ITEC-427
Graduation Project (Phase 2)

General Information

Course Code	ITEC-427	Level/ Year	8^{th} / 4^{th}	Required (R)/ Selected Elective (SE)			R
Credit Hours	Theory		3	Lab	0	Total	3
Prerequisites	ITEC-425						
Course Coordinator	Dr. Ali Ahmad						

Course Description

This course represents the culmination of the graduation project for students in the Bachelor of Information Technology (BIT) program. Building on the foundation laid in Phase 1, students will focus on the implementation, testing, and evaluation of their proposed projects. Key activities include developing and integrating system components, conducting rigorous testing to ensure functionality and performance, and refining the project based on feedback and test results. Students will also prepare comprehensive documentation and deliver a final presentation of their project outcomes. Throughout this phase, students will work closely with faculty advisors to ensure the successful completion of their projects. By the end of this course, students will have demonstrated their ability to apply theoretical knowledge to practical problems, showcasing their skills and readiness for professional practice in the field of information technology.

Course Objectives

- Implement the project plan developed in Phase 1, including the development and integration of system components.
- Conduct rigorous testing to ensure the functionality, performance, and reliability of the project.
- Identify and resolve any issues or challenges encountered during the implementation phase.
- Produce comprehensive documentation, including technical specifications, user manuals, and maintenance guides.
- Present the final project outcomes clearly and professionally to a diverse audience, including peers, faculty, and industry professionals.
- Demonstrate effective teamwork and collaboration skills throughout the project implementation.
- Adhere to ethical and professional standards in all aspects of the project, including data privacy, security, and intellectual property considerations.
- Apply critical thinking and innovative approaches to enhance the project's effectiveness and impact.

Course Contents

List of Topics	Weeks
UNIT 1: Introduction	1, 2
UNIT 2: System Design and Architecture	3, 4, 5
UNIT 3: Implementation	6, 7, 8
UNIT 4: Testing and Validation, Results and Analysis	9, 10
UNIT 5: Project Documentation, Challenges, Ethical and Professional Considerations	11, 12, 13
UNIT 6: Conclusion and Future Work, References	14, 15

Textbook

How to do the Final Year Projects, 2^{nd} Edition, By Hossein Hassani, Bookboon, 2015, ISBN 10: 8740302776, ISBN 13: 9788740302776.
Projects in Computing and Information Systems: A Student's Guide, 3^{rd} Edition, By Christian Dawson, Pearson, 2015, ISBN 10: 1292073462, ISBN 13: 9781292073460.

Reference Materials

Writing your thesis - A Practical Guide for Students, 2nd Edition, By Librero Felix R., 2012, Philippines Open University, ISBN 10: 9717672105, ISBN 13: 9789717672106.
Doing Your Research Project: A Guide for First-Time Researchers, 7th Edition, By Stephen Waters, Judith Margaret Bell, 2018, McGraw-Hill Education, ISBN 10: 033524338X, ISBN 13: 9780335243389.

Course Learning Outcomes

CLO	Description	Cognitive Domain	Mapped PI
CLO#01	**Implement** the project plan developed in Phase 1, including the development and integration of system components.	Applying	PI 2.3 PI 6.2
CLO#02	**Conduct** rigorous testing to ensure the functionality, performance, reliability, and security of the project.	Applying	PI 2.4 PI 6.3 PI 6.4
CLO#03	**Evaluate** security requirements, threats, vulnerabilities, as well as any issues or challenges encountered during the implementation phase with suitable remedies.	Analyzing	PI 1.3 PI 6.1 PI 6.3 PI 6.4
CLO#04	**Produce** comprehensive documentation, including technical specifications, user manuals, and maintenance guides.	Creating	PI 3.1
CLO#05	**Present** the final project outcomes clearly and professionally to a diverse audience, including peers, faculty, and industry professionals.	Applying	PI 3.2 PI 3.3 PI 3.4
CLO#06	**Demonstrate** effective teamwork, collaboration, and leadership skills throughout the project implementation.	Applying	PI 5.1 PI 5.2 PI 5.3 PI 5.4
CLO#07	**Adhere** to ethical and professional standards in all aspects of the project, including data privacy, security, and intellectual property considerations.	Applying	PI 4.2 PI 4.3
CLO#08	**Apply** critical thinking, innovative approaches, and emerging trends to enhance the project's effectiveness and impact.	Applying	PI 1.4 PI 4.4

CLO-PI-SO Mapping

	SOs					
CLOs	**SO1**	**SO2**	**SO3**	**SO4**	**SO5**	**SO6**
CLO#01	-	PI 2.3	-	-	-	PI 6.2
CLO#02	-	PI 2.4	-	-	-	PI 6.3 PI 6.4
CLO#03	PI 1.3	-	-	-	-	PI 6.1 PI 6.3 PI 6.4

CLO#04	-	-	PI 3.1	-	-	-
CLO#05	-	-	PI 3.2 PI 3.3 PI 3.4	-	-	-
CLO#06	-	-	-	-	PI 5.1 PI 5.2 PI 5.3 PI 5.4	-
CLO#07	-	-	-	PI 4.2 PI 4.3	-	-
CLO#08	PI 1.4	-	-	PI 4.4	-	-

Approvals

Prepared by **Course Coordinator**	Dr. Ali Ahmad		
Approved by **Track Leader**	Dr. Jayabrabu	**TL** **Signature**	
Last updated	August 18, 2024		