	X	
L2	Develop and maintain a positive learning environment in the classroom.	N			X	
L3	Plan, manage and deliver productive lessons.	Y			X	X
L4	Use both high-tech and low-tech evidence-based strategies and tools to address the diverse learning needs of students and maintain learning engagement.	Y			X	X
L5	Manage difficult behaviors and create a safe and productive learning environment.	N			X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assesments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits

40% - Final Exam

BIBLIOGRAPHY TBA

CODE: CE202 INSTRUCTIONAL TECHNIQUES FOR THE PRIMARY AND MIDDLE SCHOOL CLASSROOM

COURSE DETAILS

Course level: Graduate

Course category: Core

Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs

Discussion Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation) Language of instruction: English

Pre-requisites	ME301 Curriculum Design and Instructional Decision Making
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

In this course, the primary focus is on development of a specific set of planning skills Primary and Secondary school teachers need to appropriately design, implement, manage, and assess student learning. Students in this course will study cognitive, physical, and intellectual development of the school child; factors influencing instructional decisions; motivational techniques; content selection and organization; the breakdown of academic content into facts, concepts, generalizations, principles, and rules; performance objectives and their importance in the instructional planning process; long- and short-term planning processes; roles of content area and professional teaching standards in professional teacher behaviors; accommodations for diverse student backgrounds, situations, and needs; basic classroom management and discipline techniques; use of media and technology in the instructional process; elements of effective instructional practice; measurement and evaluation of students and programs; legal issues affecting the teacher's decision-making process; and the role of reflectivity in continuous instructional improvement.

LEARNING CONTENT AND OBJECTIVES:

By the end of the course, the candidate will:

- Understand and appropriately apply teaching, learning, and adolescent development theories to lesson, unit, and course design and implementation;
- Understand and appropriately apply assessment/measurement theories in the creation, interpretation, selection, and effective use of assessment tools for the school classroom (including standardized testing instruments);
- Understand and appropriately apply and evaluate effective classroom management strategies for the primary and secondary school level;
 - Understand, apply, and evaluate delivery skills and delivery systems appropriate in implementing instruction and assessment at the primary and secondary school level;
- Select, understand, and effectively apply and assess a variety of basic teaching models and strategies that are appropriate for the primary and secondary level classroom;
- Demonstrate through performance and effectively explain in their own words the importance of cognitive and student development theories in the application of teaching, learning, and assessment processes;
- Understand, analyze, evaluate, and apply national and state content area learning standards for teaching, learning, planning, and assessment purposes;
- Understand and apply task analysis procedures in lesson, unit, and course curriculum design; and
- Effectively employ reflective teacher practices in the design, delivery, assessment, and re-design of teaching, learning, curriculum design, evaluation, and assessment strategies.

Course Schedule and Topics:

This course will cover the following topics.

UNIT 1: Overview of the philosophical foundations of teaching and learning; Evaluate the Vygotskian foundations of optimal questioning and learning strategies; Compare contemporary models of teaching with constructivist ideals.

UNIT 2: Inquiry based learning; Apply cognitive principles to lesson planning; Describe the value of making learning experience authentic.

UNIT 3: Learning together; the social family of models, roles for all learners in cooperative settings. Assess the value of social learning versus individual learning. Explain potential role modifications to accommodate diversity and special needs learners in cooperative learning activities.

UNIT 4: Critical analysis of the applications of behaviorist instructional techniques. Evaluate the utility of directed instruction in the context of constructivist ideals. Critically assess the impact of high stakes testing on higher order learning.

UNIT 5: Guided instruction strategy, integration and holistic perspectives on learning; Describe strategies for integrating learning models for optimal learning. Evaluate problems in cognition that require hard scaffolding.

UNIT 6: Planning for diversity special needs students; Equality as a guiding paradigm. Analyze issues that may hinder or promote diversity in learning organizations. Describe methods for including the theme of equity as a cornerstone for planning effective instruction.

UNIT 7: Model programs, constructivism and real world classrooms; Evaluate constructivist examples with personal concepts of contemporary practice. Critique institutional paradigms that discourage constructivism in classroom practice.

UNIT 8: Thematic Planning. – Final Project

Application and evaluation of all course goals and objectives in a final project activity that assess the candidates understanding through the development of a thematic curricular unit, developed in a group planning context.

Final Project:

The major project for this course is the design of a series of lesson plans utilizing a combination of different teaching strategies.

The project must meet the following criteria:

1. There must be a minimum of five lesson plans in the series.
2. Each lesson plan should be designed to cover a 1 ½ hour block.
3. All lesson plans must be related to a central topic or theme, which is to be clearly identified at the beginning of your plan. The topic or theme is a matter for your group to decide upon.
4. Objectives, methods, materials, information about your target audience and assessment strategy are to be included for each lesson plan. A unified assessment strategy for the entire series is perfectly acceptable. You are also encouraged to explore alternative assessment vehicles though it is not required.
5. A minimum of three teaching strategies are to be used in the lesson plan series.

6. Each lesson plan must include a discussion of the strategy used and why you believe it is the most appropriate for the topic or theme being addressed.
7. In your lesson plan must include web-based material
8. The Backward Design Model must be used to format all lesson plans.
9. Pedagogical applications of technology must be used at least twice.
10. The plan must include provisions for diversity and special needs learners.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Asses se d in this modul e?	A	B	C	D
L 1	Understand and appropriately apply teaching, learning, and adolescent development theories to lesson, unit, and course design and implementation;	N	X	X	X	
L 2	Understand and appropriately apply assessment/measurement theories in the creation, interpretation, selection, and effective use of assessment tools for the school classroom (including standardized testing instruments)	N	X	X	X	
L 3	Understand and appropriately apply and evaluate effective classroom management strategies for the primary and secondary school level;	N	X	X	X	

L 4	Understand, apply, and evaluate delivery skills and delivery systems appropriate in implementing instruction and assessment at the primary and secondary school level;	Y	X	X	X	
L 5	Select, understand, and effectively apply and assess a variety of basic teaching models and strategies that are appropriate for the primary and secondary level classroom;	Y	X	X	X	
L 6	Demonstrate through performance and effectively explain in their own words the importance of cognitive and student development theories in the application of teaching, learning, and assessment processes;	N			X	
L 7	Understand, analyze, evaluate, and apply national and state content area learning standards for teaching, learning, planning, and assessment purposes;	Y	X	X	X	
L 8	Understand and apply task analysis procedures in lesson, unit, and course curriculum design; and	Y	X		X	X
L 9	Effectively employ reflective teacher practices in the design, delivery, assessment, and re-design of teaching, learning, curriculum design, evaluation, and assessment strategies	Y			X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

TBA

CODE: CE203 SPECIAL EDUCATIONAL NEEDS: INCLUSIVE

APPROACHES

COURSE DETAILS

Course level: Graduate

Course category: Core

Course Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion

Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation) Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course presents an overview of current special education issues as they relate to inclusive practices. Candidates will gain an understanding of the challenges faced by exceptional students and analyze the responsibilities of educational professionals in addressing these challenges. The philosophy of inclusion will be emphasized through identifying collaborative strategies, tools and approaches that will assist in making the general education classroom more inclusive for all students. Students will therefore learn how to identify and provide appropriate learning opportunities for children with diverse needs and become sensitive to social, emotional, behavioral, cognitive, and cultural differences; the need to work with families, and the importance of early intervention to prevent or ameliorate disability.

LEARNING CONTENT AND OBJECTIVES:

By the end of the course, the candidate will:

1. Demonstrate an understanding of laws, regulation, and policies that pertain to the development of educational programs for students with special needs, including major categories of disabilities.
2. Discuss the concept of least restrictive alternatives and examine the research and rationale(s) for inclusive education.

3. Demonstrate an understanding of the role and responsibilities of the general educator in the design of Individual Education Programs (IEP), including identification, referral, IEP development, and implementation.
4. Discuss principles of educational assessment for special populations, including testing bias, sensitivity to cultural and language factors, and the importance of adaptations for English Language Learners (ELL).
5. Demonstrate an understanding of the characteristics and effective applications of collaboration, including working with families and paraprofessionals in the design and implementation of assessment and instructional programs for students with disabilities.
6. Analyze classroom and student needs in organizing and planning instruction for special populations, including the design of accommodations and the use of assistive technologies.
7. Demonstrate an understanding of appropriate instructional materials and methods for students with low incidence disabilities and the accommodations that can be made for them in general education classrooms.
8. Demonstrate an understanding of appropriate instructional materials and methods for students with high incidence disabilities and the accommodations that can be made for them in general education classrooms.
9. Describe effective curricular and instructional approaches and accommodations that ensure access to the content areas, including literacy, mathematics, science, and social studies.
10. Demonstrate an understanding of strategies for increasing students' positive behaviors and promoting the social integration of students with special needs in general education classrooms.

Course Schedule and Topics:

This course will cover the following topics.

UNIT 1: Foundations of Special Education: Inclusion as a philosophy for educating exceptional students in general education settings; Legal & Ethical Premise for teaching all students

UNIT 2: Special Education Referral & Assessment Special education identification process

UNIT 3: Collaboration Models; Creating Collaborative Relationships Comprehensive planning team through effective collaboration and communication strategies

UNIT 4: The Classroom Environment: Strategies for Classroom Organization and Management

UNIT 5: Low Incidence Disabilities Working with advanced students - Learning disabilities - ADHD - emotional & behavior challenges

UNIT 6: High Incidence Disabilities Autism & ASD Spectrum Disorders, Intellectual Disabilities - FASD/FASE

UNIT 7: Other Students with Special Needs Communication Disorders - Hearing loss - Vision & Blindness - Physical Disabilities

UNIT 8: Instructional Adaptations; Differentiating Instruction Strategies to enhance learning, motivation, and social development

UNIT 9: Evaluating Student Learning Strategies for evaluating student progress in general, modifying the evaluation methods used to assess student progress, developing differentiated assessment practices, and using alternative grading practices.

