Course Name	SOFTWARE SECURITY		Course Code	ITEC-434		
Credit Hours	3		**Contact Hours**	Lec	Lab	Total
				2	2	4

Offered as	☐ University Requirement ☐ College Requirement ☒ Program Requirement ☐ Core ☒ Elective
	☒ ITEC ☐ COMP ☐ CNET

Level	7	**Prerequisite**	ITEC331

Course Description:

This course offers a comprehensive understanding of software security principles and practices. Students will delve into secure software requirements, identifying various security threats, vulnerabilities, and attack vectors impacting software systems. The curriculum includes learning about security policies, risk management strategies, and compliance with security standards. It covers the secure software development life cycle, along with security assessment and audit techniques. Through real-world case studies, students will acquire the skills to identify and mitigate security risks in software development and deployment. By the end of the course, students will be well-equipped with the knowledge and tools to create robust and secure software solutions.

This course will develop the student's ability to learn:

♦ Understand the key concepts, principles, and importance of software security in the development and deployment of software systems.

♦ Identify and analyze secure software requirements, various types of security threats, vulnerabilities, and attack vectors that can compromise software applications.

♦ Contrast security policies, risk management strategies, and compliance requirements to ensure adherence to industry standards and best practices.

♦ Evaluate secure software development life cycle, and security assessments and audit techniques to identify potential security risks and recommend mitigation strategies.

♦ Communicate effectively with stakeholders regarding software security issues, solutions, and best practices.

Assessment Methods	☒ Mid-term **Exam**	15%	☒ **Assignment-1**	10%		
	Assignment-2	15%	☒ **Lab Exam**	20%	☒ **Final Exam**	40%

Text Book:

• Suhel Ahmad Khan, Rajeev Kumar, Raees Ahmad Khan,"Software Security: Concepts & Practices", CRC Press, 1st Edition, ISBN-10: 1032356316 | ISBN-13: 9781032356310, 2023.

 Erik Fretheim, Marie Deschene,"Secure Software Systems: Design and Development", Jones & Bartlett Learning, 1st Edition, ISBN-10: 1284261158 | ISBN-13: 9781284261158, 2023.

Reference Books:

♦ Loren Kohnfelder,"Designing Secure Software: A Guide for Developers", No Starch Press, 1st Edition, ISBN-10: 1718501927 | ISBN-13: 9781718501928, 2021.

♦ James F. Ransome & Anmol Misra & Mark S. Merkow,"Practical Core Software Security: A Reference Framework", CRC Press, 1st Edition, ISBN-10: 1032333144 | ISBN-13: 9781003319078, 2023.