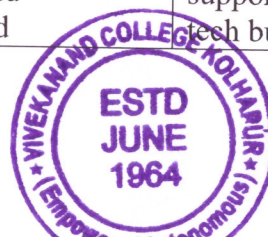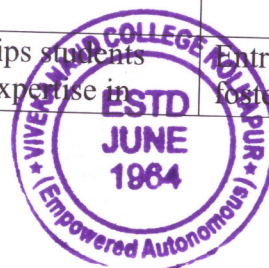## Shri swami Vivekanand Shikshan Sanstha's
Vivekanand College (An Empowered Autonomous), Kolhapur
Department of MCA
Curriculum relevance: Course contents with focus on Employbility /Entraprenaurship /Skill development (PG) 2024-25 to 2025-26
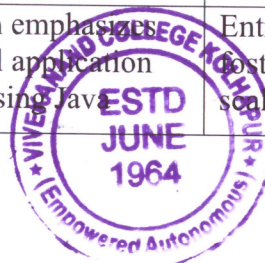
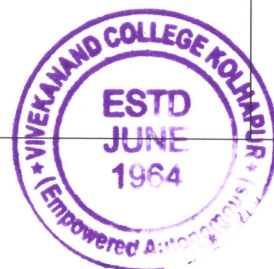| Sr. No.	Course Code	Course Titles	Year of Introduction	Employability	Entrepreneurship	Skill Development
1	DSC36DST11	Data Structure using C++	2024-25	The course emphasizes practical skills like designing efficient data structures (e.g., arrays, linked lists, trees) using C++, aligning with industry demands for software development roles.	Project-based assignments encourage creating marketable solutions, like inventory management systems, fostering entrepreneurial thinking.	Debugging, optimization, and algorithm analysis exercises build critical technical skills for real-world software development.
2	DSC36DBM11	Database Management System	2024-25	Practical exercises, such as optimizing queries and designing ER diagrams, prepare students for technical interviews and certifications like Oracle SQL.	Students learn to develop scalable database solutions for startups, such as customer management systems or e-commerce platforms, fostering innovative business ideas.	Hands-on labs in query optimization, indexing, and normalization using tools like MySQL or MongoDB enhance technical proficiency in managing large-scale data.
3	DSC36CNW11	Computer Networks	2024-25	The curriculum integrates industry-aligned modules such as Software Defined Networking, Cloud Infrastructure, and	Entrepreneurial thinking is fostered through innovation labs, startup incubation support, and coursework on tech business models,	Skill development is prioritized via project-based learning, interdisciplinary electives, and exposure

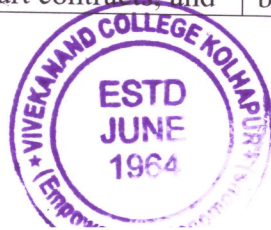|				Cybersecurity, enhancing employability through hands-on training and certification pathways.	enabling students to translate network solutions into viable ventures.	to tools like Wireshark, GNS3, and AWS, ensuring graduates are both technically proficient and innovation-ready.
4	DSC36OSA11	Advance Operating System	2024-25	The curriculum emphasizes cutting-edge topics like distributed systems, mobile OS architectures, and concurrency control, equipping students with in-demand skills for roles in system design, cloud infrastructure, and embedded computing.	Entrepreneurial capabilities are nurtured through modules on OS customization, kernel-level programming, and performance optimization, enabling students to develop innovative system-level solutions and launch tech ventures.	Skill development is reinforced via hands-on labs, simulation tools, and real-world projects, fostering proficiency in tools like Linux, ARM-based systems, and virtualization platforms essential for both industry and research.
5	DSC36CYS11	Cyber Security	2024-25	The curriculum equips students with industry-relevant skills in ethical hacking, cryptography, digital forensics, and cloud security, preparing them for high-demand roles such as cybersecurity analyst, incident responder, and security consultant	Entrepreneurial potential is fostered through modules on cyber law, risk management, and secure software development, enabling students to launch cybersecurity startups or develop innovative security solutions for emerging digital threats	Skill development is enhanced via hands-on labs, real-world simulations, and industrial training, ensuring proficiency in tools like Kali Linux, Wireshark, and Metasploit, while promoting critical thinking and problem-solving abilities
6	DSC36OOP21		2024-25	The course equips students with practical expertise in	Entrepreneurial skills are fostered through project-	Skill development is enhanced via hands-on

