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Addis Ababa University
College of Natural Sciences
School of Information Science

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Course Title	**Introduction to Computer and Information Systems**			
Module Title	Basics of Information Systems			
Module Code	INSY-M1011		Course Code: INSY1011	
CP/ECTS	7			
Study Hour	Lecture: 48	Laboratory: 48	Tutorial: 0	Home Study: 93
Instructor Information	Name: *Tsegaye Berhanu*			
	Office Phone: +251-111-229191 Email: tsegaye.berhanu@aau.edu.et			
	Office Location: Eshetu Chole Building, 3rd floor, Room #319			
	Consultation Hour:			
Course Information	Academic Year: 2017/2018			
	Semester: I			
	Mode of Delivery: Parallel			
Course Description	An overview of computer and Information Systems (IS). It includes: the development of computers, data representation, logical organization of a computer system, computer software, computer arithmetic, computer system architecture, internet, computer network and communication, problem solving using computers, operating systems, windows environment and office application. Theoretical and conceptual foundations of Information Systems (IS); organizational and technological aspects of IS; development of IS; overview of database design and management; telecommunications and networks; applications of IS in business: TPS, MIS, DSS, electronic commerce, AI, expert systems, virtual reality and other specialized systems; management of IS resources; overview of software quality and project management; legal, security, social, and ethical issues in IS; contemporary trends in IS			
Learning Outcomes	Upon the completion of this course, a student will be able to: ➢ Use computes as a prime tool in solving common problems with in various facets of our society ➢ Explain the major components, functions and principles of computes ➢ Explain historical development of computer with their characteristics ➢ Describe data representation techniques and computer arithmetic ➢ Define basics terms associated with communication and networking. ➢ Make use of the basic office application ➢ Describe basic concepts in internet ➢ Understand theoretical and conceptual foundations of IS. ➢ Understand the importance and relevance of IS and technological aspects of IS ➢ Understand IS and database development methodologies. ➢ Know applications of IS.			

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Course Content

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Topics	Duration	References

Chapter 1: Overview of Computers and their Historical development
    1.1. Overview of Computers
    1.2. History of computers
    1.3. Generations of computers
    1.4. Characteristics of computers
    1.5. Applications of computers
    1.6. Types of computers
	1 -2	**Text: Chapter**

Chapter 2: Computer Systems
    2.1. Hardware
        2.1.1.   The processing unit (CPU)
        2.1.2.   Input unit
        2.1.3.   Output unit
        2.1.4.   Memory Unit
            2.1.4.1. Data representation and Numbering Systems
    2.2. Software
        2.2.1.   System software
        2.2.2.   Application software
    2.3. Database
	3-4	**Text: Chapter**

Chapter 3: Computer Networks
    3.1. Data transmission
    3.2. Types of Network
    3.3. Network topology
    3.4. Internet and the World Wide Web		

Chapter 4: Fundamentals of Information Systems
    4.1. Overview of IS
    4.2. Data vs. Information
    4.3. IS building blocks
    4.4. IS development phases
    4.5. IS development methodologies
	9-10	Text: Chapter

Chapter 5: Major Issues in Computer and IS
    5.1. Impact of IS
    5.2. Computer Ethics, Crime, and Privacy
    5.3. Security concerns and security management strategies in e-business applications
    5.4. Ethical issues in Is
	11-12	**Text: Chapter**

Chapter 6: Major Applications and Current trends of Computer and Information Systems
    6.1. Office Automation System
    6.2. Transaction Processing System
    6.3. Management Information System
    6.4. Decision Support System
    6.5. Trends in Hardware, software, communication and user interface advances
	13-16	**Text: Chapter**

Teaching Strategy	The course will be delivered in the form of lectures, demonstration, student presentations, group discussions, and individual and group project works.
Assessment Criteria	The evaluation shall be based on both formative and summative assessment which include:

Assessment Forms	% of credit allotted
Lecture (100%)	
• Participation and Attendance	10
• Quizzes and Assignments	25
• Test	25
• Final examination	40
Practice (100%)	
• Participation and Attendance	10
• Lab Assignments	20
• Lab Exam	40
• Project	30

Role of Instructor(s)	Delivers lectures, prepares reading assignments and topics for group discussion, prepares projects by discussion with student, gives consultation and advises students on project works and assignments, prepares and evaluates quiz, assignment, midterm and final examination
Role of Students	Attend lectures, lab session and presentation, work in team on group work, participate in group discussion, discusses with the instructor on topics of interest for project work, delivers and presents project work, attend quiz, midterm and final examination.
Required software and/or hardware	Software: office applications Hardware: Desktop computers

Reference	Text book
	  1. Belle, Jean-Paul Van et al. 2001.Discovering Information Systems. California, USA.
	  2. Jason, Charvat. 2003. Project Management Methodologies: Selecting, Implementing, and Supporting Methodologies and Processes for Projects. John Wiley & Sons.
	  3. Satzinger, John W.,Jackson, Robert B., and Burd, Stephen D.2007. Systems Analysis and Design. Course Technology,Australia.
	  4. Hoffer, Jeffrey A., George, Joey F., and Valacich, Joseph S.1999. Modern Systems Analysis and Design.5th ed. Addison-wesley,inc, Reading.
	  5. Project Cycle Management Technical Guide. 2001. FAO. Rome, Italy.
	  6. Whitten, Jeffer L. and Bentley, Lonnie D. 2007.Systems Analysis & Design Methods.7th ed. McGraw-Hill, New York.
	  7. Information systems Today, By Leonard, M. Jessup References
	  8. Computer Science: An Overview: International Edition, (10 ed), Pearson Higher Education, 2007.