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## **FACULTY OF INFORMATION TECHNOLOGY AND COMMUNICATION STUDIES**

### DEPARTMENT INFORMATION TECHNOLOGY STUDIES

#### **UNDERGRADUATE COURSE**

#### **OUTLINE (SYLLABUS)**

<b>A. COURSE DETAILS:</b>					
<b>Course Code</b>	<b>BCPC201</b>	<b>Credit Hours</b>	<b>3</b>	<b>Level</b>	<b>200</b>
<b>Course Title</b>	<b>INFORMATION SYSTEMS</b>				
<b>Academic Year</b>	<b>2024/2025</b>	<b>Semester</b>	<b>FIRST</b>		
<b>Programmes</b>	Bachelor of Business Administration, Bachelor of Science (B.Sc.) Accounting, Bachelor of Science (B.Sc.) Banking and Finance, Bachelor of Science (B.Sc.) Information Technology Management, Bachelor of Science (BSc.) Accounting and Finance, Bachelor of Science (BSc.) Actuarial Science, Bachelor of Science (BSc.) Business Economics, Bachelor of Science (BSc.) Marketing				

<b>B. COURSE INSTRUCTOR(S) DETAILS:</b>	
<b>Name: Course Lead</b>	<b>ALBERT AKANLISIKUM AKANFERI</b>
<b>Office Location</b>	<b>REV. FR. J. J. MARTEY BLOCK, ROOM FFS06</b>
<b>Mobile/Office Line</b>	<b>0547890296</b>
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<b>Email - Head of Department</b>	

<b>Course Lecturer(s)</b>	Dr. Amanda Quist Okronipa, Dr. Joshua Ofoeda, Mr. Lawrence Aziale, Mr. Alex Ansah, Mr. Adnan O. Lamptey, Dr. Harriet Lamptey, Mrs. Maud Ashong Elliot, Ms. Yvonne Nketia Ms. Augustina Dee Agor, Mr. Emmanuel Dwamena Acheampong and Mr. Solomon Kutiamé
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### C. COURSE DESCRIPTION

Successful organizations must deal effectively with intense global competition, a heightened focus on the bottom line, an increasingly rapid pace of change, and a close scrutiny of their ethical practices. For an organization to thrive in today's business environment, managers and functional specialists in all areas - accounting, finance, marketing, production and operations management, and human resources - must perform their jobs effectively, efficiently, and ethically. Information technology provides the tools that enable all organizational personnel to solve increasingly complex problems and to capitalize on opportunities that contribute to the success of the organization.

Information Systems is a foundation course for the bachelor degree programmes that overviews the critical aspects of Information Systems needed in all businesses in the 21st century. While primarily a business course, there will be consideration of the technical aspects necessary to be able to liaise meaningfully with IT departments and personnel. The predominant focus of the course will be the ability to leverage technology for business purposes. The course includes fundamental information management skills (eg: Spreadsheets

& Databases) and focuses on the use of information to make business decisions and solve business problems. It also includes information on Information Systems for commerce and collaboration; business intelligence and Enterprise Information Systems; security, privacy and ethics for Information Systems. The teaching and learning strategies include blended teaching and learning, case studies, group project work and class discussion of video clips.

#### ***PREREQUISITE (IF ANY)***

This course is designed for degree course stated above. It assumes the reader has completed a first course in Introduction to Information Technology.

### D. COURSE OBJECTIVES

#### **The course will cover (or will teach students):**

1. The different types of computer hardware in terms of current storage, peripherals, processing and security
2. The different types of software applications, including issues of security, licensing and ethics
3. Introduction to the concepts and terminology, components, uses, security and ethics of networks and communication
4. The various types of information systems, their users, uses and relevance in the business environment
5. Identify information systems security issues within the business work environment
6. Introduction to various information systems design methodologies

7. Introduction to the concept of globalisation and the digital divide and their effects
8. Issues of ethical and legal implications of computerised information systems in the business environment
9. Developments in current and future trends in information systems

