



COLLEGE OF COMPUTING STUDIES

JRMSU-CCS-003-C

Program: BS INFORMATION SYSTEMS

Department: INFORMATION SYSTEMS DEPARTMENT

Instructor/Professor: ANDREW GALLEMIT

COURSE SYLLABUS

Pre-Requisites: CC 105 Unit of Credit: 3 units No. of Hours: 90 hours [18 weeks]	Course Code	CC 106	Day & Time: LEC – MW- 8:00 AM-9:00 AM /F- 8:00 AM-10:00 AM LAB – MW-9:00-10:30 AM/ TTH 10:30 AM-12:00 PM Room: PHYS LAB (CAS)/ COMP LAB 1/ 4in1 LAB Consultation Hours: F-3:00-4:00 PM
	Course Title	APPLICATION DEVELOPMENT AND EMERGING TECHNOLOGIES	

PHILOSOPHY	Jose Rizal Memorial State University believes in the transformative power of education, cultural diversity and technology to create positive societal change.
VISION	A Smart UniverCity, locally and globally, that inspires excellence, fosters innovation, and promotes sustainable development for the betterment of society.
MISSION	Jose Rizal Memorial State University pledges to deliver effective and efficient services along instruction, research, extension and production. It commits to provide a Smart UniverCity to foster adaptable learning with technology and innovation for student success, forge partnerships to tackle challenges and drive sustainable progress and ensure academic excellence, ethics, and accountability in all operations.
GOALS	<p>Jose Rizal Memorial State University aimed at transforming the university into a dynamic and forward-thinking institution that prioritizes innovation, collaboration, sustainability, and inclusivity, in a S.M.A.R.T approach:</p> <p>S - Strategic Modernization and Responsive Technologies along mandated functions</p> <p>M - Maximized Stakeholders Glocal Collaboration and Connectivity</p> <p>A – Accountable Participatory Governance and Sound Fiscal Management</p> <p>R- Resilient to internal and external risks and hazards</p> <p>T- Transformative Livability and Inclusive Environment</p>
CORE VALUES	R- esilience I-negrity Z-eal for Excellence A-ltruism L-eadership

PROGRAM OUTCOME/S addressed by the Course	<p>ISO1: Effectively bridge the technical and the management communities within an organization to ensure that the organization has the information and the systems it needs to support its operation.</p> <p>ISO2: Design, develop and implement a strategic computing solutions and services using innovative and appropriate methods and modern computing tools for information systems practice to help organizations to achieve a competitive advantage.</p> <p>ISO4: Collaborate with other experts in the field to create opportunities and search for powerful techniques to bring out the best for the organization in a form of information systems.</p> <p>ISO5: Utilize computing technologies that conform to professional, ethical and legal practices and develop IS solutions with appropriate consideration for business, information security, public health and safety, cultural, societal, and environmental concerns.</p>
COURSE DESCRIPTION	This course focuses on the development of applications using web, mobile and emerging technologies. Emphasis on requirements management, interface design, usability, testing, deployment, including ethical and legal considerations will be given.

COURSE OUTCOMES	LEARNING OUTCOMES	TOPICS	REFERENCES	LEARNING ACTIVITIES	LEARNING MATERIALS	FORMATIVE ASSESSMENT	SUMMATIVE ASSESSMENT
Demonstrate Filipino patriotism, responsible citizenship and pride as a member of JRMSU community.	<p>Associate awareness and appreciation of the University's Vision, Mission & Quality Policy, College Goals, and Program objectives.</p> <ul style="list-style-type: none"> Demonstrate understanding of the classroom policies, course requirements, and grading system. 	JRMSU VMGO, Classroom Policies, Course Overview, Course Requirements, Grading System	JRMSU Manual	Oral recitation	JRMSU Faculty Manual Student Handbook	Articulate the Vision, Mission and Goals of the College of Business Administration Verbalize the classroom's policies, course requirements	Demonstrate Filipino patriotism, responsible citizenship and pride as a member of JRMSU community.
Illustrate how an emerging device could change the design of an interface for an application.	• Explain SDLC & trends	Intro to Application Development	• Sommerville, Ian. Software Engineering, 10th Ed.	Lecture, discussion	Laptop/ Computer, Projector, E-book	Quiz	MIDTERM EXAMINATION
	• Create wireframes	Requirements Analysis, UI/UX	• Freeman, Eric. Head First Design Patterns, 2nd Ed.	Workshop	Laptop/ Computer, Projector, E-book	Quiz, Lab output	
	• Compare frameworks	Modern Dev Frameworks	• Sommerville, Ian. Software Engineering, 10th Ed.	Demo, hands-on coding	Laptop/ Computer	Quiz, Lab output	