		Object Oriented Programming with Python		Python's object-oriented paradigms, enabling them to build scalable applications and pursue roles in software development, automation, and data engineering.	based learning, where students design and deploy Python-based solutions for real-world problems, encouraging innovation and startup readiness.	training in frameworks like Django and Flask, version control tools like Git, and collaborative coding practices, ensuring graduates are industry-ready and adaptable.
7	**DSC36WEB21**	Advance Web Technology	**2024-25**	The curriculum emphasizes full-stack development, responsive design, and cloud integration using modern frameworks like React, Node.js, and Django, preparing students for high-demand roles in web and software development.	Entrepreneurial skills are cultivated through project-based learning, startup incubation support, and modules on scalable web architecture, enabling students to build and launch innovative digital platforms.	Skill development is reinforced via hands-on training in UI/UX design, API development, and deployment tools like Docker and GitHub, ensuring graduates are technically proficient and industry-ready.
8	**DSC36SEG21**	Software Engineering	**2024-25**	The curriculum emphasizes agile methodologies, software architecture, and DevOps practices, equipping students with industry-ready skills for roles in software development, quality assurance, and systems design.	Entrepreneurial capabilities are nurtured through modules on product lifecycle management, innovation strategy, and tech startup incubation, enabling students to transform software ideas into scalable ventures.	Skill development is reinforced via hands-on projects, collaborative coding, and exposure to tools like Git, JIRA, and CI/CD pipelines, fostering both technical proficiency and problem-solving acumen.
9	**DSC36ADJ21**	Advance Java Programming	**2024-25**	The curriculum emphasizes enterprise-level application development using Java	Entrepreneurial skills are fostered through modules on scalable architecture, API	Skill development is reinforced via hands-on projects, version

				frameworks like Spring and Hibernate, preparing students for roles in backend development, software engineering, and cloud-based solutions.	integration, and mobile app development, enabling students to design and deploy innovative Java-based products and services.	control practices, and exposure to tools like Eclipse, IntelliJ IDEA, and Maven, ensuring graduates are proficient in modern software development workflows.
10	DSC36INS21	Information Security	2024-25	The curriculum covers critical areas such as network security, ethical hacking, cryptography, and incident response, preparing students for high-demand roles like security analyst, penetration tester, and cybersecurity consultant.	Entrepreneurial skills are fostered through modules on cyber risk management, secure software development, and digital forensics, enabling students to build innovative security solutions and launch cybersecurity ventures.	Skill development is reinforced through hands-on labs, simulation exercises, and exposure to tools like Kali Linux, Metasploit, and SIEM platforms, ensuring graduates are technically proficient and industry-ready.
11	DSC36CCM21	Cloud Computing	2024-25	Providing industry-relevant skills in cloud platforms, virtualization, and cloud services.	It fosters **entrepreneurship** through practical exposure to cloud-based business models, start-ups, and scalable solutions	Focus on **skill development** is ensured by hands-on labs, real-world projects, and certifications that prepare learners for cloud careers and innovation.

				The course enhances **employability** by equipping learners with practical skills in data analysis, machine learning models, and AI tools widely used in industry.	It promotes **entrepreneurship** by encouraging innovation and AI-driven solutions for real-world problems.	A strong focus on **skill development** is ensured through hands-on projects, case studies, and exposure to emerging AI technologies.
12	DSC36AIM31	Artificial Intelligence & Machine Learning	2025-26			
13	DSC36DAN31	Data Analytics Using Python	2025-26	The course builds **employability** by training learners in Python programming, data handling, visualization, and analytics tools demanded by industry	It supports **entrepreneurship** by enabling data-driven decision-making and developing innovative business solutions.	Emphasis on **skill development** is achieved through practical exercises, projects, and case studies using real-world datasets.
14	DSC36ETH31	Ethical Hacking	2025-26	The course enhances **employability** by equipping learners with in-demand skills in cybersecurity, penetration testing, and network defense.	It fosters **entrepreneurship** by preparing learners to build cybersecurity solutions and services for businesses.	Strong focus on **skill development** is ensured through hands-on labs, simulations, and real-world security case studies.
15	DSC36NLP31	Natural Language Processing	2025-26	The course strengthens **employability** by providing expertise in text processing, sentiment analysis, and NLP frameworks widely used in industry	It encourages **entrepreneurship** through the development of intelligent language-based applications and innovative AI solutions.	Emphasis on **skill development** is ensured via practical projects, case studies, and implementation of real-world NLP applications.
16	DSC36BCT31	Blockchain Technology	2025-26	The course boosts **employability** by imparting skills in distributed ledger systems, smart contracts, and	It nurtures **entrepreneurship** through exposure to blockchain-based business models,	A strong emphasis on **skill development** is ensured via hands-on labs, projects, and real-

				blockchain frameworks demanded by industry.	fintech innovations, and decentralized applications.	world blockchain case studies.

HEAD
DEPARTMENT OF M. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)