## **E. COURSE LEARNING OUTCOMES**

**This course will enable students to:**

1. Identify current hardware, their storage, peripherals and processing and matching them to business requirements
2. Identify different types of software relating them to business use
3. Explain various networking and communication concepts and terminologies, and demonstrate understanding issues of their uses and security concerns
4. Categorised different types of information systems according to their uses to meet organisational needs
5. Analyse information systems security needs of small to medium firms, and implement personal digital security
6. Apply concepts of system design and identify systems design security issues
7. Justify the role of information systems in globalisation and the digital divide
8. Assess the ethical and legal implication of information systems on business firms
9. Determine the role and direction of current and future trends in information systems

## **F. COURSE CONTENT IN A WEEKLY FORMAT**

The course outline is prepared on weekly format, describing the topics to be thought in each week

<b>WEEKS</b>	<b>COURSE CONTENT</b>
<b>WEEK 1</b>	<b>WHAT IS AN INFORMATION SYSTEM?</b> <ul style="list-style-type: none"> <li>a. Major components of Information Systems</li> <li>b. Basic History of Information Systems</li> <li>c. Role of Information Systems</li> </ul>
<b>WEEK 2</b>	<b>THE SOFTWARE AND HARDWARE COMPONENTS OF INFORMATION SYSTEMS</b> <ul style="list-style-type: none"> <li>a. Current storage (measurements, types)</li> <li>b. Peripheral components Processing</li> <li>c. Security (physical components, locks)</li> <li>d. Ethics (responsible disposal)</li> </ul>
<b>WEEK 3</b>	<b>NETWORKING AND COMMUNICATION</b> <ul style="list-style-type: none"> <li>a. Concepts and terminology</li> <li>b. Components Uses of networks</li> <li>c. Security (passwords, firewalls, configurations)</li> <li>d. Ethics (hacking, approved use)</li> </ul>
<b>WEEK 4</b>	<b>INFORMATION SYSTEMS FOR BUSINESS AND DEVELOPMENT</b> <ul style="list-style-type: none"> <li>a. Information systems at different organizational levels</li> <li>b. Transaction processing system (TPS)</li> <li>c. Management information system (MIS)</li> <li>d. Executive Information system (EIS)Decision support system (DSS)</li> <li>e. Knowledge work Systems (KWS)</li> <li>f. Office Automation Systems (OAS)</li> <li>g. Expert systems (ES)</li> </ul>

<b>WEEK 5</b>	<b>ARTIFICIAL INTELLIGENCE IN BUSINESS AND ACADEMIA, &amp; INDUSTRIAL INTERNET OF THINGS (IIOT)</b> <ul style="list-style-type: none"> <li>a. Introduction to AI and IIoT</li> <li>b. AI and IIoT Applications in Business</li> <li>c. AI and Data Analytics</li> <li>d. The role of AI in data analytics for business decision-making</li> <li>e. Machine learning algorithms and data-driven insights</li> </ul>
<b>WEEK 6</b>	<b>INTRODUCTION TO GOOGLE FORMS FOUNDATIONS &amp; CORE APPLICATIONS</b> <ul style="list-style-type: none"> <li>a. Introduction &amp; Context</li> <li>b. Hands-On Form Creation</li> <li>c. Advanced Features</li> <li>d. Case Scenarios &amp; Group Work</li> </ul>
<b>WEEK 7</b>	<b>GOOGLE FORM THIRD-PARTY ADD-ONS &amp; AUTOMATION</b> <ul style="list-style-type: none"> <li>a. Add-on Ecosystem Overview</li> <li>b. Hands-On Integration</li> <li>c. Automation Challenge</li> </ul>
<b>WEEK 8</b>	MID-SEMESTER EXAMINATIONS MID-SEMESTER EXAMINATIONS COVERING CHAPTERS 1 TO 7
<b>WEEK 9</b>	<b>INTRODUCTION TO HTML BASICS, CSS &amp; PAGE DESIGN</b> <ul style="list-style-type: none"> <li>a. What is programming?</li> <li>b. “Hello World” with HTML/JS.</li> <li>c. Build a simple webpage.</li> <li>d. Style their page (colours, fonts, layouts).</li> <li>e. Convert webpage into a small CV/business profile site</li> </ul>
<b>WEEK 10</b>	<b>JAVASCRIPT BASICS &amp; FORMS &amp; INPUT VALIDATION</b> <ul style="list-style-type: none"> <li>a. Variables, operators, functions.</li> <li>b. Add an interactive button or calculator.</li> <li>c. Create a contact form,</li> <li>d. validate email/phone inputs.</li> </ul>
<b>WEEK 11</b>	<b>DOM MANIPULATION &amp; INTERACTIVITY</b> <ul style="list-style-type: none"> <li>a. Interactive quiz,</li> <li>b. hide/show sections,</li> <li>c. small calculator.</li> </ul>
<b>WEEK 12</b>	<b>MINI-PROJECT &amp; DEMO</b> <ul style="list-style-type: none"> <li>a. Build and present a small profile/business site with interactivity.</li> </ul>