UNIT 10 Strategies for Independent Living Working with Families of Students with Exceptionalities

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Demonstrate an understanding of laws, regulation, and policies that pertain to the development of educational programs for students with special needs, including major categories of disabilities.	N		X		
L2	Discuss the concept of least restrictive alternatives and examine the research and rationale(s) for inclusive education.	N		X		
L3	Demonstrate an understanding of the role and responsibilities of the general educator in the design of Individual Education Programs (IEP), including identification, referral, IEP development, and implementation.	N	X	X		
L4	Discuss principles of educational assessment for special populations, including testing bias, sensitivity to cultural and language factors, and the importance of adaptations for English Language Learners (ELL).	N	X	X		
L5	Demonstrate an understanding of the characteristics and effective applications of collaboration, including working with families and paraprofessionals in the design and	N	X	X		

	implementation of assessment and instructional programs for students with disabilities.					
L4	Analyze classroom and student needs in organizing and planning instruction for special populations, including the design of accommodations and the use of assistive technologies.	Y		X	X	
L5	Demonstrate an understanding of appropriate instructional materials and methods for students with low incidence disabilities and the accommodations that can be made for them in general education classrooms.	Y	X	X	X	
L6	Demonstrate an understanding of appropriate instructional materials and methods for students with high incidence disabilities and the accommodations that can be made for them in general education classrooms.	Y	X	X	X	
L7	Describe effective curricular and instructional approaches and accommodations that ensure access to the content areas, including literacy, mathematics, science, and social studies.	Y		X	X	X
L8	Demonstrate an understanding of strategies for increasing students' positive behaviors and promoting the social integration of students with special needs in general education classrooms.	Y	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits

40% - Final Exam

BIBLIOGRAPHY

TBA

CODE: CE302 INTEGRATION OF LEARNING TECHNOLOGY

COURSE DETAILS

Course level: Graduate

Course category: Core

Course Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion

Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100

Preparation) Language of instruction: English

Pre-requisites	ME201 Learning Theory and Implications for Instruction
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course is designed to provide students with knowledge, skills and experience in implementing educational technology into a pedagogically sound learning environment. This course also emphasizes the critical evaluation and pedagogical design aspects of integrating technology in instruction. Students will develop and use digital and nondigital teaching- learning resources using technology tools appropriate in various subject areas in the Primary and Secondary level. Further, the course will provide opportunities for students to use technology tools to develop project-based collaborative activities and share resources among communities of practice.

LEARNING CONTENT AND OBJECTIVES:

By the end of the course, the candidate will:

- Use technology to facilitate and inspire student learning
- Achieving and maintaining expertise in the use of educational technology
- Develop project/problem-based/inquiry-based collaborative plans and activities using technology tools
- Use open-ended tools to support the development of the project-based collaborative activities in subject specific application.

- Produce learning resources using technology tools in various subject areas.
- Evaluate the relevance and appropriateness of ICT tools and resources based on the learning context.
- Use technology tools to collaborate and share resources among communities of practice.
- Model digital-age work and learning
- Promote and model digital citizenship and responsibility
- Recognize the importance of continued professional growth and leadership in

Course Schedule and Topics:

This course will cover the following topics.

UNIT 1: Overview of course; History of Educational Technology, Standards Connecting Curriculum and Technology;

UNIT 2: Theory and Practice: Foundations for Effective Technology Integration

Promoting Digital Citizenship, Copyright and Plagiarism; Planning & Implementation for Technology Integration

UNIT 3: Technology Integration Planning (TIP) Model; Learning Theory Instructional Software; Learning Theories (Background to Question Model)

UNIT 4: Educational Games continued Instructional Software for 21st Century Teaching

UNIT 5: Technology Tools for 21st Century Emerging Technologies; Technology Integration for Diverse Learners

UNIT 6: Teaching: The Basic Suite Characteristics of ICT resources and their relevance and appropriateness

UNIT 7: Introduction to Distance Education: Online & Blended Environments

UNIT 8: Ethics, Copyright and Professional Responsibilities

UNIT 9: Online Tools, Uses & Web-based Development, Virtual Reality/QR Codes Human and non-human learning resources

UNIT 10: Assistive Learning Tools Differentiated Instruction Digital Storytelling Video, Webcams, and Virtual Field Trips

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Use technology to facilitate and inspire student learning	N			X	X
L2	Achieving and maintaining expertise in the use of educational technology	N			X	X
L3	Develop project/problem-based/inquiry-based collaborative plans and activities using technology tools	Y			X	X
L4	Use open-ended tools to support the development of the project-based collaborative activities in subject specific application.	N			X	X

L5	Produce learning resources using technology tools in various subject areas.	Y			X	X
L6	Evaluate the relevance and appropriateness of ICT tools and resources based on the learning context.	Y		X	X	X
L7	Use technology tools to collaborate and share resources among communities of practice.	N			X	X

L8	Model digital-age work and learning	N			X	X
L9	Promote and model digital citizenship and responsibility	N			X	X
L10	Recognize the importance of continued professional growth and leadership in	N		X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits

40% - Final Exam

BIBLIOGRAPHY TBA

CODE: CE303 ADVANCED PRACTICES FOR TEACHING THE STEM

FIELDS

COURSE DETAILS

Course level: Graduate

Course category: Core

Course credits: 10

Course duration: 10 weeks

Total contact hours: 35 (10hrs Lectures + 25hrs Discussion

Forum) Total exam hours: 2

Total study hours: 203 (90 hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100

Preparation) Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course will help students facilitate learning in the science, technology, engineering and math (STEM) fields. Students will discuss and explore principles of teaching and learning, and use constructive alignment to plan, deliver and evaluate teaching and learning activities. This course will also explore how to plan learning outcomes and goals, evaluate forms of assessment, and select appropriate student-centered learning activities and methods to support student development in a cohesive way. Students will learn to use assessment for learning, use writing and discussions to support deep learning and critical thinking skills for students, and reflect on the role of the learning environment and how to include diverse students in your teaching. The course also includes an intense overview of the history, science, methods, and theories of integrated STEM education.

LEARNING CONTENT AND OBJECTIVES:

By the end of the course, the candidate will:

- Develop (by integrating class readings, class discussions, personal use of technology and personal educational philosophy) a theoretically sound argument for embedding mathematical and scientific thinking strategies in the curricula

- Teaching basic knowledge of national standards in the fields of science, mathematics and technology teaching
- Demonstrate the ability to synthesize relevant information about the use of STEM thinking in primary or secondary education
- Use the vocabulary, key concepts, definitions and models that apply to STEM education
- Demonstrate the ability to collect, evaluate, synthesize and share real world data relevant to primary or secondary curricula
- Demonstrate problem-solving skills, evaluate the effectiveness of possible solutions, and discuss strategies and processes required for effective problem-solving
- Demonstrate the ability to work in collaborative design teams to meet specified criteria and solve design problems
- Development of innovative and alternative teaching methods and learning activities to promote STEM education
- Apply cognitive STEM tools (i.e. scientific model, design loop, etc.) and resources to solve human and environmental problems
- Demonstrate the ability to use different pedagogical strategies to improve STEM thinking in elementary or secondary school students
- Analyze characteristics, strengths, and weaknesses of current STEM education programs and initiatives
- Show proof of knowledge of the historical background and the development of the natural sciences, mathematics, technical education and engineering

Course Schedule and Topics:

This course will cover the following topics.

1. Background and history of the STEM movement
 - a. What is the role of science, mathematics, technology, and engineering?
 - b. What is the difference between science and technology?
 - c. Why is STEM important?
 - i. The demand for skills
 - ii. National rankings and current trends
 - iii. The elementary gap
 - d. How is STEM different than traditional science and math
 - e. The role of problem solving and design
 - f. Barriers to STEM education

- g. Strategies for effective STEM education
 - h. Problem-based learning
 - i. Performance based teaching and learning
-
- 2. The power and promise of STEM education
 - a. Active learning and engagement
 - b. The role of the standards
 - c. Understanding by design--backwards design
 - d. STEM and 5E teaching
 - e. The relationship between the standards and engineering
 - f. Delivering the standards through engineering and design
 - g. Using standards to develop curriculum
-
- 3. Science as a way of knowing
 - a. Inquiry-based teaching and learning
 - b. How does science work
 - c. Position of science in the modern world
 - d. History and nature of science
 - e. Unifying concepts
 - f. Science, technology, and engineering
-
- 4. Mathematics as a way of knowing
 - a. Position of mathematics in the modern world
 - b. Mathematics as a way of knowing
 - c. Mathematical focal points
 - i. Mathematical thinking

- ii. Mathematical importance
- iii. Mathematical fit
- iv. Mathematical Connections

5. Technology and engineering

- a. Foundational concepts
- b. The engineering design loop
- c. Adhering to design parameters and constraints
- d. Technological assessment

6. Integrative STEM

- a. Disciplinary, interdisciplinary, and trans-disciplinary strategies
- b. Questioning/clarifying the problem
- c. Identifying constraints/limitations
- d. Gathering research
- e. Quantifying/mental modeling
- f. Visioning and graphic representation
- g. Drawing and modeling (including software usage)
- h. Prototyping and assessment
- i. Artifact development
- j. Communicating the results of engineering/design

7. Teaching integrative STEM

- a. Teaching with the end in mind
- b. The role of design and engineering in the classroom
- c. Curricular assessment procedures, tools, and techniques
- d. Developing curriculum and activities
- e. Instructional methods for teaching STEM
- f. Collaboration strategies and resources

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module ?	A	B	C	D
L1	Develop (by integrating class readings, class discussions, personal use of technology and personal educational philosophy) a theoretically sound argument for embedding mathematical and scientific thinking strategies in the curricula	N		X	X	X
L2	Teaching basic knowledge of national standards in the fields of science, mathematics and technology teaching	N			X	
L3	Demonstrate the ability to synthesize relevant information about the use of STEM thinking in primary or secondary education	Y			X	
L4	Use the vocabulary, key concepts, definitions and models that apply to STEM education	N		X	X	X
L5	Demonstrate the ability to collect, evaluate, synthesize and share real world data relevant to primary or secondary curricula	N		X	X	
L6	Demonstrate problem-solving skills, evaluate the	N		X	X	X

	effectiveness of possible solutions, and discuss strategies and processes required for effective problem-solving					
L7	Demonstrate the ability to work in collaborative design teams to meet specified criteria and solve design problems	N			X	
L8	Development of innovative and alternative teaching methods and learning activities to promote STEM education	Y			X	
L9	Apply cognitive STEM tools (i.e. scientific model, design loop, etc.) and resources to solve human and environmental problems	Y			X	X
L10	Demonstrate the ability to use different pedagogical strategies to improve STEM thinking in elementary or secondary school students	Y			X	X
L11	Analyze characteristics, strengths, and weaknesses of current STEM education programs and initiatives	Y			X	X
L12	Show proof of knowledge of the historical background and the development of the natural sciences, mathematics, technical education and engineering	Y		X	X	

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits
40% - Final Exam

BIBLIOGRAPHY TBA

ENGLISH LANGUAGE COURSES

A Certificate will be issued after completion of all the English Course modules.

CODE: ENGLISH A1 BEGINNERS ENGLISH COURSE

NB: A certificate will not be awarded after completion of this course. A Certificate will be issued after completion of all the English Course modules.

Course level: Undergraduate

Course category: Core requirement

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The English For Beginners A1 course is designed for students with no prior knowledge of the language. The course will cover the core skills: grammar, vocabulary, pronunciation, listening, speaking, reading, and writing. You will learn the fundamental features of English grammar such as word forms, verb tenses and question and answer formation.

COURSE OBJECTIVES

- 1) Develop students' language skills.
- 2) To help students communicate and understand simple phrases and vocabulary on common areas (very basic personal and family information, shopping, the local area and employment).
- 3) Build confidence and help students proceed to A2 level.

LEARNING CONTENT AND OUTCOMES

The learner will be able to understand and use familiar words, phrases and expressions in English related to everyday situations (family, pets, shopping, home, work).

