**1st Semester, Academic Year 2025-2026**

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| Course No. & Descriptive Title: | **ISAE101 – Human Computer Interaction** |  | Schedule & Room Assignment: |  |
| Name of Faculty Member/s: | **HABER, VINCENT H.** |  | **LEC** | **9:00 – 10:00 AM (MW – Rm5)** |
|  |  |  | **LAB** | **1:00 – 2:30 PM (TF – Lab1)** |

**Part I:**

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| **Philosophy** | Total human development with appropriate competencies. |
| **Vision** | A globally competitive university. |
| **Mission** | Provides high quality instruction, research and extension. |
| **Goal** | To lead in transforming human resources into productive, self-reliant citizens, and responsible leaders. |
| **Graduate Attributes** | DMMMSU aims to produce highly competent, specialized, and globally competitive professionals. This is operationalized into graduate attributes that should be attained by the time students will graduate from the University.   1. **Professionally competent**   Exemplify the competencies and value required of their professions;   1. **Committed and responsible leader**   Demonstrate professional, social and ethical responsibility consistent with their roles as local and global citizens;   1. **Effective communicator and collaborator**   Can effectively communicate and work in multi-disciplinary teams;   1. **Critical thinker and innovator**   Use relevant information and research drawn facts in rendering sound decisions and developing insights for new knowledge;   1. **Reflective lifelong learner**   Engage in lifelong learning for continuous professional growth and development; and   1. **Responsible environment steward**   Manage a sustainable environment, promoting peace and prosperity for mankind. |
| **Core Values** | SERVICE: Service to our stakeholders  PRODUCTIVITY: Productivity with passion for work  EXCELLENCE: Excellence in our programs through scholarly undertakings  COMMITMENT: Commitment in delivering our mandates  INNOVATIVENESS: Innovation towards attaining operative systems, breakthroughs, and milestone  ADVOCACY: Advocacy in transforming lives  LEADERSHIP: Leadership for transformation, Empowerment, and sustainable development |
| **Program Outcomes** | 1. Apply knowledge of business and management processes, computing, mathematics, and social sciences appropriate to Information Systems to address real-world problems. 2. Analyze complex problems, identify and define the computing requirements needed with respect to organizational factors, and plan strategic designs with appropriate solutions and implement client support practices. 3. Evaluate information systems in terms of general quality attributes, design, and possible trade-offs presented within the given competency requirements. 4. Design and implement information systems solutions that enhance organizational performance to achieve their goals within a competitive global environment. 5. Use knowledge and understanding of fundamentals of service management, enterprises in modeling and design of information systems to articulate latest developments with respect to environment concerns. 6. Utilize modern computing to deploy and use effectively skills, tools and techniques necessary for information systems based on industry standard practices. 7. Fluent in techniques for acquiring, converting, transmitting and storing data and information, including those related to data quality. 8. Function efficiently and effectively on teams in achieving the vision, direction and strategic purpose for the creation of an information systems project. 9. Exhibit strong ethical principles and have good interpersonal communication in team skills. 10. Communicate and work efficiently, effectively and independently with a range of multi-disciplinary and diverse audiences. 11. Ensure that data and IT infrastructure are protected from a variety of security threats and identify high level solutions to protect the data of the organization. 12. Demonstrate an understanding of the social issues and ethical implications of technology across organizations and society. 13. Participate and engage in research and life-long learning, planning, and improving performance as the foundation for professional development. |
| **Course Type** |  |
| **Course Credit** | **3 Units** |
| **Course Description** | This course is about theory and practical skills in the management of software development and information systems implementation projects. The course also aims to further your development as a scholar and future business professional. The course will also refine your communication skills and group-work skills, improve your time management and assist in your research skills. The course assumes no prior experience in project management but does assume that you are familiar with the systems development lifecycle and have a good understanding of the processes involved in the development of information systems. |
| **Contact Hours/Week** | Lecture – 2 hours a week  Laboratory – 3 hours a week |
| **Course Prerequisite/s** |  |
| **Course Outcomes** | L01: Analyze different user populations with regard to their abilities and characteristics for using both software and hardware products.  L02: Evaluate the design of existing user interfaces based on the cognitive models of target users. |
| **Course Requirements** | * Midterm Exam and Final Exam * Quizzes and oral recitation * Class participation * Project/s |
| **Grading System** | MIDTERM: 60% Class Standing (Quizzes and other written assessments, Participation, Values)  40% Midterm Exam  FINALS: 60% Class Standing (Quizzes and other written assessments, Participation, Values  40% Final Exam  Final Grade = 40% of Midterm Grade + 60% of Final Term Grade |
| **Classroom Policies** | * Wear proper uniform and ID * Attend to the scheduled class regularly * Always be respectful towards your classmates and teachers   Strictly meet deadlines set by the teacher |
| **Consultation Hours** | HABER – 4:00 AM – 5:00 AM(TTh)  HABER - 8:00 AM – 9:00 AM(F) |

