

BIT 1104 Information Technology I (3 CU)

- (a) **Course Description:** This course is intended to be at the introductory level in a curriculum and to provide foundation skills for subsequent courses. Together with Information Technology II it provides an overview of the discipline of IT, and begins to instill an IT mindset. The goal is to help students understand the diverse contexts in which IT is used and the challenges inherent in the diffusion of innovative technology. The topics covered in this course include: User Centeredness and Advocacy; Information Assurance and Security; IT Systems Model; Management of Complexity (Abstraction, Modeling, best Practices, Patterns, Standards, Use of Appropriate Tools); Adaptability; Professionalism (Life-long Learning, Professional Development, Ethics, Responsibility, Interpersonal Skills, Data versus Information).

(b) **Aims:** The course aims to:

- Give the students main guidelines for the future study of IT-related courses
- Develop their knowledge and understanding of
 - the components of IT systems and their interrelationships;
 - the nature of complexity occurring in IT systems;
 - tools and methods used in IT for managing complexity;
 - the role of the IT professional as the user advocate;
 - the necessity of life-long learning and continued professional development for an IT professional;
 - the importance of adaptability and interpersonal skills to an IT professional;
 - the difference between data and information, and their interrelationship;
 - the importance of data and information in IT;
 - the importance of the mastery of information and communication technologies to an IT professional
- Form initial skills of
 - identification of the components of IT systems and their interrelationships;
 - managing complexity through relevant tools and methods;
 - choosing valid techniques and methodologies for analyzing and designing different kind of information technologies;
 - advocacy of users' interests;
 - Interpersonal communication.

(c) **Learning Outcomes:** On completion of this course unit, the students will be able to:

- Acquire main guidelines for the future study of IT-related courses
- To develop knowledge and understanding of the components of IT systems and their interrelationships; the nature of complexity occurring in IT systems; tools and methods used in IT for managing complexity; the role of the IT professional as the user advocate; the necessity of life-long learning and continued professional development for an IT professional; the importance of adaptability and interpersonal skills to an IT professional; the difference between data and information, and their interrelationship, the importance of data and information in IT; the importance of the mastery of information and communication technologies to an IT professional
- Form initial skills of identification of the components of IT systems and their interrelationships; managing complexity through relevant tools and methods; choosing

valid techniques and methodologies for analyzing and designing different kind of information technologies; advocacy of users' interests; interpersonal communication.

(d) Teaching and learning pattern: The assessment will be in form of tests and assignments (40% - Test I: 15%, Test II: 15%, Assignment: 10%) and final written exam (60%)

(e) Indicative content:

- User Centeredness and Advocacy
- Information Assurance and Security
- IT Systems Model
- Management of Complexity
 - Abstraction
 - Modeling
 - Best Practices
 - Patterns
 - Standards
 - Use of Appropriate Tools
- Adaptability
- Professionalism
 - Life-long Learning
 - Professional Development
 - Ethics
 - Responsibility
 - Interpersonal Skills
 - Data versus Information

(f) Assessment method: The assessment will be in form of tests and assignments (40% - Test I: 15%, Test II: 15%, Assignment: 10%) and final written exam (60%)

(g) Reference Books:

- (i) Information Technology: Principles, Practices, Opportunities by Senn, J.A., Pearson Education, 2003.
- (ii) Information Technology: Inside and Outside by Cyganski, D., Orr, J. A., Prentice Hall, 2001
- (iii) Introduction to Information Technology by Turban, E., Rainer, K.R., Porter R.E., Wiley and Sons Inc., 2007
- (iv) The Executive's Guide to Information Technology by Baschab, J., Piot J., Garr, N.G.,

Wiley and Sons Inc., 2007

- (v) The Essential Guide to Computing: The Story of Information Technology by Walters, E.G., Prentice Hall Inc., 2000
- (vi) Fluency with Information Technology: Skills, Concepts, and Capabilities (3rd Edition) by Snyder, L., Addison-Wesley, 2007
- (vii) Using Information Technology by Williams, B. and Sawyer, S Career, Education, 2009