At the end of the course the student will be able to;

- 1) Introduce themselves and others
- 2) Ask and answer basic questions
- 3) Tell the time
- 4) Describe their weekly routineS
- 5) Use negations

CODE: ENGLISH A2 BASIC ENGLISH

NB: A certificate will not be awarded after completion of this course. A Certificate will be issued after completion of all the English Course modules.

Course level: Undergraduate

Course category: Core requirement

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	English A1 Beginners English or an Equivalent
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Areas seen in Beginners English will be studied in further detail and the student will understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment).

The student will be able to describe in simple terms aspects of their background, immediate environment and matters in areas of immediate need.

LEARNING CONTENT AND OUTCOMES

Learning content to be provided.

CODE: ENGLISH B1 INTERMEDIATE ENGLISH

NB: A certificate will not be awarded after completion of this course. A Certificate will be issued after completion of all the English Course modules.

Course level: Undergraduate

Course category: Core requirement

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	English A2 Basic English or an Equivalent
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The learner will be able to deal with most situations likely to arise while travelling in an area where the language is spoken. The student will be capable of producing simple connected text on topics which are familiar or of personal interest. They will be able to describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans.

LEARNING CONTENT AND OUTCOMES

Learning content to be provided.

CODE: ENGLISH B2 UPPER-INTERMEDIATE ENGLISH

NB: A certificate will not be awarded after completion of this course. A Certificate will be issued after completion of all the English Course modules.

Course level: Undergraduate

Course category: Core requirement

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	English B1 Intermediate English or an Equivalent
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The student will understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in their field of specialisation. They will be able to interact with a degree of fluency and spontaneity that makes regular interaction with users of the target language quite possible without imposing strain on either party.

LEARNING CONTENT AND OUTCOMES

Learning content to be provided.

CODE: ENGLISH FOR BUSINESS 1: ADVANCED ENGLISH

NB: A certificate will not be awarded after completion of this course. A Certificate will be issued after completion of all the English Course modules.

Course level: Undergraduate

Course category: Core requirement

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	English B2 Upper-Intermediate English
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The student will understand a wide range of demanding, longer texts, and recognise implicit meaning. The student will be able to express themselves fluently and spontaneously without much obvious searching for expressions.

English for Business 1 will reinforce key language skills, grammar rules, and vocabulary with listening, speaking, reading, and writing exercises. The learner will be introduced to business topics such as meetings and presentations, telephone language, company history, and business lunches.

LEARNING CONTENT AND OUTCOMES

Learning content to be provided.

CODE: ENGLISH FOR BUSINESS 2: PROFICIENCY ENGLISH

A Certificate will be issued after completion of this module..

Course level: Undergraduate

Course category: Core requirement

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	English for Business 1 Advanced English
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The second part of this English for Business course summarises information from different oral and written sources, reconstructing arguments and accounts in a coherent presentation. The student will be able to express themselves spontaneously, fluently and precisely, differentiating finer shades of meaning even in more complex / business situations. Upon completion learner will receive an EBU Certificate that they could share with prospective employers and professional network.

LEARNING CONTENT AND OUTCOMES

Learning content to be provided.

PROJECT MANAGEMENT

NB: The Project Management Program certificate will be issued after completion of **all** 4 modules: CAPM I, CAPM II, CAPM III and CAPM IV.

SPECIALIZATION COURSE

CODE: CP105 - PROJECT MANAGEMENT CAPM I

COURSE DETAILS

Course level:	Undergraduate
Course category:	Specialization Course
Course credits:	10
Course duration:	13 weeks
Total contact hours:	38 (13hrs Lectures + 25hrs Discussion Forum)
Total exam hours:	2
Total study hours:	230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)
Language of instruction:	English
Teacher:	Luc De Ceuster, MSc, PMP

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The Course CP105 Project Management (CAPM I) is the first course in a series of 4 during which you will be introduced into the “Art of Project Management”.

During this course module, you will learn about the projects and project management, and focus on the origin and selection of projects the definition of a project and creating the project plan.

This will include the origin of projects, how to select between projects using decision making methods and financial parameters, introducing important definition and terminology that all project managers use, providing an easy to use ten-step approach to project management to help you manage projects from definition to closing, application of different techniques.

The techniques that will be described in this section relate to the creation of the charter, developing the work breakdown structure, defining the work packages and activities, precedence diagramming methods including the critical path method, creating the project schedule or Gantt, resource allocation, project budget and S-curve and finally the principles of risk management. A free software ProjectLibre will also be introduced that will give you the possibility to get valuable experience on how to work with a typical project management software.

COURSE CONTENT

In the following overview, you will find the main topics that will be taught during the successive lessons.

- Defining Projects
- Origin of Projects and Project Selection
- Principles of Decision Making for Projects
- Basic Principles of Project Management
- Introducing Basic Project Management
- Managing Projects in 10 steps
- Review and Midterm Quiz
- From Idea to Project Charter
- From Charter to Project Activities
- Principles of Precedence Diagramming and Critical Path
- Gantt Chart, Resources Allocation and Problem Resolution and Creating the Project Budget
- Project Risk Management
- Course Review and Final Quiz

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

- Define what a project is and what Project Management is about
- Establish a Return-on-Investment Policy to evaluate and select projects
- Identify the Different Steps needed to manage Projects into successful Completion
- Apply Project Management Principles to define and plan Projects
- Create a Project Charter and a Project Plan including Requirements, Scope, Precedence Diagram, Gantt Chart, Resources Allocation and Planning, Budget, and a Risk Management Plan.

Learning Outcomes:		Assessed in this module?	A	B	C	D
On successful completion of the course the candidate will be able to:						
L 1	Define what a project is and what project management is about	YES	✓			
L 2	Establish a Return-on-Investment Policy and conduct project selection	YES			✓	✓
L	Identify the different steps needed to manage projects into successful completion	YES			✓	✓

3						
L 4	Apply different principles to define and plan projects	YES	✓		✓	✓
L 5	Create a Project Charter and a Project Plan including Requirements, Scope, Precedence Diagram, Gantt Chart, Resources Allocation and Planning, Budget, and a Risk Management Plan.	YES	✓		✓	✓

Assessments.

20% - Weekly Quizzes

10% - Weekly Forum and Discussion Board

10% - Merits

25% - Midterm Quiz

35% - Final Quiz

BIBLIOGRAPHY

- Focus on Project Success, Tools and Techniques, Luc De Ceuster, 2010
- Focus on Risk Management, Manage Risks to Improve Project Success, Luc De Ceuster, 2010
- Focus on Earned Value, Earned Value Management for Successful Projects, Luc De Ceuster, 2010
- SLACK, Nigel, CHAMBERS, Stuart & JOHNSTON, Robert. Operations Management (4th edition), Prentice Hall.
- Radical Project Management, 1st Edition, Prentice Hall 2002 by Rob Thomsett; ISBN: 0-13-009486-2 (the digested version of the text is stored on the e-Learning as PMThomsett.pdf)
- Project Management, 3rd Edition, Pearson Education Limited 2003 by Harvey Maylor; ISBN: 0-273-65541-8
- Managing Projects, Prentice Hall 2002 by David Boddy, ISBN: 0272-65128-5

CODE: CP205 - PROJECT MANAGEMENT CAPM II

COURSE DETAILS

Course level:	Undergraduate
Course category:	Specialization Course
Course credits:	10
Course duration:	13 weeks
Total contact hours:	38 (13hrs Lectures + 25hrs Discussion Forum)
Total exam hours:	2
Total study hours:	230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)
Language of instruction:	English
Teacher:	Luc De Ceuster, MSc, PMP

Pre-requisites	CP105 – Project Management CAPM I
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The Course CP205 Project Management (CAPM II) is the second course in a series of 4 during which you will be introduced into the “Art of Project Management”.

During this course module, you will review the main topics that were introduced in the previous course module, and we will introduce more complex elements and techniques for project planning and apply all on a complete exercise.

The next step in this course is about the project management process step execution monitor and control of the project and project closing. This will also include Earned Value Management Principles.

Since the ten steps approach does not include quality management, stakeholder and communications management and procurement management, the principles of these knowledge areas will be introduced.

The final part will be dedicated to Critical Chain Project Management (CCPM) and Agile.

COURSE CONTENT

In the following overview, you will find the main topics that will be taught during the successive lessons.

- Review of the `Tools and Techniques for Project Planning
- Adding Uncertainty to Duration and Cost Estimates and Projects (PERT/Mont Carlo)
- Project Duration Reduction Techniques like Crashing and Fast Tracking, Exercises
- Adding Resources to the Gantt, resolving Resource Issues and creating the project resources and cost

baseline

- Advanced Risk Management Techniques
- Principle of Earned Value
- Principles of quality Management for Projects
- Principles of Stakeholder and Communications Management
- Principles of Procurement Management
- Introduction to Agile Project Management
- Critical Chain Project Management and Course Review
- Final Quiz

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

- Create a project plan for a project including risk, quality, procurement, communications and stakeholder management
- Apply the principles of uncertainty and probability on project planning, duration and cost estimation
- Explain the Principles of Earned Value Management
- Calculate the project reviewed end date and estimates cost at completion
- Evaluate resource utilization over the project duration and resolve issues of overutilization and create the resources and budget baseline
- Estimate probabilistic project duration and costs using PERT and/or Monte Carlo Simulation
- Identify the elements related to Quality, Procurement, Stakeholders and Communication
- Explain the principles of Agile and Critical Chain Project Management (CCPM).

Learning Outcomes:		Assess ed in this module?	A	B	C	D
On successful completion of the course the candidate will be able to:						
L 1	Apply the principles of uncertainty and probability on project planning, duration and cost estimation and introduce methods like PERT and Monte Carlo	YES	✓		✓	
L 2	Explain the principles of earned value management and calculate the estimated project duration and final cost	YES	✓		✓	✓
L 3	Evaluate resource utilization, apply resources levelling and smoothing to remove overutilization and create the resource and budget baselines	YES			✓	✓

L 4	Identify the elements related to quality, procurement, stakeholders and communication	YES	✓	✓		
L 5	Explain the principles of Agile and Critical Chain Project Management	YES	✓		✓	

Assessments.