	<ul style="list-style-type: none"> • Build responsive pages • Create REST API • Connect app to DB • Deploy apps to cloud • Integrate IoT data • Use AI APIs • Implement authentication 	<ul style="list-style-type: none"> Front-End Development Back-End Development Database Integration Cloud Computing IoT Integration AI Integration App Security 	<p>Online Resources:</p> <ul style="list-style-type: none"> • MDN Web Docs https://developer.mozilla.org/en-US/ • freeCodeCamp https://www.freecodecamp.org/ • W3Schools https://www.w3schools.com/ <p><small>BEFORE AND AFTER CODING</small></p>	<ul style="list-style-type: none"> Coding lab Coding lab Hands-on Workshop Hands-on Workshop Coding lab 	<ul style="list-style-type: none"> Laptop/ Computer 	<ul style="list-style-type: none"> Lab output 	FINAL EXAMINATION
	<ul style="list-style-type: none"> • Build cross-platform app • CI/CD pipelines 	<ul style="list-style-type: none"> Mobile App Development DevOps Basics 	<p>W3Schools https://www.w3schools.com/</p> <p>Online Resources:</p> <ul style="list-style-type: none"> • MDN Web Docs https://developer.mozilla.org/en-US/ • freeCodeCamp https://www.freecodecamp.org/ • W3Schools https://www.w3schools.com/ 	<ul style="list-style-type: none"> Coding lab Workshop 	<ul style="list-style-type: none"> Laptop/ Computer Laptop/ Computer 	<ul style="list-style-type: none"> Lab output Lab output 	

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	• Final project proposal	Project Planning		Group work	Laptop/ Computer	Proposal submission	Project
	• Build core features	Project Implementation 1		Group work	Laptop/ Computer	Progress check	
	• Integrate emerging tech	Project Implementation 2		Group work	Laptop/ Computer	Progress check	
	• Present and defend project	Final Presentation		Defense	Laptop/ Computer	Final Output	

REFERENCES

Sommerville, Ian. Software Engineering, 10th Ed.

Freeman, Eric. Head First Design Patterns, 2nd Ed.

Before and After Coding: A learning Package for CC106-Application Development and Emerging Technologies by Andrew Gallemi

Online Resources:

AWS (), Azure, Google Cloud Docs

• MDN Web Docs

<https://developer.mozilla.org/en-US/>

• freeCodeCamp

<https://www.freecodecamp.org/>

• W3Schools

<https://www.w3schools.com/>

GRADING PLAN

The term grade is computed using the formula:

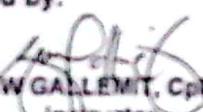
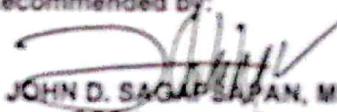
Quizzes	10%
Lab Exercises	30%
Midterm Exam	15%
Final Exam	15%
Research Paper (Emerging Tech)	30%

The Final Project is computed using the formula:

40% - Performance Tasks
50% - Panel members rating
100% Total

CLASSROOM RULES AND CONDUCT

1. Course requirements must be submitted on time.
2. Plagiarism is strictly prohibited. Be aware that plagiarism in this course would include not only using another's words, but another's specific intellectual posts in social media. Assignments must be done independently and without reference to another student's work. Any outside sources used in completing an assignment, including internet references must be fully cited on any homework assignment or exercise.
3. Academic accommodations are available for students with special needs. Students with special needs should schedule an appointment with the instructor early in the semester to discuss any accommodations for this course.

Prepared by:	Noted by:	Recommended by:	Approved/Disapproved:
 ANDREW GALEMIT, CpE, MSIT Instructor	 MEDELYN S. GAHUMAN, MIS BSIS Program Chair	 JOHN D. SAGAPAHAN, MSIT CCS Associate Dean	 JAY D. TELEN, Ph.D., VP for Academic Affairs
Date: AUG. 19, 2025	Date: AUG. 19, 2025	Date: AUG. 20, 2025	Date: 08/19/2025

Date Revised:

8/19/2025