

Semester 2
Paper 201: Mobile Eco- System Security

Marks: 100

Lectures 60

Objective: At time when companies are looking at not only a mobile first approach but a mobile only approach, the cell phone revolution has hit both the enterprise and the consumer market in a massive way. Its entire eco system needs to be very carefully understood , and the various attacks which can be possible at each stage needs to be carefully, practically performed in order to understanding how to protect the entire mobility ecosystem, which is going to be one of the most important pillars of transforming an organisation into a digital organisation.

Unit I: Introduction to Mobile Eco-System Security

Mobile Security Model, Enterprise Mobile Environment, Mobile Crypto Algorithm.

Unit II: Mobile Eco-System Technology

Mobile Devices - features and security concerns, Platforms, Applications - development, testing and delivery

Unit III: Mobile Eco-System Networks

Cellular Network - baseband processor and SIM card, GSM encryption and authentication and other attacks, WIFI Networks - public hotspots and enterprise WLANs, SSL/TLS , Web Technologies - server-side and client side web applications

Unit IV: Management

Enterprise Mobility Program, Transactions Security, File Synchronization and Sharing, Vulnerability Assessments, BYOD Device Backup, Data Disposal/Sanitization, NAC for BYOD, Container Technologies, Exchange ActiveSync (EAS), Mobile Authentication, Mobile Management Tools

Unit V: Scenario Testing

Cellular Attacks, Attacking Web Interface, Wireless Attacks, SSL attacks, Android, iOS

Suggested Readings:

1. Fried, S. (2010). *Mobile device security: A comprehensive guide to securing your information in a moving world*. Boca Raton, FL: Auerbach Publications.
2. Stuttard, D. & Pinto, M. (2011). *The web application hacker's handbook: Discovering and exploiting security flaws* (2nd ed.). Indianapolis, IN: Wiley, John & Sons.
3. Dwivedi, H., Clark, C., & Thiel, D. (2010). *Mobile application security*. New York: McGraw-Hill Companies.