20% - Weekly Quizzes

10% - Weekly Forum and Discussion Board

10% - Merits

25% - Midterm Quiz

35% - Final Quiz

BIBLIOGRAPHY

- Focus on Project Success, Tools and Techniques, Luc De Ceuster, 2010
- Focus on Risk Management, Manage Risks to Improve Project Success, Luc De Ceuster, 2010
- Focus on Earned Value, Earned Value Management for Successful Projects, Luc De Ceuster, 2010
- SLACK, Nigel, CHAMBERS, Stuart & JOHNSTON, Robert. Operations Management (4th edition), Prentice Hall.
- Radical Project Management, 1st Edition, Prentice Hall 2002 by Rob Thomsett; ISBN: 0-13-009486-2 (the digested version of the text is stored on the e-Learning as PMThomsett.pdf)
- Project Management, 3rd Edition, Pearson Education Limited 2003 by Harvey Maylor; ISBN: 0-273-65541-8
- Managing Projects, Prentice Hall 2002 by David Boddy, ISBN: 0272-65128-5

CODE: CP305 - PROJECT MANAGEMENT CAPM III

COURSE DETAILS

Course level:	Undergraduate
Course category:	Core requirement
Course credits:	10
Course duration:	13 weeks
Total contact hours:	38 (13hrs Lectures + 25hrs Discussion Forum)
Total exam hours:	2
Total study hours:	230 (117hrs self-directed + 9hrs Specific assignments +4hrs Research + 100 Preparation)
Language of instruction:	English
Teacher:	Luc De Ceuster, MSc, PMP

Pre-requisites	CP205 – Project Management CAPM II
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The Course CP305 Project Management (CAPM III) is the third course in a series of 4 during which you will be introduced into the “Art of Project Management”.

During this course module, you will learn about the PMI Certification of Certified Associate in Project Management abbreviated as CAPM.

After learning about the tools and techniques, terms and terminologies and important concepts in CAPM I and II we will now look deeper into the certification program and knowledge you need to pass the CAPM exam organized by the Project Management Institute.

The main document that we will work with and refer to when describing the different elements is the Guide to the Project Management Body of Knowledge also referred to as the PMBOK®.

This course will prepare you to take the exam by reviewing all topics included in the PMBOK and passing test quizzes that are set up per section and that will provide you with typical questions as you can find in the real exam.

At the end of the course module CP305a Project Management (CAPM IV) you will have the opportunity to test your knowledge on a real 3-hour exam simulation covering 150 questions.

COURSE CONTENT

In the following overview, you will find the main topics that will be taught during the successive lessons.

- Review of the Tools and Techniques, main terms and terminology from CAPM I and II

- Overview of the PMI and CAPM Training Content
- Overview of the different domains that are part of the PMBOK and chapter overview
- PMBOK - Chapter 1: Introduction to project management part 1
- PMBOK - Chapter 1: Introduction to project management part 2
- PMBOK - Chapter 2: The project environment
- PMBOK - Chapter 3: The Role of the Project Manager
- PMBOK - Chapter 4: Project Integration Management part 1
- PMBOK - Chapter 4: Project Integration Management part 2
- PMBOK - Chapter 5: Project Scope Management Processes
- PMBOK - Chapter 5: Project Scope Management Tools and Techniques
- Chapters review and preparation for the final quiz
- Midterm and Final Quiz
- Principles of Procurement Management
- Introduction to Agile Project Management
- Critical Chain Project Management and Course Review
- Final Quiz

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

- Memorize the inputs, tools and techniques and outputs of the processes related to the knowledge areas Integration and Scope Management
- Apply the tools and techniques of the processes related to the different knowledge areas
- Recite the content related to the introduction of project management, the role of the project manager and the project environment
- Describe the importance of the PMI and the CAPM certification, the different domains of the PMBOK and the content of the chapters
- Prepare for the CAPM certification exam
- Identify the different knowledge areas as defined in the PMBOK

<p>Learning Outcomes:</p> <p>On successful completion of the course the candidate will be able to:</p>	<p>Assessed in this module?</p>	<p>A</p>	<p>B</p>	<p>C</p>	<p>D</p>
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L 1	Memorize the inputs, tools and techniques and outputs of the processes related to the knowledge areas Integration and Scope Management	YES	✓			
L 2	Apply the tools and techniques of the processes related to the different knowledge areas	YES	✓		✓	✓
L 3	Recite the content related to the introduction of project management, the role of the project manager and the project environment	YES	✓			
L 4	Describe the importance of the PMI and the CAPM certification, the different domains of the PMBOK and the content of the chapters	YES	✓			
L 5	Identify the different knowledge areas as defined in the PMBOK and prepare for the CAPM Certification Exam	YES	✓	✓		

Assessments.

20% - Weekly Quizzes

10% - Weekly Forum and Discussion Board

10% - Merits

25% - Midterm Quiz

35% - Final Quiz

BIBLIOGRAPHY

- A Guide to the Project Management Body of Knowledge (PMBOK Guide). 6th Edition, Project Management Institute, USA, ISBN: 9781628251845
- Focus on Project Success, Tools and Techniques, Luc De Ceuster, 2010
- Focus on Risk Management, Manage Risks to Improve Project Success, Luc De Ceuster, 2010
- Focus on Earned Value, Earned Value Management for Successful Projects, Luc De Ceuster, 2010
- SLACK, Nigel, CHAMBERS, Stuart & JOHNSTON, Robert. Operations Management (4th edition), Prentice Hall.
- Radical Project Management, 1st Edition, Prentice Hall 2002 by Rob Thomsett; ISBN: 0-13-009486-2 (the digested version of the text is stored on the e-Learning as PMThomsett.pdf)
- Project Management, 3rd Edition, Pearson Education Limited 2003 by Harvey Maylor; ISBN: 0-273-65541-8
- Managing Projects, Prentice Hall 2002 by David Boddy, ISBN: 0272-65128-5

CODE: CP305A- PROJECT MANAGEMENT CAPM IV

COURSE DETAILS

Course level:	Undergraduate
Course category:	Specialization Course
Course credits:	10
Course duration:	13 weeks
Total contact hours:	38 (13hrs Lectures + 25hrs Discussion Forum)
Total exam hours:	2
Total study hours:	230 (117hrs self-directed + 9hrs Specific assignments +4hrs Research + 100 Preparation)
Language of instruction:	English
Teacher:	Luc De Ceuster, MSc, PMP

Pre-requisites	CP305 – Project Management CAPM III
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The Course CP305a Project Management (CAPM IV) is the final course in a series of 4 during which you will be introduced into the “Art of Project Management”.

During this course module, you will continue learning about the PMI Certification of Certified Associate in Project Management abbreviated as CAPM.

After learning about the tools and techniques, terms and terminologies and important concepts in CAPM I and II we will now look deeper into the certification program and knowledge you need to pass the CAPM exam organized by the Project Management Institute by introducing the remaining chapters and knowledge areas.

The main document that we will work with and refer to when describing the different elements is the Guide to the Project Management Body of Knowledge also referred to as the PMBOK®.

This course will prepare you to take the exam by reviewing all topics included in the PMBOK and passing test quizzes that are set up per section and that will provide you with typical questions as you can find in the real exam.

At the end of this course module CP305a Project Management (CAPM IV) you will have the opportunity to test your knowledge on a real 3-hour exam simulation covering 150 questions.

COURSE CONTENT

In the following overview, you will find the main topics that will be taught during the successive lessons.

- Review chapters 1 to 5 of the PMBOK
- PMBOK Chapter 6 - Project Schedule Management - Processes
- PMBOK Chapter 6 - Project Schedule Management - Tools and Techniques
- PMBOK Chapter 7 - Project Cost Management
- PMBOK Chapter 8 - Project Quality Management
- PMBOK Chapter 9 - Project Resources Management
- PMBOK Chapter 10 - Project Communications Management
- PMBOK Chapter 11 - Project Risk Management
- PMBOK Chapter 12 - Project Procurement Management
- PMBOK Chapter 12 - Project Stakeholder Management, Code of Conduct and Review of all chapters to prepare for the final quiz
- Midterm Quiz
- Final Quiz = Certification exam simulation, 150 questions to complete in 3 hours.

LEARNING CONTENT AND OUTCOMES

At the completion of the course the student will be able to:

- Memorize the inputs, tools and techniques and outputs of the processes related to the knowledge areas Schedule, Cost, Quality, Resources, Communication, Risk, Procurement and Stakeholder Management
- Apply the tools and techniques of the processes related to the different knowledge areas
- Analyze the links between the different process part of the knowledge areas as defined in the PMBOK
- Summarize the different processes and to which project management process step they belong
- Diagram the processes and their links
- Prepare for the CAPM Certification exam as determined by the PMI

Learning Outcomes:		Assessed in this module?	A	B	C	D
On successful completion of the course the candidate will be able to:						
L 1	Memorize the inputs, tools and techniques and outputs of the processes related to the knowledge areas Schedule, Cost, Quality, Resources, Communication, Risk, Procurement and Stakeholder Management	YES	✓			
L 2	Apply the tools and techniques of the processes related to the different knowledge areas	YES	✓		✓	✓
L 3	Analyze the links between the different process part of the knowledge areas as defined in the	YES	✓			

	PMBOK					
L 4	Summarize the different processes and to which project management process step they belong	YES	✓			
L 5	Prepare for the CAPM Certification exam as determined by the PMI	YES	✓	✓		

Assessments.

20% - Weekly Quizzes

10% - Weekly Forum and Discussion Board

10% - Merits

25% - Midterm Quiz

35% - Final Quiz

BIBLIOGRAPHY

- A Guide to the Project Management Body of Knowledge (PMBOK Guide). 6th Edition, Project Management Institute, USA, ISBN: 9781628251845
- Focus on Project Success, Tools and Techniques, Luc De Ceuster, 2010
- Focus on Risk Management, Manage Risks to Improve Project Success, Luc De Ceuster, 2010
- Focus on Earned Value, Earned Value Management for Successful Projects, Luc De Ceuster, 2010
- SLACK, Nigel, CHAMBERS, Stuart & JOHNSTON, Robert. Operations Management (4th edition), Prentice Hall.
- Radical Project Management, 1st Edition, Prentice Hall 2002 by Rob Thomsett; ISBN: 0-13-009486-2 (the digested version of the text is stored on the e-Learning as PMThomsett.pdf)
- Project Management, 3rd Edition, Pearson Education Limited 2003 by Harvey Maylor; ISBN: 0-273-65541-8
- Managing Projects, Prentice Hall 2002 by David Boddy, ISBN: 0272-65128-5

CPA PROGRAM

This online program will provide you with the requisite knowledge to sit for the Examinations administered for the Certified Public Accountant (CPA). Being a CPA means being a member of a professional order and the EBU Program is designed to encourage the development of critical thinking, analysis and communication skills. By facilitating personal growth and the ability to adapt and respond to a complex and changing environment, this EBU Certified Public Accountant program helps you acquire advanced knowledge in accounting, problem-solving skills, professional communication skills, research and analytical skills and related aspects of business.

Students have a scheduled 24 months to complete the online course (6 sections with each section having 3 courses per term). Some sections do not have to be completed consecutively. Once registered, you will have access to the EBU Online campus and global community of students. Your password and access information will be emailed to you in time for the start of class. The starting dates are October, January and March of each year. Live webinars conducted once a week for 1 hour with a Professor will take place generally between 16:00hrs – 18:00hrs CET. Discussion forums will take place during the 24 month program and participation is mandatory.

Upon successful passing of courses students will receive a European University CPA Completion Certificate and may proceed to obtaining country specific exams.