#### G. COURSE TOPICS CREDIT HOURS ACTIVITIES AND READINGS IN A WEEKLY FORMAT

WEEK	TOPIC	CREDIT HRS	ACTIVITIES	READINGS
<b>WEEK 1</b>	WHAT IS INFORMATION SYSTEM?	3	Lecture, Class Discussion	(Bourgeois, D. T. 2019) Chapter 1
<b>WEEK 2</b>	THE SOFTWARE AND HARDWARE  COMPONENTS OF INFORMATION SYSTEMS	3	Lecture, Class Discussion	(Bourgeois, D. T. 2019) Chapter 4

<b>WEEK 3</b>	NETWORKING AND COMMUNICATION	3	Lecture, Class Discussion, Quiz	(Bourgeois, D. T. 2019) Chapter 5
<b>WEEK 4</b>	INFORMATION SYSTEMS FOR BUSINESS AND DEVELOPMENT	3	Research, Class Discussion, Quiz	Lecture Notes
<b>WEEK 5</b>	ARTIFICIAL INTELLIGENCE IN BUSINESS AND ACADEMIA, & INDUSTRIAL INTERNET OF THINGS (IIOT)	3	Research, Class Discussion, Quiz	Lecture Notes
<b>WEEK 6</b>	MID-SEMESTER EXAMINATIONS	2	TEST	N/A
<b>WEEK 7</b>	INTRODUCTION TO PROGRAMMING & HTML BASICS	3	PRACTICAL SESSIONS	Lecture Notes
<b>WEEK 8</b>	CSS & PAGE DESIGN	3	PRACTICAL SESSIONS	Lecture Notes
<b>WEEK 9</b>	JAVASCRIPT BASICS	3	PRACTICAL SESSIONS	Lecture Notes
<b>WEEK 10</b>	FORMS & INPUT VALIDATION	3	PRACTICAL SESSIONS	Lecture Notes
<b>WEEK 11</b>	DOM MANIPULATION & INTERACTIVITY	3	PRACTICAL SESSIONS	Lecture Notes
<b>WEEK 12</b>	MINI-PROJECT & DEMO	3	PRACTICAL SESSIONS	Lecture Notes

## H. COURSE ASSIGNMENT

*The course will be assigned using the following methods*

**Presentations**

**Group presentation, Class assignment, Homework, Quizzes, Online Quizzes**

## I. COURSE INSTRUCTIONS

*The course will be delivered using the following course instruction methods*

STUDENT LED LEARNING where students working together to support each other,

BLENDED LEARNING where traditional classroom teaching is combined with online learning and independent study.,

PROBLEM BASED LEARNING a student-centered approach, where students learn about a subject through exploring the subject and solving problems,

WORK BASED LEARNING where students are provided the opportunity to learn through real-life work experiences.,

DISCUSSION METHODS, BUZZ GROUP DISCUSSION, a method in which small groups of 2-3 participants are created and they all discuss a specific question or issue in order to come up with many ideas in a short time. Lecture and Video discussions

## J. COURSE ASSESSMENT

*The course will be assessed using FORMATIVE AND SUMMATIVE ASSESSMENT*

## K. FORMATIVE ASSESSMENT

*Formative assessment or assessment for learning involves a continuous way of checks and balances in the teaching learning processes (Jeri, 2018).*

