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| **College of Information Technology and Computing**  Department of Information Technology | | **SYLLABUS**  Course Title: **Computer Programming 1**  Course Code: **IT121**  Credits: 3 units (1 hours Lecture, 2 hrs Laboratory) |
| **USTP Vision**    A nationally-recognized Science and Technology (S&T) university providing the vital link between education and the economy    **USTP Mission**     * Bring the world of work (industry) into the actual higher education and training of the students; * Offer entrepreneurs of the opportunity to maximize their business potentials through a gamut of services from product conceptualization to commercialization; * Contribute significantly to the national development goals of food security and energy sufficiency through technology solutions.     **Program Educational Objectives:**     |  | | --- | | **PEO1:** | | **PEO2:** | | **PEO3:** |   **Program Outcomes:**   |  | | --- | | **a:** Apply knowledge of computing, science, and mathematics appropriate to the discipline. | | **b:** Analyze a problem, and identify and define the computing requirements appropriate to its solution. | | **c:** Design, implement, and evaluate computer-based systems, processes, components, or programs to meet desired needs. | | **d:** Function effectively on teams to accomplish a common goal. | | **e:** Understand professional, ethical, legal, security, and social issues and responsibilities. | | **f:** Communicate effectively with a range of audiences. | | **g:** Analyze the local and global impact of computing on individuals, organizations, and society. | | **h:** Recognize the need for and engage in continuing professional development. | | **i:** Use current techniques, skills, and tools necessary for computing practice. | | **j:** Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems. | | **k:** Apply design and development principles in the construction of software systems of varying complexity. | | **l:** Demonstrate knowledge and understanding of IT principles and practices and apply them to real-world problems. | | |  |  | | --- | --- | | Semester/Year:**1st Semester SY 2024-2025**  Class Schedule: Morning: 8:00–10:00 (Lecture), 10:00–1:00 (Lab)  Afternoon: 1:00–3:00 (Lecture), 3:00–6:00 (Lab)  Bldg./Rm. No.: 41-104 | Prerequisite(s):N/A  Co-requisite(s):N/A | | Instructor: Joshua Amper, Juan Carlos Valdevieso  Email: joshuaamper@gmail.com, valdeviesojuan2@gmail.com  Mobile No.: 0923241723, 09776566246 | Consultation Schedule: Monday and Wednesday: 6:00 PM – 8:00 PM Friday: 9:00 AM – 11:00 AM Location: Faculty Room / Online via Microsoft Teams Contact: your.email@school.edu  Bldg.Rm. No.: 41-104  Office Phone No./Local: | | 1. **Course Description:**   This course introduces students to the fundamental principles of computer programming. It covers problem-solving techniques, algorithm development, basic programming constructs, and hands-on coding using a modern programming language (e.g., Python, Java, or C). Topics include variables, data types, control structures, functions, arrays, and basic input/output operations. Students are expected to develop logical thinking and debugging skills while working on structured programming exercises. | | | 1. **Course Outcome:**  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Course Outcomes (CO)** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | | CO1: Demonstrate understanding of basic programming constructs such as variables, data types, operators, control structures (if-else, loops), and functions to solve computational problems. | I | I | I | I | I | I | I | I | I | I | I | I | | CO2: Develop modular and well-documented code using structured programming principles and appropriate algorithms to address real-world problems. | I | I | I | E | I | I | E | I | I | E | E | D | | CO3: Apply logical reasoning and debugging strategies to identify, trace, and correct programming errors using available tools and techniques. | I | D | I | I | E | E | E | E | D | E | D | D | | | | 1. **Course Outline:**  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Allotted Time (hr)** | **Course**  **Outcomes (CO)** | **Intended Learning Outcomes (ILO)** | **Topic/s** | **Suggested Readings** | **Teaching-Learning Activities** | **Assessment Tasks/Tools** | **Grading Criteria** | **Remarks** | | Week 1 | CO1 | Explain the role of programming in IT | Introduction to Programming and IDEs | Chapter 1 of textbook | Lecture, discussion, lab orientation | Quiz, Recitation | 10% Quiz | Orientation | | Week 2-8 |  | Integrate all learned concepts | Function Parameters and Recursion | Chapter 7 | Code review, demo | Quiz + Coding Task |  |  | | MIDTERM EXAMINATION | | | | | | | | | | Week 9-16 | CO1 | Integrate concepts in a final project | Function Parameters and Recursion | Review All | Hands-on lab | Project Demo |  |  | | FINAL EXAMINATION | | | | | | | | | | | | 1. **Course Requirements:**   asd   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  | WHATTT |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | | **Prepared by:** | |  | | Amper Amper  Instructor | | Valdevieso Valdevieso  Instructor | |  | | |  | | --- | | **Recommending Approval:** | |  | | Engr. Juan Carlos Valdevieso PhD | | Chair | |  | |  | | |  | | --- | | **Approved by:** | |  | | Engr. Juan Carlos Valdevieso PhD | | Dean | |  | | |  |  |  |  |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | |