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| **VISION** | A research university with a culture of Excellence in developing globally competitive and values-oriented leaders and professionals. |
| **MISSION** | To provide research-based quality education, innovations, and collaborative extension services for sustainable national and international development. |
| **CORE VALUES** | **H**umility  **E**xcellence  **A**ccountability  **R**esiliency  **T**rustworthiness |
| **QUALITY POLICY** | The Sorsogon State University commits to deliver quality education anchored on its vision and mission for the development and growth of the community. SorSU shall transform knowledge through research, instruction, extension, and production as it adheres to statutory and regulatory requirements for continual improvement of its systems. |
| **GOAL OF THE PROGRAM** | The BSIS graduates are expected to become globally competent, innovative, and socially and ethically responsible computing professionals engaged in life-long learning endeavors. They are capable of contributing to the country’s national development goals. |
| **PROGRAM DESCRIPTION** | The BS Information Systems program includes the study of application and effect of information technology to organizations. Graduates of the program should be able to implement an information system, which considers complex technological and organizational factors affecting it. These include components, tools, techniques, strategies, methodologies, etc. Graduates are able to help an organization determine how information and technology-enabled business process can be used as strategic tool to achieve a competitive advantage. As a result, IS professionals require a sound understanding of organizational principles and practices so that they can serve as an effective bridge between the technical and management/ users’ communities within an organization. This enables them to ensure that the organization has the information and the systems it needs to support its operations. |
| **PROGRAM EDUCATIONAL OBJECTIVES** | At the end of the program, a graduate is expected to:   1. Be successful in Information System or in their chosen career path. 2. Engage in life-long learning and professional development through graduate studies and active participation in professional organizations 3. Be able to interact effectively with others in a collaborative team-oriented manner in the management and execution of projects for the development of the society. 4. Exhibit leadership qualities in technology innovation and entrepreneurship with effective communication skills, teamwork, ethics and to create ability for life-long learning needed in a successful professional career. |

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| **PROGRAM OUTCOMES IN RELATION TO PROGRAM EDUCATIONAL OBJECTIVES** | | | | |
| **PROGRAM OUTCOMES** | **PROGRAM EDUCATIONAL OBJECTIVES** | | | |
| **1** | **2** | **3** | **4** |
| 1. Articulate and discuss the latest development in the field of Information Technology |  |  |  |  |
| 1. Effectively communicate orally and in written using both English and Filipino languages |  |  |  |  |
| 1. Work effectively and independently in multi-disciplinary and multicultural teams |  |  |  |  |
| 1. Act in recognition of professional, social, and ethical responsibility |  |  |  |  |
| 1. Preserve and promote “Filipino historical and cultural heritage” |  |  |  |  |
| 1. Analyze complex problems, and identify and define the computing requirements needed to design and appropriate solution. |  |  |  |  |
| 1. Apply computing and other knowledge domains to address real-world problems |  |  |  |  |
| 1. Design and Develop computing solutions using a system-level perspective |  |  |  |  |
| 1. Utilize modern computing tools |  |  |  |  |
| 1. Apply knowledge of computing science, and mathematics appropriate to the discipline |  |  |  |  |
| 1. Understand best practices and standards and their applications |  |  |  |  |
| 1. Analyze complex problems, and identify and define the computing requirements appropriate to its solution |  |  |  |  |
| 1. Identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems. |  |  |  |  |
| 1. Design, implement and evaluate computer-based systems, processes, components or programs to meet desired needs and requirements under constraints |  |  |  |  |
| 1. Integrate IT-based solutions into the user environment effectively |  |  |  |  |
| 1. Apply knowledge through the use of current techniques, skills, tools and practices necessary for the IT profession |  |  |  |  |
| 1. Function effectively as a member or a leader of a development team recognizing the different roles within a team to accomplish a common goal |  |  |  |  |
| 1. Assist in the creation of an effective IT project plan |  |  |  |  |
| 1. Communicate effectively with the computing community and with society at large about complex computing activities through logical, writing, presentations and clear instructions |  |  |  |  |

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| **COURSE INFORMATION** | | |
| **COURSE CODE:**  IS 411 | **CLASSIFICATION:**  Major | **COURSE PRE-REQUISITE:**  Capstone Project 1 |
| **COURSE TITLE:**  Capstone Project 2 | **COURSE SCHEDULE:**  [IS 4-1] Thur 10:00 – 11:00 | Fri 07:00-09:00  [IS 4-2] Mon 08:00-10:00 & Fri 10:00-11:00 | **CREDIT:**  3 units |

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| **COURSE SYLLABUS** | | | | | | | | | | | | | | | | | | | | |
| **COURSE DESCRIPTION** | This course is the continuation of Capstone Project 1 and the culmination stage of the capstone project journey of BSIS students. This undertaking should significantly address an existing problem or need. For B.S. in Information Technology, the capstone project should focus on the infrastructure, application, or processes involved in introducing a Computing solution to a problem. Capstone Project integrates the different courses, knowledge, and competencies learned in the curriculum. Students are encouraged to produce innovative results or explore new frontiers of knowledge or application areas. This course is culminated with the public presentation of the developed Computing solution. | | | | | | | | | | | | | | | | | | | |
| **COURSE OBJECTIVES** | | **PROGRAM OUTCOMES** | | | | | | | | | | | | | | | | | | |
| **a** | **b** | **c** | **d** | **e** | **f** | **g** | **h** | **i** | **j** | **k** | **l** | **m** | **n** | **o** | **p** | **q** | **r** | **s** |
| 1. Provide students with the fundamental principles and methods in writing a capstone project. | | *I* | *-* | *-* | *-* | *-* | *-* | *D* | *D* | *-* | *-* | *-* | *-* | *-* | *-* | *D* | *-* | *-* | *-* | *-* |
| 1. Design a system or computer software which are useful to the various sectors of society. | | *D* | *-* | *D* | *-* | *-* | *D* | *D* | *D* | *D* | *-* | *-* | *-* | *-* | *-* | *E* | *-* | *-* | *-* | *-* |
| 1. Prepare chapters one to six of the Capstone project. | | *D* | *D* | *D* | *D* | *-* | *I* | *D* | *D* | *I* | *-* | *-* | *-* | *-* | *-* | *E* | *-* | *-* | *-* | *-* |
| 1. Understand the ethics in writing a capstone project. | | *I* | *-* | *D* | *D* | *-* | *-* | *-* | *-* | *-* | *-* | *-* | *-* | *-* | *E* | *E* | *-* | *-* | *-* | *-* |
| 1. Defend the completed capstone project. | | *E* | *E* | *E* | *-* | *-* | *-* | *D* |  | *E* | *-* | *-* | *-* | *-* | *-* | *D* | *D* | *D* | *D* | *D* |

I - INTRODUCTORY, E- ENABLING, D - DEMONSTRATED

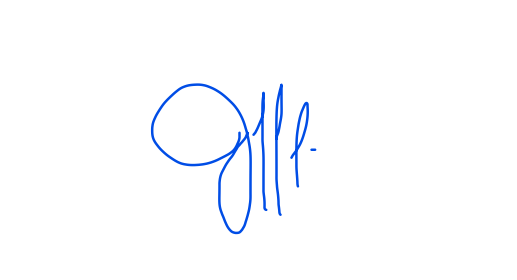
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| **CONTENT OUTLINE AND TIME FRAME** | |
| **TIME FRAME** | **COURSE CONTENT / SUBJECT MATTER** |
| Week 1 | Course & Disaster and Risk Reduction Orientation  *SDG: 3 – Good Health and Well-Being*  *SDG: 4 – Quality Education*  *SDG: 6 – Clean Water and Sanitation*  *SDG: 13 – Climate Action*  *SDG: 15 – Life on Land* |
| Week 2 | Reconnecting with the Client and Revisiting of the Project Requirements  *SDG: 4 – Quality Education*  *SDG: 9 – Industry, Innovation and Infrastructure* |
| Week 3 | On Development and Implementation: the details  *SDG: 4 – Quality Education*  *SDG: 9 – Industry, Innovation and Infrastructure* |
| Week 4 | On Conclusions and Recommendations  *SDG: 4 – Quality Education*  *SDG: 9 – Industry, Innovation and Infrastructure* |
| Week 5 | Writing the Final Executive Summary & Software Testing  *SDG: 4 – Quality Education*  *SDG: 9 – Industry, Innovation and Infrastructure* |
| Week 6 - 8 | Project Development and Manuscript Writing  *SDG: 4 – Quality Education*  *SDG: 9 – Industry, Innovation and Infrastructure* |
| Week 9 | *Midterm Examination (50% Working System & Manuscript Chapters 1-4)* |
| Week 10 – 13 | Project Development and Manuscript Writing  *SDG: 4 – Quality Education*  *SDG: 9 – Industry, Innovation and Infrastructure* |
| Week 12 – 14 | Software Testing and Quality Assurance  *SDG: 4 – Quality Education*  *SDG: 9 – Industry, Innovation and Infrastructure* |
| Week 15 | Evaluation of Client Test Results  *SDG: 4 – Quality Education*  *SDG: 9 – Industry, Innovation and Infrastructure* |
| Week 16 - 17 | Capstone Project Final Oral Defense  *SDG: 4 – Quality Education*  *SDG: 9 – Industry, Innovation and Infrastructure* |
| Week 18 | *Final Examination (100% Working System & Complete Manuscript)* |

