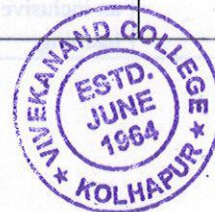Shri Swami Vivekanand Shikshan Sanstha

Vivekanand College, Kolhapur (Autonomous)
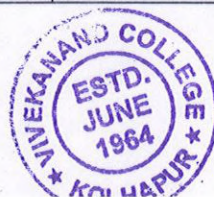## Department of Computer Science

Curriculum relevance: Course contents with cross cutting issues (PG) 2022-23 to 2023-24

Sr. No.	Course Code	Course / SECs Titles	Year of Introduction	Professional Ethics	Gender	Human Values	Environment and Sustainability	Sustainable Development goals	NEP-2020
1.	CC-2500 A	Design and Analysis of Algorithms	2022-23	Highlighting ethical considerations in algorithm design, focusing on fairness, transparency, and responsible algorithmic use.	Promoting gender diversity in algorithmic research and development,	Integrating human values such as transparency, accountability, and ethical decision-making into algorithmic design practices to ensure that algorithms align with societal values and needs.	Discussing the environmental impact of algorithms, including considerations for computational resources and energy consumption, and promoting sustainable algorithmic practices.	Exploring how algorithm design aligns with Sustainable Development Goals in Indian education, contributing to objectives like quality education, reduced inequalities, and responsible consumption and production.	Following to the principles and recommendations outlined in the National Education Policy-2020, which encourage a multidisciplinary and holistic education. This includes fostering creativity, critical thinking, and innovation in the context of algorithm design and analysis.
2.	CC-2501 A	Python Programming	2022-23	Highlighting the importance of ethical coding practices in Python programming, including issues related to data privacy, security, and responsible development of software applications.	Promoting an inclusive learning and research environment for all students.	Integrating human values such as collaboration, empathy, and social responsibility into the curriculum to ensure that Python programming is approached with consideration for the well-being and needs of users.	Discussing the environmental impact of software applications developed using Python, including considerations for server energy consumption and promoting sustainable coding practices.	Python programming can contribute to goals such as good health, quality education, and reduced inequalities through the development of impactful software solutions.	This includes fostering creativity, critical thinking, and innovation in the context of Python programming in NEP-2020.

No.	Course Code	Course Title	NEP-2020					
3.	CC-2502 A	Database Management System	2022-23	Ethical considerations in handling of sensitive information.	Promoting gender diversity in database management	Integrating human values such as integrity, transparency, and user-centric design into the curriculum to ensure that database management systems are developed with consideration for the well-being and needs of users.	Discussing the environmental impact of database management systems, including considerations for energy consumption, data storage, and promoting sustainable data management practices.	Database technologies can contribute to goals such as quality education, reduced inequalities, and responsible consumption and production in Sustainable development.	Included creativity, critical thinking, and innovation in the context of database management in NEP-2020.
4.	CC-2503 A	Cyber Security	2022-23	The issues related to responsible disclosure, respecting user privacy and following to ethical hacking practices.	Promoting gender diversity in cybersecurity	Integrating human values such as integrity, accountability, and empathy into the curriculum to ensure that cybersecurity professionals approach their work with a focus on protecting individuals and society.	Discussing the environmental impact of cybersecurity practices, including considerations for energy consumption in maintaining secure systems and promoting sustainable cybersecurity solutions.	Aligning the study of cyber security with the IT Act to explore how cybersecurity measures can contribute to goals such as peace, justice and strong institutions, as well as partnerships for the goals.	This includes fostering creativity, critical thinking, and innovation in the context of cybersecurity education in NEP-2020.
5.	CC-2506	Web Technology	2022-23	Ethical considerations in web development and technology enhancement.	Promoting gender diversity in web design and development technology	Integrating human values such as accessibility, inclusivity, and user-centric design into the curriculum to ensure that web technologies are developed with consideration for the well-being and needs of diverse users.	Discussing the environmental impact of web technologies	To explore how web technologies can contribute to goals such as quality education, reduced inequalities, and responsible consumption and production for the societal benefits.	This includes fostering creativity, critical thinking, and innovation in the context of web technology in NEP-2020.
6.	CC-2507	Advanced Java	2022-23	the importance of ethical coding practices in advanced Java programming, including issues related to intellectual	Promoting gender diversity in advanced Java programming by providing an inclusive learning	Integrating human values such as collaboration, empathy, and social responsibility into the curriculum to ensure that Java programming is approached with consideration for the	The environmental impact of software applications developed using Java, including considerations for server energy consumption	To explore how Java programming can contribute to goals such as good health, quality education etc.	This includes fostering creativity, critical thinking, and innovation in the context of advanced Java programming