*The method allows Lecturers to check their learners' progress as well as the effectiveness of their own practice, thus allowing for self-assessment of the student.*

The following formative assessment methods will be used

**ANALYSIS OF STUDENTS WORK.** In this, the lecturer assigns, collect and examine student work continuously to assess student learning and to revise and improve teaching,

**QUESTIONING STRATEGIES TO ENGAGE ALL LEARNERS.** A strategy which ensures that everyone has the opportunity to participate in discussions when a question is posed

**FACE-TO-FACE SIT-DOWN EXAMINATION**

## LEVERAGING OF TECHNOLOGY

Learning Management System-Moodle. Devices such as laptops, tablets, smartphones, and gain competencies in excel, word, PowerPoint, etc

## L. SUMMATIVE ASSESSMENT

### EXAMINATION STRUCTURE

**The structure of examination is as shown below**

	<b>INTERIM EXAMINATION</b>	<b>FINAL EXAMINATION</b>
<b>Number of Questions</b>	<b>60</b>	<b>6</b>
<b>Allocated Hrs.</b>	<b>2</b>	<b>2.5</b>
<b>Compulsory Questions</b>	<b>All Compulsory</b>	<b>Part Compulsory</b>

**Total marks are broken down as follows**

	<b>%</b>
<b>Final Examination</b>	<b>60%</b>
<b>Interim Examination</b>	<b>20%</b>
<b>Assignments</b>	<b>15%</b>
<b>Class attendance</b>	<b>5%</b>
<b>TOTAL</b>	<b>100%</b>

### Interim Examination - Additional Information

STUDENTS ARE TO BRING LAPTOPS, TABLETS, OR SMART PHONES FOR TESTS

### Final Examination - Additional Information

NONE

**Assignments - Additional Information**  
THREE ONLINE TESTS IN MULTIPLE CHOICE QUESTION FORMAT

**Class Attendance - Additional Information**  
CLASS ATTENDANCE IS COMPULSORY AND ATTRACTS 5 MARKS

**M. READING LISTS/REFERENCES**

**BASIC TEXTS**

1. Bourgeous, D. T., Mortati, J, Wang, S, Smith J. (2019), Information Systems for Business and Beyond, Pressbooks
2. Chesney, T., Reynolds, G., & Stair, R. (2012) Fundamentals of Business Information Systems. (2nd edition). Cengage Learning.

**SUPPLEMENTARY TEXTS**

1. Oz, E. (2008) Management Information Systems (6th ed). Course Technology.
2. Weske, M. (2010) Business Process Management: Concepts, Languages, Architectures (1st edition.).

**EMPLOYABILITY SKILLS**

*At the end of the course the students will be equipped with the following employability skills to this extent On a scale of 1-5. 1 is the lowest 5 is the highest.*

SKILLS	SCALE
Ability to work independently	4
Ability to work under pressure	5
Analytical skills	4
Communication skills/Interpersonal skills	5
Computer skills	4
Creativity/Creative thinking	5
Decision making	4
Entrepreneurial Skills	5
Leadership skills	4
Negotiating Skills	5
Organisational skills	4
Problem Solving Skills	5
Team work and team orientation	4
Time management	5
Writing Skills	4

## **REACH THE FOLLOWING IF YOU HAVE ANY FEEDBACK OR COMPLAINT**

<b>POSITIONS</b>	<b>EMAIL</b>
<b>Lead Lecturer</b>	albert.akanferi@upsamail.edu.gh
<b>Head of Department</b>	millicent.agangiba@upsamail.edu.gh
<b>Director - Quality Assurance</b>	director.qualityassurance@upsamail.edu.gh

### **Academic Dishonesty**

Please remember Academic Dishonesty:

- Harms the good name of the University
- Affects your personal integrity
- Is a barrier to knowledge and attitude you would have acquired
- Decrease your value in the eyes of people
- Have a heavy penalty

*DO NOT CHEAT OR CONDONE CHEATING*