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| **COURSE OUTCOMES** | **COURSE OBJECTIVES** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| 1. Collect pertinent data to support capstone project or thesis. |  |  |  |  |  |
| 1. Design the architecture and components of the proposed software solution |  |  |  |  |  |
| 1. Justify the proposed solution’s feasibility and effectiveness to solve the computing problem. |  |  |  |  |  |

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| **DESIRED LEARNING OUTCOMES (DLO)** | **COURSE CONTENT / SUBJECT MATTER** | **TEXTBOOK /**  **REFERENCES** | **TEACHING & LEARNING ACTIVITIES (TLAs)** | **ASSESSMENT OF TASK (AT)** | **RESOURCE MATERIALS** | **TIME TABLE** |
| Recall school VMGO, discuss classroom policies, and DRRM initiatives adhering to  SDG: 3, SDG: 4, SDG: 6, SDG: 13, SDG: 15 | Course Orientation   * Introduction to the Course * Overview of the VMGOs * Discussion on Disaster Risk Reduction Management * Discussion on Indigenous People | * CHED CMOs * Student University Manuals * NDRRMC Website | * Classroom discussions * Video presentation * Campus tour | * Recitation | * Computer * Slide presentation * Multimedia projector * Computer Laboratory | 1 week |
| Identify the appropriate implementation strategies before the development of the project system adhering to SDG 4 & 9. | On Development and Implementation: the detail   * Systems Development * Conduct of Functional Analysis * Conduct Project Design | * Undergraduate Research and Capstone Project Manual | * Classroom discussions * Demonstration | * Recitation * Presentation | * Computer * Slide presentation * Multimedia projector * Reading material * LMS * Computer Laboratory | 1 week |
| Able to formulate conclusions, recommendations of the system project. Finalize their executive summary relating to SDG 4 & 9. | On Conclusion and Recommendations, Writing the Final Executive Summary | * Practical Guide for Writing Information Technology * Undergraduate Research and Capstone Project Manual Education Research Project | * Classroom discussions * Demonstration * Video lessons | * Recitation * Presentation | * Computer * Slide presentation * Multimedia projector * Online resources * LMS * Computer Laboratory | 1 week |
| Continuing development of the system and manuscript relating to SDG 4 & 9. | First system prototype presentation & manuscript writing | * Practical Guide for Writing Information Technology Education Research Project | * Classroom discussions * Demonstration * Machine exercise | * Recitation * Activity * Presentation | * Computer * Slide presentation * LMS * Computer Laboratory | 5 weeks |
| *Midterm Examination* | | | | | | |
| Learn and implement on how to create test case documents and bug reporting templates adhering to SDG 4 & 9. | Test case document writing & bug reporting template | * Practical Guide for Writing Information Technology Education Research Project * Research and Thesis Writing, Outcome- Research Manual | * Classroom discussions * Demonstration | * Recitation * Activity * Presentation | * Computer * Slide presentation * Multimedia projector * Online resources * LMS * Computer Laboratory | 1 week |
| Present and gain informative feedbacks from advisers to enhance development strategies relating to SDG 4 & 9. | Second system prototype presentation & manuscript writing | * Research and Thesis Writing, Outcome- Research Manual | * Classroom discussions * Demonstration * Video lessons | * Recitation * Presentation Research | * Computer * Slide presentation * Multimedia projector * Online resources * LMS * Computer Laboratory | 1 week |
| Evaluate the systems functionality if still within the client’s requirements through client testing following SDG 4 & 9. | Client Testing & Evaluation of Results | * Educational Research and Statistics * Research and Thesis Writing, Outcome- Research Manual | * Classroom discussions * Demonstration * Video lessons | * Recitation * Quiz * Activity | * Computer * Slide presentation * Multimedia projector * Online resources * LMS * Computer laboratory | 3 weeks |
| Gain industry standard feedback from experts following SDG 4 & 9. | Expert Feedbacking | * Qualitative Data Analysis: A Methods Sourcebook | * Classroom discussions * Demonstration | * Presentation | * Computer with internet connection | 1 week |
| Present and gain informative feedbacks from advisers to enhance development strategies prior to the final presentation following SDG 4 & 9. | Third system prototype presentation & manuscript writing | * Qualitative Data Analysis: A Methods Sourcebook | * Classroom discussions * Demonstration | * Presentation | * Computer * Slide presentation * LMS * Computer Laboratory | 1 week |
| Able defend the system project relating to SDG 4 & 9 | Final Oral Defense | * Error-Proofing Your Research: Common Mistakes and How to Address them | * Presentation of the final outputs (System and Manuscript) | * Presentation of the final outputs (System and Manuscript) | * Computer * Slide presentation * Multimedia projector * Computer laboratory | 1 week |
| *Final Examination* | | | | | | |

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| **GRADING SYSTEM / STUDENT PERFORMANCE EVALUATION** | | | |
| **Criteria for Rating**   |  |  |  | | --- | --- | --- | | Examination | - | 30% | | Recitation | - | 20% | | Research Work | - | 20% | | Short Quizzes | - | 20% | | Attendance | - | 10% | | **Midterm**   |  |  | | --- | --- | | *Examination* | 50% Working System  Chapters 1-4 Manuscript | | *Recitation* | Adviser’s Evaluation | | *Research Work* | Subject Instructor’s Evaluation | | *Quizzes* | 1st Prototyping | | *Attendance* | Expert’s Evaluation | | | **Finals**   |  |  | | --- | --- | | *Examination* | Final Oral Defense  (System & Manuscript) | | *Recitation* | Adviser’s Evaluation | | *Research Work* | Subject Instructor’s Evaluation | | *Quizzes* | 2nd & 3rd Prototyping | | *Attendance* | Client Evaluation | |
| **Prototyping Schedules**   |  |  |  |  | | --- | --- | --- | --- | |  | **Regular Schedule** | **Second Chance** | **Third Chance** | | 1st Prototype | September 16-20 | September 23-25 | September 26-30 | | 2nd Prototype | October 21-23 | October 24-28 | October 29-31 | | 3rd Prototype | November 20-22 | November 25-27 | November 28-29 | | *Max. Rating* | *100* | *85* | *75* | | | Subject Instructor’s Evaluation Schedules   |  |  | | --- | --- | | Midterm | October 7 - 11, 2024 | | Finals | December 9 - 13, 2024 |   Midterm Examination: October 14 – 19, 2024  Client Testing Schedule: December 2 – 6, 2024  Final Oral Defense Schedule: December 16 - 20, 2024 | |
| **COURSE REQUIREMENTS**   * Accomplished course activities and assessment * Class attendance and participation * Developmental Projects (Presentation of completed system project with manuscript) * Quizzes/ Group activities | | **Description**   |  |  | | --- | --- | | *Prototype Evaluations* | The panelists will evaluate the capstone project's prototype and manuscript through three iterations. | | *Client Testing* | The capstone project development team will conduct actual client testing. | | *Subject Instructor's Evaluation* | Individual performance evaluation of students, including attendance, class participation, and quizzes. | | *Group Adviser's Evaluation* | Group advisers will provide evaluations on the three prototype iterations. | | *Expert's Evaluation* | System projects will be evaluated by industry experts to if the methodology and system quality is within standard | | *Final Oral Defense* | Panelists will assess the completed project, manuscript, and individual performances of group members. | | |
| **TEACHING METHODS & TECHNIQUES**   * Classroom discussions * Video lessons * Individual and group activities * Demonstration * Machine exercises * Providing useful online resources * Use of LMS as a repository of lessons and submission bins * Use of online group chat applications for announcements and subject concerns | | **CLASS POLICIES**   1. Students must comply with the subject requirements (LMS Activities/ Quizzes/ Projects/ Major Examinations) on the given schedule. 2. Students are encouraged to update themselves by checking class announcements and updates posted in the course Group Chat, LMS, or E-mail. 3. Students must follow proper etiquette in posting queries and answering questions and responses. 4. This class will not tolerate plagiarism, and due credit must be given to the owner in all submitted outputs. | |
