Technology in Banking

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Technology in Banking	4	3	1	0	Pass in Class XII	NIL

Learning Objectives
The course aims to make the students conversant with different aspects of technology used in banking and issues related to banking products in terms of delivery, security and controls with reference to India.

Learning Outcomes
After completion of the course, learners will be able to:
1. Describe the basic concepts of electronic banking.
2. Analyze the various electronic payment systems available.
3. Discuss the Electronic Fund Transfer system.
4. Recognise different types of security threats in Indian Banking.
5. Recognise E-Banking Regulations in India and discuss the concept of cloud computing.

Course Contents:
Unit 1: E-Banking (7 hours)
E-Banking: Definition, need for e-banking, types of e-banking, services offered, comparison between e-banking and internet banking.

Unit 2: Electronic Payment System and Electronic Fund Transfer System (20 hours)
Overview of Electronic Payment System: Automated Teller Machine (ATM), Mobile Banking (Using Smart phones and traditional phones), Unified Payments Interface (UPI), GPay, Paytm, PhonePe, Amazon Pay, MobiKwik, Bharat Interface for Money (BHIM). Payment Gateways: PayPal, PayUMoney, CCAvenue, etc. Card Technologies, MICR electronic clearing. Credit Card and Debit Card (Features, Verification Process, Advantages, Disadvantages), and other modern methods of electronic payments. Electronic Credit and Debit Clearing: NEFT, RTGS, DNS, ECS (Credit/Debit), IMPS, VSAT, SWIFT Code. Features, advantages and limitations of E-money, Electronic purse, Digital Cash.

Unit 3: Security Threats (11 hours)
Security Threats in e-banking Environment: Viruses, Worms, Malwares, Software Bombs, Phishing, Spoofing, Spamming, Denial of Service Attacks, Application based Digital Frauds. Technology Solutions: Digital Signature, Encryption, Protection, Multiple Step Verification.

Unit 4: E-Banking Regulations and Cloud Computing (7 hours)
Legal and regulatory issues of e-banking in India. Definition of Cloud Computing. Significance and Challenges of Cloud Computing.

Exercises:
The learners are required to:
1. Compare different types of e banking services offered in India.
2. Compare various electronic payments systems in India.
3. Evaluate the Electronic Fund Transfer system in India.
4. Discuss case studies on security breaches in case of e-banking.
5. Discuss the regulatory issues in e-banking in India.
6. Evaluate the growth of cloud computing in recent times.

Suggested Readings
- Kaptan, S.S., & Choubey, N.S. (2017). Indian banking in electronic era. India: Sarup & Sons.
- Deva, V. (2018). E-banking. Delhi, India: Common Wealth Publishers.
- Uppal, R.K. (2018). Banking with technology. (1st ed.). Delhi, India: New Century Publications.
- Uppal, R.K., & Jatana, R. (2020). E-banking in India. Delhi, India: New Century Publications.

Additional Resources
- Khan, M.Y. (2017). Indian financial system. Delhi, India: Tata McGraw Hill Publishing Company Ltd.
- Desai, V. (2015). Indian banking-nature and problems. (2nd ed.). Mumbai, India: Himalaya Publishing House.
- Uppal, R.K., & Pooja (2016). Transformation in Indian banks-search for better tomorrow. Delhi, India: Sarup Book Publishers Private Ltd.

Note: Suggested readings will be updated by the Department of Commerce and uploaded on the Department's website.