Important: Please be advised that for the CPA program - students MUST complete one section (all 3 courses) every term. The Scholarship requirement is that they must enrol in all three courses and pay a commitment fee for each - otherwise the scholarship is revoked.

EBU provides full scholarships for prospective students who wish to enrol with the payment of a €20 commitment fee per course for a total of €360 (18 courses) payable at €20 per course upon enrollment.

For more information:

<https://ebi.lu/wp-content/uploads/2019/04/CPA-Certificate-Program-Overview.pdf>

CPA PART I	CPA PART II	CPA PART III
<u>SECTION 1</u> Financial accounting Business Law Corporate law <u>SECTION 2</u> Micro and Macroeconomics Managerial Accounting Entrepreneurship and communication	<u>SECTION 3</u> Public finance and taxation Financial management Financial reporting <u>SECTION 4</u> Auditing and assurance Management information systems Quantitative analysis	<u>SECTION 5</u> Business Strategy, governance and ethics Advanced Managerial Accounting Advanced financial management <u>SECTION 6</u> Advanced public finance and taxation Advanced auditing and assurance Advanced financial reporting

SECTION 1

Course Description

- **Financial accounting:**

Financial Accounting introduces the candidate to the fundamentals of the regulatory framework relating to accounts preparation and to the qualitative characteristics of useful information. The syllabus then covers drafting financial statements and the principles of accounts preparation. The syllabus then concentrates in depth on recording, processing, and reporting business transactions and events. The syllabus then covers the use of the trial balance and how to identify and correct errors, and then the preparation of financial statements for incorporated and unincorporated entities. The syllabus then moves in two directions, firstly requiring candidates to be able to conduct a basic interpretation of financial statements; and secondly requiring the preparation of simple consolidated financial statements from the individual financial statements of group incorporated entities.

- **Business Law:**

Business Law is an introductory course on the different legal features that underlie business transactions. The course aims to provide students with the skills required to have a basic understanding of the various concepts found in Law. Students will begin by looking at the essential elements of the legal system which will lay down the foundations for the subsequent topics of the law of obligations, employment law and the formation and constitution of business organizations. This course, complemented by Corporate Law, will allow the students to have an adequate and sufficient manipulation of legal theories approaching the CPA exam.

- **Corporate law:**

The aim of the syllabus is to develop knowledge and skills in the understanding of the general legal framework, and of specific legal areas relating to business, recognising the need to seek further specialist legal advice where necessary. Corporate Law starts with an introduction to the overall legal system which underpin business transactions generally. The syllabus then covers a range of specific legal areas relating to various aspects of business of most concern to finance professionals. These are the law relating to employment and the law relating to companies. These laws include the formation and constitution of companies, the financing of companies and types of capital, and the day-to-day management, the administration and regulation of companies and legal aspects of insolvency law. The final section links back to all the previous areas. This section deals with corporate fraudulent and criminal behaviour.

SECTION 2

Course Description

- **Micro and Macroeconomics:**

Both microeconomics and macroeconomics play a role in business decisions and strategy formulation. Whether formulating strategy at the functional, business or corporate level, professional accountants must have a basic understanding of economics and the impact it has on business. This course introduces microeconomics and macroeconomics as the basis for making smart choices in life as consumers, businesspeople, investors, and informed citizens judging government policies. Microeconomics focuses on a cost/benefit analysis of all decisions. Topics include gains from trade, how prices coordinate choices, the roles of competition and monopoly, efficiency/equity trade-offs, government versus market failures, environmental policies, and income/wealth distributions. Macroeconomics focuses on the performance of market economies — measured by GDP growth, unemployment, and inflation — and appropriate roles for government monetary and fiscal policies. Topics include GDP, economic growth, business cycles, unemployment, inflation, money and exchange rates, government deficits, the national debt, globalization, and trade policy.

- **Managerial Accounting:**

The syllabus for Management Accounting introduces candidates to elements of management accounting which are used to make and support decisions. The syllabus starts by introducing the nature, the source and purpose of management information followed by the statistical techniques used to analyse data. Then the syllabus addresses cost accounting and the costing techniques used in business which are essential for any management accountant. The syllabus then looks at the preparation and use of budgeting and standard costing and variance analysis as essential tools for planning and controlling business activities. The syllabus concludes with an introduction to measuring and monitoring the performance of an organisation.

- **Entrepreneurship and communication:**

This course intends to equip the candidate with knowledge, skills and attitudes that will enable him/her to apply entrepreneurship knowledge in business and other environments. This course focuses on understanding basic entrepreneurial concepts, the entrepreneurial mindset, and developing entrepreneurial skills. The course emphasizes the entrepreneurial process and communication and the application of this process to a broad range of business contexts. The course also addresses creativity, securing resources, team building, communication, and leadership.

SECTION 3

Course Description

- **Public finance and taxation:**

The aim of this course is to provide students with a knowledge of the administration of the taxation system generic to most jurisdictions. It introduces students to the application of taxation legislation to individuals and companies in a compliant and ethical manner. Students are introduced to the rationale behind – and the functions of – the tax system. The course then considers the separate taxes that an accountant would need to have a detailed knowledge of, such as income tax from self-employment, employment and investments, the corporation tax liability of individual companies and groups of companies, the national insurance contribution liabilities of both employed and self-employed persons, and the value added tax liability of businesses. Having covered the core areas of the basic taxes, candidates should be able to compute tax liabilities, explain the basis of their calculations, apply tax planning techniques for individuals and companies and identify the compliance issues for each major tax through a variety of business and personal scenarios and situations.

- **Financial management:**

The aim of the course is to develop the knowledge and skills expected of a finance manager, in relation to investment, financing, and dividend policy decisions. The course is designed to equip candidates with the skills that would be expected from a finance manager responsible for the finance function of a business. It prepares candidates for more advanced and specialist study in Advanced Financial Management.

- **Financial reporting:**

The aim of the syllabus is to develop knowledge and skills in understanding and applying IFRS Standards and the theoretical framework in the preparation of financial statements of entities, including groups and how to analyse and interpret those financial statements. The financial reporting syllabus assumes knowledge acquired in Financial Accounting, and develops and applies this further and in greater depth. The syllabus begins with the Conceptual Framework for Financial Reporting with reference to the qualitative characteristics of useful information and the fundamental

bases of accounting introduced in the Financial Accounting syllabus within the Knowledge module. It then moves into a detailed examination of the regulatory framework of accounting and how this informs the standard setting process. The main areas of the syllabus cover the reporting of financial information for single companies and for groups in accordance with generally accepted accounting principles and relevant IFRS Standards.

SECTION 4

Course Description

- **Auditing and assurance.**

The Audit and Assurance syllabus is essentially divided into six areas. The syllabus starts with the nature, purpose and scope of assurance engagements, including the statutory audit, its regulatory environment, and introduces governance and professional ethics relating to audit and assurance. It then leads into planning the audit and performing risk assessment. The syllabus then covers a range of areas relating to an audit of financial statements including the scope of internal control and the role and function of internal audit. These include, evaluating internal controls, audit evidence, and a review of the financial statements. In addition to final review procedures, the syllabus concentrates on reporting, including the form and content of the independent auditor's report.

- **Management information systems.**

In this course students investigate on existing technologies about software and hardware to solve problems and learn to display proficiency in decision making using contemporary Information systems tools. Students will apply the principles of information systems development and learn to apply the knowledge of information systems for competitive advantage This course aim so allow the student to learn the use of data communication networks, the Internet and e-commerce in optimizing business opportunities.

- **Quantitative analysis:**

The Quantitative Analysis course aims develop an understanding of the mathematical principles and concepts which are useful in problem solving and decision making. The use of statistical methods in decisionmaking and application of statistical and mathematical models for estimation and forecasting are used in the solving and optimization of problems in management.

SECTION 5

Course Description

- **Business Strategy, governance and ethics:**

Global Strategy and consolidates and builds on knowledge candidates have gained in the other subjects: In an increasingly complex business environment characterised by change, uncertainty and escalating competition, the disciplines of strategy and leadership have become critical to successful organisational performance. The aim of this subject is to link the knowledge expected of the future finance professional to the concepts of strategy and leadership. The future finance professional is expected to use a range of technical information to make decisions for the future of the business within an ethical framework of operation. This subject demonstrates that accounting information, ethics, strategy and leadership are applicable to finance professionals, in a global context and in diverse organisational settings. The subject materials address the needs of candidates operating in different international markets in varying roles, including content on current and emerging technologies and emerging business models.

- **Advanced Managerial Accounting:**

This course is based on the prior completion of Management Accounting. The objective is to provide students with an appreciation of management accounting and to explore how they have impacted on practice. This course will explain and understand real world management accounting, examine both socio and technical aspects of the discipline together, and consider management accounting and Activity-based costing, Balanced Scorecard, Strategy execution, Cost-volume profit analysis and more advanced topics.

- **Advanced financial management:**

The aim of the syllabus is to apply relevant knowledge, skills and exercise professional judgement as expected of a senior financial executive or advisor, in taking or recommending decisions relating to the financial management of an organisation in private and public sectors. This syllabus develops upon the core financial management knowledge and skills covered in the Financial Management syllabus and prepares candidates to advise management and/or clients on complex strategic financial management issues facing an organisation. The syllabus starts by exploring the role and responsibility of a senior executive or advisor in meeting competing needs of stakeholders within the business environment of multinationals. The syllabus then re-examines investment and financing decisions, with the emphasis moving towards the strategic consequences of making such decisions in a domestic, as well as international, context. Candidates are then expected to develop further advisory skills in planning strategic acquisitions and mergers and corporate re-organisations. The next part of the syllabus re-examines, in the broadest sense, the existence of risks in business and the sophisticated strategies which are employed in order to manage risks. It builds on what candidates would have covered in the Financial Management syllabus.

SECTION 6

Course Description

- **Advanced public finance and taxation:**

The aim of the syllabus is to apply relevant knowledge and skills and exercise professional judgement in providing relevant information and advice to individuals and businesses on the impact of the major taxes on financial decisions and situations. The Advanced Taxation syllabus further develops the key aspects of taxation introduced within the Applied Skills module and extends the candidates' knowledge of the tax system, together with their ability to apply that knowledge to the issues commonly encountered by individuals and businesses, such that successful candidates should have the ability to interpret and analyse the information provided and communicate the outcomes in a manner appropriate to the intended audience. The syllabus builds on the basic knowledge of core taxes from the earlier taxation exam and introduces candidates to stamp taxes. As this is an optional exam, aimed at those requiring/desiring more than basic tax knowledge for their future professional lives, the syllabus also extends the knowledge of income tax, corporation tax, capital gains tax and inheritance tax to encompass further overseas aspects of taxation, the taxation of trusts and additional exemptions and reliefs. Computations will normally only be required in support of explanations or advice and not in isolation.