| **REFERENCES**   1. **BOOKS**    * Becker, T. (2022). Educational Research and Statistics. Kaufman Press. ISBN: 9781666889772    * Balahadia, F., Abante. M., & Anthony, E. (2020). Practical Guide for Writing Information Technology Education Research Project. Unlimited Books, Library Services and Publishing Inc. ISBN: 978-621-427-079-8    * Miles, M., Huberman, M. & Saldana, J. (2020). Qualitative Data Analysis: A Methods Sourcebook. 4th Edition. SAGE Publications, Inc. ISBN: 978-1506353074.    * De Belen. (2019). Research and Thesis Writing, Outcome- Research Manual. Jobal Publishing. ISBN/ISSN 978-971-9667-12-4    * Trinidad, J. (2019). Error-Proofing Your Research: Common Mistakes and How to Address them. Bluebooks. ISBN: 9789715509084 2. **E-SOURCES**    * Sta. Romana, C. L., Gamboa, R., Marcial, D., Gabison, G., & Sioson, A. (2012). Undergraduate Research and Capstone Project Manual. Naga City: Philippine Society of IT Educators Foundation Inc.    * Commission on Higher Education. (2015). Establishing the Policies and Guidelines on Gender and Development in the Commission on Higher Education and Higher Education Institutions (HEIs) (CMO No. 01 Series of 2015). Official Gazette. Retrieved January 22, 2024, from https://ched.gov.ph/wp-content/uploads/2017/10/CMO-no.-01-s.-2015.pdf   **FLEXIBILITY**  This course is designed to cover the latest trends and best practices in capstone project 2. To enhance their learning experience, students are provided with various reference materials and are encouraged to explore other reliable and relevant resources online. The syllabus is flexible and may be adjusted to meet the needs of the students and the nature of our discussions. In case of unforeseen circumstances that may affect the course schedule, makeup classes will be arranged to ensure the course objectives are met, or recorded video lessons will be provided via the LMS. The order and pace of the topics may also vary depending on the intensity of discussions and deliberations. | | | |

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| **INSTRUCTOR INFORMATION** | | | |
| **NAME** | Jay Arenas Rivera, *MIS* | **EMAIL** | jay.rivera@sorsu.edu.ph |
| **CONTACT NUMBER** | (+63) 908-892-5746 | **CONSULTATION** | [IS 4-1] Monday 11:00 – 12:00 PM @ CICT Faculty Room  [IS 4-2] Tuesday 03:00 – 04:00 PM @ CICT Faculty Room |



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| Prepared by: | Recommending Approval: | | Approved: |
| **JAY A. RIVERA, MIS**  Faculty  Date Signed: 08/29/2024 | **JESSA P. OSCILLADA, MIT**  Program Head  Date Signed: 08/30/2024 | **ENGR. REY C. RODRIGUEZA, MIT**  Dean  Date Signed: | **MA. ELENA C. DEMDAM, RGC**  Campus Director  Date Signed: |