**Part II: Course Outline and Time Frame**

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| **Time Frame** | **Course Content/Subject Matter** |
| Week 1 | Introduction to Human-Computer Interaction |
| Week 2-3 | **Usability Engineering – Methods and Tools** |
| Week 4 | Introduction to GIT **Basic Git Commands** |
| Week 5-6 | **Introduction to Django Framework/ Forms and User Inputs in Django** |
| Week 7-8 | Basic Psychology of Design and Design Principles |
| Week 9 | Mid Term Examination |
| Week 10-12 | **Participatory Design/ Introduction to the GOMS Model** |
| Week 13-14 | **Interaction Styles, Interactive Systems, Work Productivity, Task Analysis vs. Knowledge-Based Analysis** |
| Week 15-16 | **Graphical User Interface (GUI)** |
| Week 17 | **Project Presentation & Evaluation** |
| Week 18 | **Final Examination** |

**Part III: Learning Plan**

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| **Learning** **Outcomes** | **Topics** | **SDG Coherence** | **Time Allotment**  **Week (hour)** | **Methodology** | **Resources** | **Assessment** |
| At the end of the orientation, the student should be able to:   * Define Human-Computer Interaction (HCI). * Understand the importance of HCI in system and software design. * Identify real-world examples of HCI applications. * Explain the interdisciplinary nature of HCI. | 1.VMGO and Overview of the Subject  2.Quality Policy Statements  3.Quality Objectives  4.Core Values of DMMMSU  5.Course Overview  6.Course Expectations/ Requirements  7.Grading System  **8.Introduction to Human-Computer Interaction**   * Definition of HCI * Brief History of HCI * Importance of HCI * Disciplines Involved in HCI * Real-World Applications | **SDG 4: Quality Education SDG 9: Industry, Innovation & Infrastructure** | WEEK 1  2 hrs (Lec)  3 hrs (Lab) | * Modular * Online Learning * Interface Evaluation * Interactive Discussions | • Module  • Google Classroom  • Google Forms  • Google Meet  • Google Drive  • VGMO  • Course Syllabus | •Activity/Exercise  • Programming Assignment  • Summative Test |
| By the end of this lesson, students will be able to:   * Explain the phases of **Design Thinking** in user-centered design. * Apply Design Thinking to UI/UX problems. * Explore and use popular **UI/UX design tools** (e.g., Figma, Balsamiq). * Create wireframes and interactive prototypes that follow usability principles. | **Usability Engineering – Methods and Tools**   * Heuristic Evaluation (Nielsen’s 10 Principles) * Design Thinking for Human-Centered Design * UI/UX Design Tools | **SDG 9: Industry, Innovation & Infrastructure** **SDG 11: Sustainable Cities & Communities** | WEEK 2-3  4 hrs (Lec)  6 hrs (Lab) | * Modular * Online Learning * Interface Evaluation * Interactive Discussions | • Module  • Google Classroom  • Google Forms  • Google Meet  • Google Drive  • VGMO  • Course Syllabus | •Activity/Exercise  • Programming Assignment  • Summative Test |
| By the end of this lesson, students will be able to:   * Understand what **Git** is and why it is important. * Initialize a Git repository and track changes to their code. * Use basic Git commands to add, commit, push, clone, and check status. * Use GitHub as a remote version control system. | **Introduction to GIT Basic Git Commands**   * git init * git add * git status * git commit * git push * git clone | **SDG 4: Quality Education** **SDG 9: Industry, Innovation & Infrastructure** | WEEK 4  2 hrs (Lec)  3 hrs (Lab) | * Modular * Online Learning * Interface Evaluation * Interactive Discussions | • Module  • Google Classroom  • Google Forms  • Google Meet  • Google Drive  • VGMO  • Course Syllabus | •Activity/Exercise  • Programming Assignment  • Summative Test |
| By the end of this lesson, students will be able to:   * Define what Django is and why it is used. * Understand the Model-View-Template (MVT) architecture. * Set up a Django project and run the development server. * Create basic views and templates. * Build a simple web interface considering HCI principles. * Understand the role of forms in collecting user input in web applications. * Create and display forms using Django’s built-in forms module. * Validate and process form data. * Apply HCI principles (error prevention, feedback, accessibility) to form design. | **Introduction to Django Framework**   * Django Architecture – MVT Pattern * Setting Up Django * Django Basic Folder Structure * Creating a Simple App and Page   **Forms and User Inputs in Django**   * Django Forms – Basics * Why Forms Matter in HCI * Django Forms – Basics | **SDG 8: Decent Work & Economic Growth** **SDG 9: Industry, Innovation & Infrastructure** | WEEK 5-6  4 hrs(lec)  6 hrs (lab) | * Modular * Online Learning * Interface Evaluation * Interactive Discussions | • Module  • Google Classroom  • Google Forms  • Google Meet  • Google Drive  • VGMO  • Course Syllabus | •Activity/Exercise  • Programming Assignment  • Summative Test |
