

Noorul Islam Centre for Higher Education

(Deemed to be University u/s 3 of the UGC Act 1956)

Kumaracoil, Thuckalay, Kanyakumari District - 629 180

Accredited by NAAC with 'A' Grade

SE25 M.E SOFTWARE ENGINEERING



Student Performance and Learning Outcomes

SE25 M.E SOFTWARE ENGINEERING

ProgrammeOutcome - PO	
PO-A	Knowledge – Applying knowledge to analyze the engineering problems and to come out with innovative ideas.
PO-B	Problem Analysis – Ability to analyze, design, implement and evaluate a computational system which meets the desired requirements as specified.
PO-C	Usage of tools - Apply the suitable tools to make the processes easier and to solve the engineering problems successfully.
PO-D	Ethics – Understanding the professional and ethical responsibilities to behave with positive attitudes.
PO-E	Societal Role - An ability to understand the impact of engineering in the society to make the survival better.
PO-F	Team Work - Ability to do the tasks individually and to coordinate with the team members to get the perfect results and to reach the project goals.
PO-G	Communication - Presentation of the findings in the field of specialization effectively with good communication skills and presentation skills.
PO-H	Research –Research methods are used for the design, analysis and interpretation of data. Investigations are made using research based knowledge to find new solutions with creativity.
PO-I	Life Long Learning - Making learning a continuous process to excel in the new technological environments.

PROGRAMME SPECIFIC OUTCOMES - PSO	
PSO-1	Foundation – The graduates will have a strong foundation in Mathematics and Engineering which enables them to apply their knowledge in various tasks of Software Engineering.
PSO-2	Development and Process – The software engineering practices including requirements engineering, analysis, prototyping, design, implementation, testing, maintenance, management of risks are applied effectively in the system development process with the help of appropriate tools and techniques.
PSO-3	Quality – The basic software quality assurance practices are applied to ensure that the software designs and development meet the standards.
PSO-4	Professionalism and Adaptability – The graduates are well aware of the ethics, professionalism and cultural diversity in the work environment and they can be effective team members or team leaders ready to learn new things and adapt to the new software engineering environments.

Sl.No	Subject Code	Subject Name
SEMESTER II		
1.	SE2505	Software Requirements Engineering
2.	SE2506	Software Architecture
3.	SE2507	Software Testing and Quality Assurance
4.	SE2508	Software Security
5.	SE2509	Business Intelligence
6.	SE25A9	Wireless Technology
7.	SE2572	Software Development Laboratory
SEMESTER IV		
8.	SE25P5	Project Work Phase-II

SE2505- Software Requirements Engineering	
CO1	Develop effective functional and non-functional requirements that are complete, concise, correct, consistent, testable and unambiguous.
CO2	Select the appropriate requirements elicitation techniques to identify requirements..
CO3	Effectively analyze requirements and prioritize accordingly.
CO4	Create a requirements specification to communicate requirements to a broad set of stakeholders.
CO5	Utilize various requirements validation techniques to critically evaluate their requirements to identify defects

SE2506- Software Architecture	
CO1	Understand the architecture, creating it and moving from one to any, different structural patterns
CO2	Analyze the architecture and build the system from the components.
CO3	Recognize major software architectural styles, design patterns, and frameworks.
CO4	Analyze the architectural concerns for designing and evaluating a system's architecture.
CO5	Evaluate the current trends and technologies such as model-driven and service-oriented architectures

SE2507- Software Testing and Quality Assurance	
CO1	Understand the importance of software testing and its role in assuring quality.
CO2	Get a thorough idea on the types of testing and knowing which test to apply in appropriate situations.
CO3	Get familiarized with the automation of software testing and management of testing.
CO4	Explore on the software quality assurance techniques.
CO5	Use the software quality assurance in software project management.

SE2508- Software Security	
CO1	Understand the security issues relating to system development
CO2	Know software development techniques to avoid security problems
CO3	Familiarize common security threats, risks, and attack vectors for software systems
CO4	Evaluate common security testing tools for a variety of testing purposes
CO5	Gain knowledge on how the vulnerabilities may be exploited in practice from penetrating a system.

SE2509- Business Intelligence	
CO1	Understand the basics of business intelligence system.
CO2	Understand various knowledge delivery techniques.
CO3	Gain knowledge on different efficiency measures and efficiency analysis methods.
CO4	Understand the modeling aspects behind Business Intelligence.
CO5	Gain knowledge on various applications and future trends of business intelligence.

SE25A9- Wireless Technology	
CO1	Describe the basics of wireless medium and modeling techniques.
CO2	Demonstrate the different wireless technologies such as CDMA, GSM, GPRS, etc.
CO3	Apply mobility management in deploying the wireless network infrastructure.
CO4	Build advanced mobile networks with high data rate.
CO5	Apply IEEE standards to construct advanced communication system.

SE2572- Software Development Laboratory	
CO1	Build a fully functional, interactive, layered, distributed, database-backed software system from the ground-up as part of a small, agile, development team in a laboratory setting.
CO2	Become acquainted with historical and modern software methodologies.
CO3	Understand the phases of software projects and practice the activities of each phase
CO4	Practice clean coding and take part in project management.
CO5	Become adept at such skills as distributed version control, unit testing, integration testing, build management, and deployment.

SE25P5- Project Work Phase-II	
CO1	Demonstrate a sound technical knowledge of their selected project topic.
CO2	Undertake problem identification, formulation and solution.
CO3	Design engineering solutions to complex problems utilising a systems approach.
CO4	Conduct an engineering project
CO5	Demonstrate the knowledge, skills and attitudes of a professional engineer.