No.	Code	Course	Year						
				property, responsible software development	environment for all students.	well-being and needs of users.			
7.	CC-2508	**Android Development with Kotlin**	2022-23	Responsible app development practices, and to follow the guidelines in the mobile app industry.	Promoting gender diversity in Android application development,	Android apps developed with Kotlin are user-friendly, ethically designed and cater to diverse user needs.	The Environmental impact of mobile app development, including considerations for energy-efficient coding practices and sustainable design choices in Android applications.	To explore how mobile apps can contribute to goals such as quality education, reduced inequalities, and sustainable cities and communities.	This includes fostering creativity, critical thinking, and innovation in the context of Android development with Kotlin in NEP-2020.
8.	CC-2509	**Software Project Management**	2023-24	The ethical considerations in software project management, including issues related to fair project management practices, intellectual property rights, and ethical decision-making in project development.	Promoting inclusive work environment for all team members.	Integrating human values such as teamwork, empathy, and transparency into the curriculum to ensure that software projects are managed with consideration for the well-being and collaboration of team members.	The environmental impact of software development projects, including considerations for energy-efficient coding practices, sustainable project management methodologies, and eco-friendly software development.	To explore how project management practices can contribute to goals such as quality education, reduced inequalities, and sustainable cities and communities.	This includes fostering creativity, critical thinking, and innovation in the context of software project management in NEP-2020.
9.	CC-2512	**Artificial Intelligence**	2023-24	The ethical considerations in AI research and development, including issues related to bias in algorithms, responsible use of AI, and ethical decision-making in AI applications.	Promoting gender diversity in AI	Integrating human values such as transparency, accountability, and fairness into the curriculum to ensure that AI technologies are developed with consideration for the well-being and values of individuals and society.	Discussing the environmental impact of AI technologies, including considerations for the energy consumption of AI models and the carbon footprint associated with training large-scale models.	To explore how AI models can contribute to goals such as good health, quality education, and reduced inequalities.	This includes fostering creativity, critical thinking, and innovation in the context of artificial intelligence.

No.	Code	Course	Year						
10.	CC-2513	**Advanced Web Technology**	2023-24	Ethical considerations in advanced web technology	Promoting gender diversity in advanced web technology	Integrating human values such as accessibility, inclusivity, and user-centric design into the curriculum to ensure that advanced web technologies are developed with consideration for the well-being and needs of diverse users.	Discussing the environmental impact of web technologies, including considerations for server energy consumption, data storage, and promoting sustainable web development practices.	To explore how advanced web technologies can contribute to goals such as quality education, reduced inequalities, and responsible consumption and production.	This includes fostering creativity, critical thinking, and innovation in the context of advanced web technology in NEP-2020.
11.	CC-2514	**PHP**	2023-24	Ethical considerations in PHP programming	Promoting gender diversity in PHP programming	Integrating human values like accessibility, inclusivity and user-centric design into the curriculum to ensure that PHP applications are developed.	The environmental impact of web applications developed using PHP	To explore how PHP programming can contribute to quality education through the development of web applications.	This includes fostering creativity, critical thinking, and innovation in the context of PHP programming in NEP-2020.
12.	CC-2515	**Network Security Analyst**	2023-24	Promoting The importance of professional ethics in network security analysis	Promoting gender diversity in the field of network security	Integrating human values such as trustworthiness, transparency, and ethical decision-making into the curriculum to ensure that network security analysts approach their work with consideration for the well-being and trust of users.	The environmental impact of network security measures, including considerations for energy-efficient security protocols and promoting sustainable cybersecurity practices.	to explore how Network Security measures can contribute to goals such as peace, justice, and strong institutions, as well as partnerships for the goals.	This includes fostering creativity, critical thinking, and innovation in the context of network security analysis.

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