| By the end of this lesson, students will be able to:   * Understand how **human psychology influences design decisions**. * Apply fundamental **design principles** (alignment, proximity, contrast, etc.). * Analyze how psychological factors affect **user perception, behavior, and usability**. * Design more effective and user-friendly interfaces using these principles. | **Basic Psychology of Design and Design Principles**   * Basic Psychology of Design * Core Design Principles | **SDG 3: Good Health & Well-Being** **SDG 10: Reduced Inequalities** | WEEK 7-8  4 hrs(lec)  6 hrs (lab) | * Modular * Online Learning * Interface Evaluation * Interactive Discussions | • Module  • Google Classroom  • Google Forms  • Google Meet  • Google Drive  • VGMO  • Course Syllabus | •Activity/Exercise  • Programming Assignment  • Summative Test |
| MID-TERM EXAM (9 WEEK) | | | | | | |
| By the end of this lesson, students will be able to:   * Define **Participatory Design (PD)** and explain its purpose in HCI. * Understand the benefits and challenges of involving users in the design process. * Identify real-world examples where PD has improved system usability. * Apply basic participatory methods (e.g., interviews, sketching, co-design sessions). * Define the GOMS model and its components. * Explain the Keystroke-Level Model (KLM) and how it estimates user task times. * Analyze user interactions using GOMS and KLM. * Apply these models to evaluate and improve interface designs. | **Participatory Design**   * Participatory Design Methods * HCI & Django Integration   **Introduction to the GOMS Model**   * Keystroke-Level Model (KLM) * GOMS & KLM * When to Use GOMS & KLM | **SDG 16: Peace, Justice & Strong Institutions** **SDG 9: Industry, Innovation & Infrastructure** | WEEK 10-12  6 hrs (Lec)  9 hrs (Lab) | * Modular * Online Learning * Interface Evaluation * Interactive Discussions | • Module  • Google Classroom  • Google Forms  • Google Meet  • Google Drive  • VGMO  • Course Syllabus | •Activity/Exercise  • Programming Assignment  • Summative Test |
| By the end of this lesson, students will be able to:   * Understand different **interaction styles** and their suitability. * Explain **interactive systems** and their role in productivity. * Compare and contrast **task analysis** vs **knowledge-based analysis**. * Apply these concepts to evaluate or improve an existing system. | **Interaction Styles, Interactive Systems, Work Productivity, Task Analysis vs. Knowledge-Based Analysis**   * Common Interaction Styles * Interactive Systems and Work Productivity | **SDG 8: Decent Work & Economic Growth** **SDG 4: Quality Education** | WEEK 13-14  4 hrs (Lec)  6 hrs (Lab) | • Modular  • Online Learning | • Module  • Google Classroom  • Google Forms  • Google Meet  • Google Drive  • VGMO  • Course Syllabus | •Activity/Exercise  • Programming Assignment  • Summative Test |
| By the end of this lesson, students will be able to:   * Define what a **Graphical User Interface (GUI)** is and its purpose. * Identify the key components of a GUI. * Explain the principles of effective GUI design. * Create a simple GUI in Python (using Tkinter or Django Templates). * Apply HCI principles to enhance user experience in GUI design. | **Graphical User Interface (GUI)**   * Components of a GUI * Principles of Good GUI Design (HCI-Based) * GUI using Django Templates (HTML + CSS) | **SDG 10: Reduced Inequalities** **SDG 9: Industry, Innovation & Infrastructure** | WEEK 15-16  4 hrs (Lec)  6 hrs (Lab) |  |  |  |
| By the end of this session, students will:   * Present their final HCI project, demonstrating both the **technical functionality** and **usability design**. * Justify how their application meets **HCI principles** and user-centered design. * Receive constructive feedback from peers and instructors. | **Project Presentation & Evaluation**   * Project Requirements * Presentation Format * Evaluation Rubric | **SDG 4: Quality Education** **SDG 17: Partnerships for the Goals** | WEEK 17  2 hrs (Lec)  3 hrs (Lab) | * Modular * Online Learning * Interface Evaluation   Interactive Discussions | • Module  • Google Classroom  • Google Forms  • Google Meet  • Google Drive  • VGMO  • Course Syllabus | •Activity/Exercise  • Programming Assignment  • Summative Test |
| FINAL EXAM | | | | | | |