- **Advanced auditing and assurance:**

The aim of the syllabus is to analyse, evaluate and conclude on the assurance engagement and other audit and assurance issues in the context of best practice and current developments. The Advanced Audit and Assurance syllabus further develops key skills introduced in Audit and Assurance at the Applied Skills level. The syllabus starts with the legal and regulatory environment including money laundering, and professional and ethical considerations, including the Code of Ethics and professional liability. This then leads into procedures in quality management, including

quality management relevant at the firm and the engagement level and the acceptance and retention of professional engagements. The syllabus then covers the audit of financial statements, including planning, and evidence gathering. It then covers the completion, evidence evaluation and review and reporting on an audit of historical financial information. The next section moves onto other assignments including prospective financial information, due diligence and forensic audit as well as the reporting of these assignments. The next section covers current issues and developments relating to the provision of audit related and assurance services.

- **Advanced financial reporting:**

As a continuation of Financial Reporting, this course covers the accounting for business combinations, the preparation of consolidated financial statements, and other related topics including, but not limited to: step-bystep acquisition, deconsolidation, segments reporting, and the goodwill impairment test. This course begins with a discussion of the scope and the differences between business combinations and asset acquisitions. The course explores the measurement and recognition principles of the acquisition method to account for business combinations. Then, the course covers the consolidation process. Students will learn how to prepare the consolidated financial statements and make all of the necessary consolidation adjustments.

DATA SCIENCE AND AI

SPECIALIZATION COURSE

CODE: MSDA 100 - DATA SCIENCE IN REAL LIFE

COURSE DETAILS

Course level: Graduate

Course category: Specialization course

Course credits: 4

Course duration: 10 weeks

Total contact hours: 30 (10hrs Lectures + 20hrs Discussion Forums)

Total exam hours: 4

Total study hours: 76 (40hrs Self-directed + 36hrs Research)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Data Science is the highly sought field of the century. Explore the truth about what Data Science is and hear from real practitioners telling real stories about what it means to work in Data Science and use cases for the same.

Learning Objectives:

- Gain fundamental knowledge of what is Data Science and what do Data Science people do
- Learn about Data Science in a business context and what is the future of Data Science
- Understand Data Science applications and discover some use cases for Data Science

CONTENT

Lesson 1 - Defining Data Science

Lesson 2 - What Does a Data Science Professional Do?

Lesson 3 - Data Science in Business

Lesson 4 - Use Cases for Data Science

Lesson 5 - Data Science People

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Gain fundamental knowledge of what is Data Science and what do Data Science people do	No	x	x		
L2	Learn about Data Science in a business context and what is the future of Data Science	YES	x	x		

L3	Understand Data Science applications and discover some use cases for Data Science	YES	x	x	x	x
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A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits
40% - Final Exam

BIBLIOGRAPHY

Bibliography: TBD

SPECIALIZATION COURSE

CODE: MSDA 104 - PYTHON FOR DATA SCIENCE

COURSE DETAILS

Course level: Graduate

Course category: Specialization course

Course credits: 4

Course duration: 10 weeks

Total contact hours: 30 (10hrs Lectures + 20hrs Discussion Forums)

Total exam hours: 4

Total study hours: 76 (40hrs Self-directed + 36hrs Research)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Students will review Python for Data Science with this introductory course and familiarize themselves with programming. Carefully crafted by IBM, upon completion of this course students will be able to write Python scripts, perform fundamental hands-on data analysis using the Jupyter- based lab environment, and create their own Data Science projects.

Learning Objectives:

- Write a Python program by implementing concepts of variables, strings, functions, loops, conditions
- Understand the nuances of lists, sets, dictionaries, conditions and branching, objects and classes
- Work with data in Python such as reading and writing files, loading, working, and saving data with Pandas

CONTENT

Lesson 1 - Python Basics

Lesson 2 - Python Data Structures

Lesson 3 - Python Programming Fundamentals

Lesson 4 - Working with Data in Python

Lesson 5 - Working with NumPy arrays

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module ?	A	B	C	D
L 1	Write a Python program by implementing concepts of variables, strings, functions, loops, conditions	YES	x	x	x	x

L 2	Understand the nuances of lists, sets, dictionaries, conditions and branching, objects and classes	YES	x	x	x	x
L 3	Work with data in Python such as reading and writing files, loading, working, and saving data with Pandas	YES	x	x	x	x

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% -

Merits

40% - Final Exam

BIBLIOGRAPHY

Bibliography: TBD

SPECIALIZATION COURSE

CODE: MSDA 201 - MACHINE LEARNING

COURSE DETAILS

Course level: Graduate

Course category: Specialization course

Course credits: 4

Course duration: 10 weeks

Total contact hours: 30 (10hrs Lectures + 20hrs Discussion Forums)

Total exam hours: 4

Total study hours: 76 (40hrs Self-directed + 36hrs Research)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This Machine Learning course examines automation of data analysis to enable computers to learn and adapt through experience to do specific tasks without explicit programming. Students will master Machine Learning concepts and techniques, including supervised and unsupervised learning, mathematical and heuristic aspects, and hands-on modeling to develop algorithms and prepare students for their role with advanced Machine Learning knowledge.

Learning Objectives:

- Master the concepts of supervised and unsupervised learning, recommendation engine, and time series modeling
- Gain practical mastery over principles, algorithms, and applications of Machine Learning through a hands-on approach that includes working on four major end-to-end projects and 25+ hands-on exercises
- Acquire thorough knowledge of the statistical and heuristic aspects of Machine Learning
- Implement models such as support vector machines, kernel SVM, naive Bayes, decision tree classifier, random forest classifier, logistic regression, K-means clustering and more in Python
- Validate Machine Learning models and decode various accuracy metrics. Improve the final models using another set of optimization algorithms, which include Boosting and Bagging techniques
- Comprehend the theoretical concepts and how they relate to the practical aspects of Machine Learning

CONTENT

Lesson 1: Introduction to Artificial Intelligence and Machine Learning

Lesson 2: Data Preprocessing

Lesson 3: Supervised Learning

Lesson 4: Feature Engineering

Lesson 5: Supervised Learning-Classification

Lesson 6: Unsupervised Learning

Lesson 7: Time Series Modelling
 Lesson 8: Ensemble Learning
 Lesson 9: Recommender Systems
 Lesson 10: Text Mining

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Master the concepts of supervised and unsupervised learning, recommendation engine, and time series modeling	YES	x	x	x	x
L2	Gain practical mastery over principles, algorithms, and applications of Machine Learning through a hands-on approach that includes working on four major end-to-end projects and 25+ hands-on exercises	YES	x	x	x	x
L3	Acquire thorough knowledge of the statistical and heuristic aspects of Machine Learning	YES	x	x	x	x
L4	Implement models such as support vector machines, kernel SVM, naive Bayes, decision tree classifier, random forest classifier, logistic regression, K-means clustering and more in Python					
L5	Validate Machine Learning models and decode various accuracy metrics. Improve the final models using another set of optimization algorithms, which include Boosting and Bagging techniques	YES	x	x	x	x
L6	Comprehend the theoretical concepts and how they relate to the practical aspects of Machine Learning	YES	x	x	x	x

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits
 40% - Final Exam

BIBLIOGRAPHY

Bibliography: TBD

SPECIALIZATION COURSE

CODE: MSDA 300 - INTRODUCTION TO ARTIFICIAL INTELLIGENCE

COURSE DETAILS

Course level: Graduate

Course category: Specialization course

Course credits: 4

Course duration: 10 weeks

Total contact hours: 30 (10hrs Lectures + 20hrs Discussion Forums)

Total exam hours: 4

Total study hours: 76 (40hrs Self-directed + 36hrs Research)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Introduction to Artificial Intelligence course is designed to help learners decode the mystery of Artificial Intelligence and understand its business applications. The course provides an overview of Artificial Intelligence concepts and workflows, Machine Learning, Deep Learning, and performance metrics. Students learn the difference between supervised, unsupervised, and reinforcement learning-be exposed to use cases, and see how clustering and classification algorithms help identify Artificial Intelligence business applications.

Learning Objectives:

- Meaning, purpose, scope, stages, applications, and effects of Artificial Intelligence • Fundamental concepts of Machine Learning and Deep Learning
- Difference between supervised, semi-supervised and unsupervised learning • Machine Learning workflow and how to implement the steps effectively
- The role of performance metrics and how to identify their essential methods

CONTENT

Lesson 1 - Decoding Artificial Intelligence

Lesson 2 - Fundamentals of Machine Learning and Deep Learning

Lesson 3 - Machine Learning Workflow

Lesson 4 - Performance Metrics

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L 1	Meaning, purpose, scope, stages, applications, and effects of Artificial Intelligence	YES	x	x	x	x
L	Fundamental concepts of Machine Learning and Deep	YES	x	x	x	x

2	Learning					
L 3	Difference between supervised, semi-supervised and unsupervised learning	YES	x	x	x	x
L 4	Machine Learning workflow and how to implement the steps effectively	YES	x	x	x	x
L 5	The role of performance metrics and how to identify their essential methods	YES	x	x	x	x

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities) 5% - Merits
40% - Final Exam

BIBLIOGRAPHY

Bibliography: TBD

FINANCIAL MARKETS

SPECIALIZATION COURSE

CODE: MSF103 - FIXED INCOME SECURITIES AND CREDIT MARKETS

COURSE DETAILS

Course level: Graduate
Course category: Specialization course
Course credits: 4
Course duration: 10 weeks
Total contact hours: 30 (10hrs Lectures + 20hrs Discussion Forums)
Total exam hours: 4
Total study hours: 76 (40hrs Self-directed + 36hrs Research)
Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The goals of this course are to describe important fixed income securities and markets and develop tools for valuing fixed income securities and managing interest rate risk. The course covers traditional bonds and term structure concepts as well as fixed-income derivatives and interest rate modelling.

