SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under section 3 of the UGC Act, 1956)

Re-accredited by NAAC with 'A++' Grade | Awarded Category – I by UGC

Founder: Prof. Dr. S. B. Mujumdar, M. Sc., Ph. D. (Awarded Padma Bhushan and Padma Shri by President of India)

Course Name: AI for Banking and Finance

Course Code: TE7533

Faculty: Engineering

Course Credit: 3

Course Level: 3

Sub-Committee (Specialization): Artificial Intelligence and Machine Learning

Learning Objectives:

Students will be able to1. understand the fundamentals of smart banking and finance

2. able to outline various Smart Banking and Finance Data Strategies and Governance

3. learn the concepts of digital banking and finance

4. implement real-time AI based banking and finance solutions

Books Recommended:

Book	Author	Publisher
Smart device contributing to realizing Smart Society, and the relating International Standards	IEEE	https://ieeexplore.ieee.org/document/8105497

Course Outline:

Sr. No.	Topic	Actual Teaching Hours	Contact Hours Equivalence
1	**Introduction to Bigdata, AI and machine learningBig-data tools and techniques, pitfalls of big-data, Introduction AI/ML , Supervised learning, Unsupervised, traditional analytics vs AI/ML based analytics, Introduction to the concepts of Smart Society and Smart Cities, Data-warehouses vs Data-grids, Cloud Infrastructures.**	8	8
2	**Smart Banking and Finance Data Strategies and GovernanceIntroduction the concepts of Smart Banking and Finance, Technology explosion, data-driven organizations, data management framework, machine learning pipeline, characteristics of building and managing analytical data teams, Digital Banking and Finance.**	9	9
3	**State of the art technologies of Banking and FinanceIntroduction to AI tools, frameworks and platforms, AutoML, Cutting Edge Developments, Trust and Ethics in AI, Explainable AI, Security and Access, Privacy issues in Banking and Finance, Biometric Data Processing, Cognitive AI, Robotics and Automation, Introduction to Quantum Computing, Impacts of Quantum Computing in Business and Society, Crypto-currency and block chaining concepts.**	18	18
4	**Use-cases of Smart Societies: Use-cases: Wireless Banking: Japan case study, Credit Decisions, Risk Management using AI, Fraud Prevention using AI, Trading using AI, Personalized Banking, Banking and Finance Process Automation using AI.**	10	10
	Total	**45**	**45**

Pre Requisites:

None

Evaluation:

A) Continuous Assessment (75 marks)

1. Essential

a) Assignments b) Research Papers c) Mini-projects d) Viva

B) End Semester Examination:

a) Assignments b) Research Papers c) Mini-projects d) Viva

Pedagogy:

1. Interactive Teaching Learning
2. Project based Learning
3. Hands-On sessions
4. Case Study discussions

Expert:

Dr. Ketan Kotecha,Professor,SIT

Dr. Sharnil Pandya,Associate Professor (CS and IT),SIT

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