Programme	B. Sc. Computer Science				
Course Code	CSC2FM106				
Course Title	Digital Empowerment through Ethical Standards				
Type of Course	**MDC**				
Semester	II				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	3	3	-	-	45
Pre-requisites	Basic understanding of computers				
Course Summary	This course explores the evolution from pre-digital challenges to the current digital landscape, covering historical milestones, key technologies, and the vision of Digital India. It emphasizes the benefits and importance of digital revolution while addressing ethical and security considerations. Participants engage with digital tools for personal and professional growth and examine case studies on digital infrastructure, missions, and services to understand real-world applications.				

Course Outcomes (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Students will be able to analyze the challenges of the pre-digital age and comprehend the importance and benefits of digital revolution, facilitating a deeper understanding of technological evolution.	An	F	Instructor-created exams / Quiz
CO2	Participants will gain familiarity with key digital technologies like Cloud Computing, IoT, AI, and Blockchain, equipping them with the knowledge to identify their applications and potential benefits in different sectors.	U	C	Instructor-created exams/ Home Assignments
CO3	Students will develop insights into Digital India initiatives and emergence of Kerala as Digital Society	U	C	Instructor-created exams
CO4	Through exploration of digital tools	Ap	P	Instructor-

		for personal and professional growth, students will enhance their digital literacy and ability in utilizing tools for data sharing, online learning, networking, and content creation, empowering them to thrive in the digital age.			created exams
CO5		Learners will become aware of ethical and security considerations in the digital age, including privacy concerns, Intellectual Property Rights, key terminologies related to cyber security, and an introduction to cyber laws in India, fostering responsible digital citizenship.	U	C	Instructor-created exams
CO6		Students will analyze real-world case studies of digital infrastructure projects, digital missions, and digital services to demonstrate a comprehensive understanding of the practical applications and implications of digital technologies in various contexts, fostering critical thinking and strategic decision-making skills in digital transformation initiatives.	An	C	Instructor-created exams
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)					

Detailed Syllabus:

Module	Unit	Content	Hrs 36+9	Marks (50)
I		**Transition to Digital World**	**7**	**8**
	1	Challenges of Pre-Digital Age	1	
	2	Importance and Benefits of Digital Revolution	2	
	3	Key concepts: digitization, digitalization, digital transformation	1	
	4	Introduction to Key Digital Technologies: Cloud Computing, IoT, AI, Block Chain	3	

		Perspective of Digital India & Digital Innovations in Kerala	11	15
II		**Perspective of Digital India & Digital Innovations in Kerala**	**11**	**15**
	5	Understanding Digital India: Concept, Objectives, and Evolution	1	
	6	Overview of Digital Infrastructure: Broadband Connectivity, Digital Literacy, and Access to Information	2	
	7	Vision of Digital India: DigiLocker, E-Hospitals, e-Pathshala, BHIM, , e-Health Campaigns	3	
	8	Kerala-Emergence as Digital Society : Internet & Mobile Penetration in Kerala, 4 Pillars of Digital Emergence in Kerala (Akshaya Project, IT@School Project, Digital Infrastructure Availability, State Data Centre & allied Applications),	2	
	9	Role of K-DISC in Digital Empowerment	1	
	10	Kerala State IT Mission: Core IT Infrastructure, e-Governance Applications, Service Delivery Platforms,	2	
III		**Digital Tools for Personal and Professional Growth**	**9**	**12**
	11	Digital Tools for Data Sharing: Google Drive, Google Sheets	2	
	12	Digital Tools for Data Sharing: Google Docs, Google Classroom	3	
	13	Online learning platforms and resources (e.g., Coursera, Khan Academy, MOOCs, Duolingo)	2	
	14	Networking Tools: LinkedIn	1	
	15	Content Creation and Management: Canva	1	
IV		**Ethical and Security Considerations in the Digital Age**	**9**	**15**
	16	Understanding privacy in the digital age	1	
	17	Legal and ethical considerations in data collection and processing: Intellectual Property Rights (IPR)	2	
	18	Key Terminologies: Cyber Security, Cyber Crime, Cyber Attack, Cyber Espionage, Cyber Warfare	2	
	19	Authentication, Authorisation	1	
	20	Cyber Crimes and Classification	2	
	21	Introduction to Cyber Laws in India	1	
V		**Open Ended Module: Case Study (One from each set)**	**9**	
	1	Case Study on Digital Infrastructure Projects: (Bharat Broadband Network (BBNL) , Submarine Cable Project, Google Data Center)	3	
	2	Case Study on Digital Mission:	3	

| | 3 | Case Study on Digital Services:

(MyGov.in , Moodle LMS, Digital Payment Services) | 3 | |

(Digital Literacy Missions in Kerala, SmartDubai Project, China's Digital Silk Road)

References

1. "Digital India Importance Needs and Values" by S K Kaushal
2. "Cyber Security in India: Government, Law Enforcement and Corporate Sector" by Vipin M. Chaturvedi and Shivani Kapoor
3. "Information Security: Principles and Practices in Indian Context" by R.S. Pressman, G. Sharma, and G. Sridhar
4. "Introduction to Computer Security" by Michael Goodrich and Roberto Tamassia
5. https://kdisc.kerala.gov.in/
6. https://itmission.kerala.gov.in/

Assessment Rubrics:

- Quiz / Assignment/ Quiz/ Discussion / Seminar
- Midterm Exam
- Final Exam