Course description:

- Introduce important fixed income securities such as bonds, forward rate agreements, futures, swaps, interest rate options (Caps, Floors, and Swap options)
- Develop tools for pricing and hedging the fixed income securities
- Discuss tools for managing interest rate risk
- Introduce term structure models

COURSE OUTCOMES

Course outcomes: On completion of the course, students will be able to:

- Identify and distinguish between the different types of fixed income securities;
- Demonstrate how to apply derivative instruments to hedge the risks and enhance the returns of fixed income securities;
- Make use of analytic tools in bond portfolio management and interest rate risk management;
- Identify various sources of credit risk and apply structural models to estimate the risk Rev 6/2020

COURSE CONTENT

Unit 1: Introduction and Valuation of Fixed Cash Flows

- Valuation
- Yield to maturity
- No arbitrage valuation

Unit 2: The Interest Rate Sensitivity of Instruments with Fixed Cash Flows

- Duration and convexity

Unit 3: Introduction to Variable Cash Flows

- Floating rate notes
- Inverse floaters
- Interest rate Swap

Unit 4: Valuation and Interest Rate Sensitivity of Interest-Rate Dependent Cash Flows

- Valuing cash flows
- Characteristics of Interest rates

Unit 5: Fixed-Income Options

- Callable bonds
- Caps, floors
- Swap options

Unit 6: The Credit Market

- Credit risk
- Credit default swaps

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L 1	Identify and distinguish between the different types of fixed income securities;	NO	X	X	X	X
L 2	Demonstrate how to apply derivative instruments to hedge the risks and enhance the returns of fixed income securities;	YES	X	X	X	X
L 3	Make use of analytic tools in bond portfolio management and interest rate risk management;	YES	X	X	X	X
L 4	Identify various sources of credit risk and apply structural models to estimate the risk	YES	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

Bibliography: Colquitt, J., Credit Risk Management: How to Avoid Lending Disasters and Maximise Earnings, McGraw-Hill

SPECIALIZATION COURSE

CODE: MSF 200 - RISK MANAGEMENT IN FINANCIAL MARKETS

COURSE DETAILS

Course level: Graduate

Course category: Specialization course

Course credits: 4

Course duration: 10 weeks

Total contact hours: 30 (10hrs Lectures + 20hrs Discussion Forums)

Total exam hours: 4

Total study hours: 76 (40hrs Self-directed + 36hrs Research)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The course explains different types of financial crises, why financial intermediaries exist, how to identify, measure and manage risks in financial institutions. The focus is on interest rate risk, market risk, credit risk, and foreign exchange and liquidity risks. The course gives a good understanding of how to run financial institutions, sovereign debt crises and how to regulate markets to avoid crises. This process, known as the risk management process, is becoming an increasingly important tool in the management of a business and personal financial health. An effective and efficient corporate risk management program leads to knowledge and control of costs and an improved bottom line. The risk management process involves identification of risks and associated potential costs, analysis of the causes of risk of financial loss, determination of various strategies to treat risk, selection of strategies appropriate to the goals and objectives of the business, implementation of the selected strategies, management and monitoring of results. Making adjustments, adapting to external and internal forces, and crisis or disaster management are incorporated in the corporate risk management process.

COURSE OBJECTIVES

This course will examine the way in which business and society make an assessment of, control and transfer risk. The goal of this course is to engage students in active discovery of risk management principles. Students will be prepared to function in a business environment, developing an awareness of the challenges, the tools, and the process of designing and implementing a risk management program. This course focuses on the ways in which businesses and society assess, control, and transfer risk.

COURSE OUTCOMES

Upon completion of the course, students will know the main concepts to quantify and manage all kind of risks of financial institutions.

They will:

- Understand the meaning of risk and the ethical considerations •
- Know the role and purpose of risk management.

- Be conversant with the core elements of the risk management process. •
- Understand the different categories of risk.
- Critically be able to assess current trends in risk management.
- Have the ability to evaluate the position of insurance within risk management.
- Understand the key risk management lessons learnt from major loss events

COURSE CONTENT

Unit 1: Understanding the meaning of risk

- Risk and certainty
- Probability theory
- Risk perception
- Ethical Considerations

Unit 2: The Role and purpose of risk management

- Benefits of risk management
- Roles and responsibilities, management, compliance and audit functions

Unit 3: The core elements of the risk management process

- Risk register
- Risk management standards
- Regulatory and corporate governance context=

Unit 4: Categories of risk

- Financial, operational, Insurance strategic and reputation
- Categorising risks
- Cause, events and effects

Unit 5: Current trends in risk management

- Enterprise risk management (ERM)
- Governance Risk and Compliance (GRC)
- Risk aggregation and correlation

Unit 6: Insurance within Risk management

- Alternatives to insurance, risk transfer

Unit 7: Key lessons from major loss events

- Examples,
- Consequences of failure in risk management systems

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L 1	Understand the meaning of risk and the ethical considerations	NO	X	X	X	X
L 2	Know the role and purpose of risk management.	NO	X	X	X	X

L 3	Be conversant with the core elements of the risk management process	YES	X	X	X	X
L 4	Understand the different categories of risk.	YES	X	X	X	X
L 5	Critically be able to assess current trends in risk management.	YES	X	X	X	X
L6	Have the ability to evaluate the position of insurance within risk management.	YES	X	X	X	X
L7	Understand the key risk management lessons learnt from major loss events	NO	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

Bibliography: Measuring and Managing Credit Risk, Servigny & Renault, McGraw Hill

SPECIALIZATION COURSE

CODE: MSF201- FINANCIAL MARKETS AND INSTITUTIONS

COURSE DETAILS

Course level: Graduate

Course category: Specialization course

Course credits: 4

Course duration: 10 weeks

Total contact hours: 30 (10hrs Lectures + 20hrs Discussion Forums)

Total exam hours: 4

Total study hours: 76 (40hrs Self-directed + 36hrs Research)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course gives fundamental knowledge on the structure, function and role of the financial system in light of the complex web of links and interconnections with the banking sector. The course will cover financial intermediaries, financial instruments and the different markets where credit institutions are active players.

COURSE OBJECTIVES

The objective of this course is to provide students with an introduction to the theory and practice of financial markets and institutions.

- To help students to gain a thorough understanding of the workings of financial markets and of financial instruments
- To introduce the students to the management of financial markets and institutions in an international context

COURSE OUTCOMES

On completion of this course, the student will be able to:

- Understand and critically discuss economic principles behind the determination of interest rates.
- Be conversant with what determines the demand and supply of money.
- Communicate thoughts and critically discuss why financial institutions exist. • understand and critically discuss how the prices of equities are determined and different degrees of stock market efficiency.
- Evaluate and distinguish between different types of money and bond markets instruments and how these markets work.

COURSE CONTENT

Unit 1: Fundamentals of Financial Markets

- Interest rates and valuation
- The behaviour of interest rates

Unit 2: Fundamentals of Institutions

- Financial Crisis
- Central Banks and Monetary Policy

Unit 3: Financial Markets

- Money Markets
- Bond Markets
- Stock Markets
- Forex Markets
- Decentralised Markets and Fintech

Unit 4: Financial Institutions

- Banking and Management
- Financial Regulation
- Banking Industry/OTC
- Ethical considerations and governance

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	understand and critically discuss economic principles behind the determination of interest rates..	YES	X	X	X	X
L2	Be conversant with what determines the demand and supply of money.	YES	X	X	X	X
L3	communicate thoughts and critically discuss why financial institutions exist.	YES	X	X	X	X
L4	understand and critically discuss how the prices of equities are determined and different degrees of stock market efficiency.	YES	X	X	X	X
L5	evaluate and distinguish between different types of money and bond markets instruments and how these markets work	YES	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

- 55% - Classwork (review questions, homework, essay, and other related activities)
- 5% - Merits
- 40% - Final Exam

BIBLIOGRAPHY

Bibliography: Financial Markets and Institutions, Saunders, McGraw-Hill

SPECIALIZATION COURSE

CODE: MSF301 - CORPORATE INVESTMENT AND FINANCIAL POLICY

COURSE DETAILS

Course level: Graduate

Course category: Specialization course

Course credits: 4

Course duration: 10 weeks

Total contact hours: 30 (10hrs Lectures + 20hrs Discussion Forums)

Total exam hours: 4

Total study hours: 76 (40hrs Self-directed + 36hrs Research)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course examines techniques and issues in corporate finance with a focus on corporate investment decisions. The course covers several aspects of valuation in a corporate setting: estimation of free cash flow, stock valuation along with recognition of growth opportunities, risk management strategies, estimation of beta using online data, and specifying market scenarios to identify sustainable growth outcomes when evaluating investment proposals. Further topics include merger and acquisition strategies, the examination of options embedded in corporate capital structures, incentive-aligning compensation including executive stock options, and techniques for measuring financial performance including Economic Value Added.

COURSE OBJECTIVES

- To understand the characteristics of various financial policies including investment in assets and capital structure
- To understand the key factors affecting financial performance
- To understand the features of specific forms of domestic and international business finance and identify the circumstances when each is appropriate
- To understand the key variables affecting financial performance, and
- To understand the principles of risk minimisation strategies including exchange rate and interest rate risk management.

COURSE OUTCOMES

On successful completion of this course, students will be able to:

- Apply percent of sales approach to identify external financing needed at a given growth rate, and use formulas and pricing models to measure growth opportunities
- Employ various capital budgeting techniques in decision-making
- Apply option pricing models including real options methods, to evaluate corporate

investments

- Utilise leading techniques in the valuation of merger and acquisition strategies
- Analyse corporate investment decisions in the context of corporate diversification and corporate governance
- Identify & apply ethical principles relevant to the finance profession

COURSE CONTENT

Unit 1: Long term financing

- Bond and stock valuation
- Cost of capital
- Dividend returns

Unit 2: Performance Analysis and Business Planning

- Financial Statement Analysis
- Financial Forecasting
- Business valuation
- Bankruptcy and Restructuring

Unit 3: Long-term investment decision

- Capital budgeting-Evaluation methods
- Capital Budgeting-Cash flow methods
- Capital Budgeting Risk Analysis
- Lease analysis

Unit 4: Working capital policy

- Cash management
- Credit policy/Receivables management
- Hedging Futures and options

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L 1	Apply percent of sales approach to identify external financing needed at a given growth rate, and use formulas and pricing models to measure growth opportunities	YES	X	X	X	X
L 2	Employ various capital budgeting techniques in decision-making	YES	X	X	X	X

L 3	Apply option pricing models including real options methods, to evaluate corporate investments	YES	X	X	X	X
L 4	Utilise leading techniques in the valuation of merger and acquisition strategies	YES	X	X	X	X
L 5	Analyse corporate investment decisions in the context of corporate diversification and corporate governance	YES	X	X	X	X
L6	Identify & apply ethical principles relevant to the finance profession	NO	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

Bibliography: Foundations of Financial Management, Block & Danielsen, McGraw-Hill

FINTECH AND BLOCKCHAIN

SPECIALIZATION COURSE

CODE: BSD101 - INTRODUCTION TO DIGITAL CURRENCIES, ICOs& MARKETS

COURSE DETAILS

Course level: Undergraduate

Course category: Specialization Course

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course was designed for individuals and organizations who want to learn how to navigate investment in cryptocurrencies. Students will learn how to define a currency, analyze the foundations of digital signatures and blockchain technology in cryptocurrency, and accurately assess the risks of cryptocurrency in a modern investment portfolio. By the end of this course, students will have a deep understanding of the realities of Cryptocurrency, the intricacies of Blockchain technology, and an effective strategy for incorporating Cryptocurrency into investment plans.

COURSE OBJECTIVES

The course will survey the theory and principles by which cryptocurrencies operate, practical examples of basic cryptocurrency use, including clients, wallets, transactions. We'll look at the cryptocurrency ecosystem financial services and discuss the existing and potential interaction of cryptocurrencies with the banking, financial, legal and regulatory environment. Lastly, the course will examine in detail how cryptocurrencies can be viewed from an innovation perspective and what opportunities they present for the developing world.

COURSE CONTENT

- Fundamental technology components of blockchain-based digital currencies
- Advanced uses of the blockchain, escrow services, multi-signature transactions, asset registration, attestation and smart contracts applications.
- Alternative blockchains to Bitcoin
- Cryptocurrencies and the monetary and banking systems,
- Regulation and cryptocurrencies
- Developing, financial inclusion and economic development.