**Part IV: Course Map**

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| **Course Outcomes (CO)** | **Program Outcomes** | | | | | | | | | | | | | |
| **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **P06** | **P07** | **P08** | **P09** | **P10** | **P11** | **P12** | **P13** |  |
| L01: Analyze different user populations with regard to their abilities and characteristics for using both software and hardware products. | I | **I** | I | I | I | **I** | **P** | **P** | **P** | **P** | **P** | **P** | **P** |  |
| L02: Evaluate the design of existing user interfaces based on the cognitive models of target users. | I | **P** | **P** | **P** | P | **P** | **P** | **P** | **P** | **P** | **P** | **P** | **P** |  |

**Legend: I - Introduced, P - Practiced, D – Demonstrate**

**Part V: References**

Carden, F. (2025, March 26). Usability. Digital.gov. https://digital.gov/topics/usability/

Django documentation | Django documentation. (n.d.). Django Project. https://docs.djangoproject.com/en/5.2/

Nielsen Norman Group: UX Training, Consulting, & Research. (n.d.). Nielsen Norman Group. https://www.nngroup.com/

Carden, F. (2025, March 26). Usability. Digital.gov. https://digital.gov/topics/usability/

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| **Prepared by:**  **VINCENT H. HABER**  Faculty Member  Date: JULY 11 2025 | **Recommending Approval:**  N/A  Program Chairperson  Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ | **Approved:**  **EDELITA C. EBUENGA**  Dean/Institute Director  Date: JULY 11 2025 |