**MAKERERE** **UNIVERSITY** **BUSINESS** **SCHOOL**

**FACULTY OF COMPUTING AND INFORMATICS**

**DEPARTMENT OF APPLIED COMPUTING & IT**

**Academic Year 2024/2025 Semester I**

**BACHELOR OF ARTS IN ECONOMICS**

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| **Course Name:** | **Intermediary ICT** |
| **Course Code:** | **ECB2103** |
| **Credit Units:** | **5** |
| **Total Contact Hrs:** | **75** |

**Course Description:**

This course unit will provide you with the essential skills to take your place as a knowledge worker in the information technology industry. It will cover computing discipline such as data management, data communications and business systems development and information security. It will also provide students with practical skills in developing various business and financial models using Ms Excel.

**Course Objectives:**

1. To equip the students with theoretical knowledge of Information System types
2. To Expose students to the business value of implementing data resource management
3. To enable students understand database management approach to managing the data resources of a business,
4. Equip students with relevant practical computer based competences in business and corporate world.

**Learning Outcomes:**

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

1. Understand the information systems activities, types, components and architectures.
2. Explain the business value of implementing data resource management processes and technologies in an organization.
3. Outline the advantages of a database management approach to managing the data resources of a business, compared to a file processing approach.
4. Explain how database management software helps business professionals and supports the operations and management of a business.
5. Identify several major developments and trends in the industries, technologies, and business applications of telecommunications and Internet technologies.
6. Understand the security and ethical challenges of ICT.
7. Be able to develop various business and financial models using Ms excel

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| **Topic** | **Practicals** | **Duration** | |
| Information and Systems theory   * Data, information, knowledge and wisdom * Transforming / processing data into information * What is the value of information? * Storing and organizing information * Analysing information for decision making * Importance of system theory Types of Systems. * Information systems and its components * Information systems infrastructure / architecture | Introduction To Excel, Entering data and navigating a Workbook   * Opening a workbook * Renaming, insertion, deletion and positioning of worksheets * Inserting and deleting of columns, rows, cells and cell addressing * Review of Excel Ribbon tabs-Home, Insert,   Page layouts, formulas, data, review and View   * Use of the Quick access toolbar * Use of the Office button * Saving of a workbook in a folder and compatible model * Auto fill, direct entry and importing data * Entering text and numerical data * Inserting columns and rows * Selecting Cells * Selecting Non adjacent cells * Auto select * Go to | 4 weeks  (20 Hours) | |
|  | Printer setup, page setup, setting of margins, headers and footers and print preview |  |
| Data management   * Fundamental data concepts.   Approaches to Data management Traditional file processing.   * Challenges of traditional file processing. * Database approach to data management * Data hierarchy. * Database management systems Types of databases. * Data warehouse and data mining and their uses. * Determinants for the choice of database approach. * Pros and cons of database management approach. * Database trends, security and quality | Formatting and editing data in a Worksheet, &  formulas   * Inserting comments * Number * Font * Alignment * Boarders and Fill * Protection * Copying, moving and pasting * Cell referencing and fixing * Entering Formulas * Using Functions (Auto sum, average, count, countif, max, min, and mode, median, changing cases….) * Sorting in Ascending and descending order * Customized sorting * Subtotals for different columns with Summaries * Auto filtering and customized filtering * Using the Chart wizard * Standard and custom types * Format chart areas * Selecting chart location | 4 weeks  (20 Hours) |
| Developing Solutions/systems for information Management   * System development methodology and approaches. * End users and information systems (IS) specialists. * Steps of the information systems development cycle. * Systems development approaches. * Identify the activities involved in the implementation of new information systems. * Compare and contrast the four basic system conversion strategies. * End user computing & development * Information systems acquisition (inhouse development vs.   outsourcing) | Logical functions   * Introduction of the IF statement * Inbuilt and typed IF statements * Simple IF * Nested IF * General functions * Applications of the IF function-Grading, Tax (URA PAYE new and old) | 4 weeks  20 Hours |

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| Managing information systems development. | |  |  |
| Information Systems Security and Ethical Challenges /Aspects   * Introduction to information security * Security requirements * Ethical issues in how the use of information technologies. * Security threats, management strategies and defences. | Financial functions   * Financial Modelling * PV, FV, NPV, IRR * Loan Amortization * Depreciation models (SLN,DB,DDB SYD   etc) | 1 week  (5 Hours) |

**Mode of Delivery**

Lecture method, Discussion, Practical and Case studies

**Percentage distribution of marks between coursework and end of semester examinations.**

Course work 30%

Final Examination 70%

Total 100%

**Reading List**

* 1. Groenewald, R. (2018, August 21). *Why Teach Digital Citizenship in 2018*. Retrieved from www.fractuslearning.com: [https://www.fractuslearning.com/why-teachdigitalcitizenship-in-2018/](https://www.fractuslearning.com/why-teach-digital-citizenship-in-2018/)
  2. ITU. (2018). *Fast-forward progress: Leveraging tech to achieve the global goals.* Geneva: ITU.
  3. Milan, Milenkovic .(2013).*Operating Systems, Concepts and Design.* (2nd ed.). Tata McGraw Hill.
  4. Nyeko and Moya. (2013). *ICT in Business* Second Edition
  5. Paul, C. M., Spires, H., & Kerkhoff, S. (2017). Digital Literacy for the 21st Century. *Encyclopedia ofInformation Science and Technology, Fourth*, 2235-2242. Retrieved February 25, 2019, from [https://www.researchgate.net/publication/318508429\_Digital\_Literacy\_for\_the\_21st\_Cen tury](https://www.researchgate.net/publication/318508429_Digital_Literacy_for_the_21st_Century)
  6. Republic of Uganda., n.d., 'Uganda Vision 2040'. Available at: http://npa.ug/wp- content/themes/npatheme/documents/vision2040.pdf, accessed 28 Jan 2019

7. TRUEX, L. (2016, November 22). *How Cloud Computing Can Help Your Home Business*. Retrieved from www.thebalancesmb.com: [https://www.thebalancesmb.com/how-cloudcomputing-can-help-your-home-business1794162.](https://www.thebalancesmb.com/how-cloud-computing-can-help-your-home-business-1794162)