COURSE OUTCOMES

At the completion of the course the student will be able to:

- Understand the fundamental technology components of blockchain-based digital currencies, the process of currency issuance, proof-of-work and alternative consensus mechanisms, how they are applied and how the distributed ledger is structured in its core.
- Understand more advanced uses of the blockchain such as escrow services, multi-signature transactions, asset registration, attestation and smart contracts applications.
- Understand alternative blockchains to Bitcoin, such as alt-coins and Ethereum and IOU-based systems like Ripple.
- Understand what parallels and differences cryptocurrencies have with the existing monetary and banking systems, what approaches are the same and what is fundamentally different.
- Understand existing approaches by regulators globally, and the likely frameworks for regulating cryptocurrencies, and their interface with conventional finance, in the future.
- Be able to critically judge on their own, whether cryptocurrencies are disruptive innovations, and what hurdles, bottlenecks or avenues exist towards wider adoption, as well as the potential they present for leapfrogging infrastructure in developing nations and the potential they present for improving financial inclusion and economic development.

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Understand the fundamental technology components of blockchain-based digital currencies, the process of currency issuance, proof-of-work and alternative consensus mechanisms, how they are applied and how the distributed ledger is structured in its core.	YES	X	X	X	X
L2	Understand more advanced uses of the blockchain such as escrow services, multi-signature transactions, asset registration, attestation and smart contracts applications.	NO	X	X	X	X

L3	Understand alternative blockchains to Bitcoin, such as alt-coins and Ethereum and IOU-based systems like Ripple.	YES	X	X	X	X
L4	Understand what parallels and differences cryptocurrencies have with the existing monetary and banking systems, what approaches are the same and what is fundamentally different.	YES	X	X	X	X
L5	Understand existing approaches by regulators globally, and the likely frameworks for regulating cryptocurrencies, and their interface with conventional finance, in the future.	YES	X	X	X	X
L6	Be able to critically judge on their own, whether cryptocurrencies are disruptive	NO	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

Bibliography: TBD

CODE: BSDL102 - CYBER SECURITY RISK REGULATION

COURSE DETAILS

Course level: Undergraduate

Course category: Specialization Course

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

Cybersecurity is a complex, sophisticated, and growing challenge. This course explores cybersecurity topics from a business context in alignment with prevailing standards and guidelines. The major domains of security are explored from organizational management, risk, and technical perspectives. Critical security goals of Confidentiality, Integrity, and Availability are discussed. The emerging threat landscape is examined, including attacker motives and tactics. The concept of system vulnerabilities is explained along with a review of enterprise techniques for vulnerability management. The security challenge is presented from the enterprise perspective, with attention to the intersection of individual, organizational, and technical cybersecurity concerns.

COURSE OBJECTIVES

1. To introduce the fundamental concepts of information and cybersecurity in the business enterprise.
2. To explore the threats and vulnerabilities associated with business systems.
3. To understand the core domains of security as presented in widely accepted cybersecurity frameworks.
4. To explain critical cybersecurity technical components as related to the respective security domains.
5. To introduce cyber risk management concepts.
6. To explore the challenges of communicating cybersecurity concepts to business executives.

COURSE CONTENT

- Concepts of cybersecurity and technical risks
- Security goals in information systems
- Cyber risk in a systems environment.
- Cyber security threats

- Common security frameworks to treat cyber risks

COURSE OUTCOMES

At the completion of the course:

1. Students will be able to communicate concepts of cybersecurity and technical risks to management, executives, and other non-technical audiences.
2. Students will recognize common security goals in information systems.
3. Students will explain the characteristics of information or cyber risk in a systems environment.
4. Students will understand the prevailing information and cybersecurity threats.
5. Students will be able to apply common security frameworks to treat cyber risks

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Students will be able to communicate concepts of cybersecurity and technical risks to management, executives, and other non-technical audiences.	NO	X	X		
L2	Students will recognize common security goals in information systems.	YES	X	X	X	X
L3	Students will explain the characteristics of information or cyber risk in a systems environment.	YES	X	X	X	X
L4	Students will understand the prevailing information and cyber security threats.	YES	X	X	X	X
L5	Students will be able to apply common security frameworks to treat cyber risks	YES	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)
5% - Merits
40% - Final Exam

BIBLIOGRAPHY

Bibliography: TBD

CODE: BSDL200 - BLOCKCHAIN TECHNOLOGY FUNDAMENTALS

COURSE DETAILS

Course level: Undergraduate

Course category: Specialization Course

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

The course will cover the most important blockchain concepts, the philosophy of decentralization behind blockchain, and the main discussions within the blockchain environment.

COURSE OBJECTIVES

The objectives of the Blockchain Fundamentals course consists of knowledge and practical skills components. We will work according to a 'Flipped Learning' methodology. This means that we will create a learning environment in which you, together with your peers, can actively develop your knowledge and skills. You will be put in charge of your own learning progress.

COURSE CONTENT

- History, technology, and applications of Blockchain
- Blockchain applications and concepts
- Creating a Crypto token and initial Coin Offering
- cryptocurrency exchanges and wallets
- Blockchain startups

COURSE OUTCOMES

At the completion of the course the student will be able to:

1. The student will be able to comfortably discuss and describe the history,

technology, and applications of Blockchain

2. The student will be able to assess Blockchain applications in a structured manner
3. The student will be able to present Blockchain concepts clearly and persuasively
4. The student will be able to create their own Crypto token
5. The student will be able to create their own Initial Coin Offering
6. The student will be able to use cryptocurrency exchanges and wallets safely
7. The student will gain familiarity with investing in Blockchain startups

Learning Outcomes: On successful completion of the course the candidate will be able to:	Assessed in this module?	A	B	C	D
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L1	The student will be able to comfortably discuss and describe the history, technology, and applications ofBlockchain	NO	X	X		
L2	The student will be able to assess Blockchain applications in a structured manner	YES	X	X	X	X
L3	The student will be able to present Blockchain concepts clearly and persuasively	YES	X	X	X	X
L4	The student will be able to create their own Crypto tokenand, gain familiarity with investing in Blockchain startups	YES	X	X	X	X
L5	The student will be able to create their own Initial CoinOffering	YES	X	X	X	X
L6	The student will be able to use cryptocurrency exchanges and wallets safely	NO	X	X		

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

Bibliography: Foundations of Financial Management, Block & Danielsen, McGraw-Hill

SPECIALIZATION COURSE

CODE: BSDL300 -PRINCIPLES IN INNOVATION DISRUPTION

COURSE DETAILS

Course level: Undergraduate

Course category: Specialization Course

Course credits: 10

Course duration: 13 weeks

Total contact hours: 38 (13hrs Lectures + 25hrs Discussion Forum)

Total exam hours: 2

Total study hours: 230 (117hrs self-directed + 9hrs Specific assignments + 4hrs Research + 100 Preparation)

Language of instruction: English

Pre-requisites	N/A
Co-requisites	N/A
Prohibited Combinations	N/A

COURSE OVERVIEW

This course will examine how innovation-driven by emerging technologies is transforming the way we do business and disrupting well-established industries. The driver for the current and imminent wave of disruption is the emergence of technological breakthroughs that can be leveraged by innovative entrepreneurs and forward-thinking companies. Though fast and agile processes, creative innovators are indeed able to appropriate these new technologies and adapt them to relevant use cases that could potentially disintermediate traditional lines of business, or deliver previously unthought-of business models. Some of these technologies are embodied in current buzzwords such as: Big Data, Machine Learning, Artificial Intelligence, Blockchain, Synthetic Biology, Digital Fabrication, Industry 4.0, Internet of Things. Harnessing these emerging technologies and creating innovative business models around them is a process that requires a good knowledge of entrepreneurial principles such as Lean Start-up and Rapid Prototyping, but also a fundamental understanding of the principles behind the technologies in question. For this reason, this course places itself at the intersection between business and technology and aims at strengthening the students' holistic understanding of the interplay between these two domains.

COURSE OBJECTIVES

The objectives of this course are twofold: First, to introduce principles of disruptive innovation in entrepreneurial and economic settings. Second, to focus on disruptive innovation in the sphere of blockchain technology and discuss the potential disruption within various industries.

COURSE CONTENT

- Fundamentals of disruptive technologies
- Advances in disruptive technologies (Start-ups, Industry players and consortia, Software providers, Government and regulators, etc.),
- Business use-cases
- New business models and evolving infrastructures
- Challenges in entrepreneurial activities, cross-industry collaboration and engagement
- Issues and dilemmas in disruptive technologies, ethics, privacy, sustainability, and legislation

COURSE OUTCOMES

At the completion of the course the student will be able to have:

- Clear and critical grasp of the fundamentals of the covered disruptive technologies, their promise as well as their current limitations
- Overview over the ecosystem of stakeholders pushing advances in disruptive technologies forward (Start-ups, Industry players and consortia, Software providers, Government and regulators, etc.), and ability to individually map out the ecosystem for a given technology.
- Knowledge of pertinent business use-cases related to specific technologies, and the ability to assess these use-cases
- Ability to conceptualize and understand new business models based on collaborative, open, and continuously evolving infrastructures
- Awareness and understanding of challenges involved in engaging in entrepreneurial activities in the domain of technologies that are at an early maturity stage
- Awareness of the importance of cross-industry collaboration and engagement in the process of ongoing standards-building for new technologies.
- Understanding of issues and dilemmas in the development of disruptive technologies related to ethics, privacy, sustainability, and legislation

Learning Outcomes: On successful completion of the course the candidate will be able to:		Assessed in this module?	A	B	C	D
L1	Clear and critical grasp of the fundamentals of the covered disruptive technologies, their promise as well as their current limitations	NO	X	X		
L2	Overview over the ecosystem of stakeholders pushing advances in disruptive technologies forward (Start-ups, Industryplayers and consortia, Software providers, Government and regulators, etc.), and ability to individually map out the ecosystem for a given technology.	YES	X	X	X	X
L3	Knowledge of pertinent business use-cases related to specific technologies, and the ability to assess these use-cases	NO	X	X		
L4	Awareness of the importance of cross-industry collaboration and engagement in the process of ongoing standards-building for new technologies.	YES	X	X	X	X

L5	Ability to conceptualize and understand new business models based on collaborative, open, and continuously evolving infrastructures	YES	X	X	X	X
L6	Understanding of issues and dilemmas in the development of disruptive technologies related to ethics, privacy, sustainability, and legislation	NO	X	X		
L7	Awareness and understanding of challenges involved in engaging in entrepreneurial activities in the domain of technologies that are at an early maturity stage	YES	X	X	X	X

A – Knowledge and Understanding B – Intellectual Skills C – Practical Skills D – Transferable Skills

Assessments.

55% - Classwork (review questions, homework, essay, and other related activities)

5% - Merits

40% - Final Exam

BIBLIOGRAPHY

Bibliography: TBD

