Syllabus of 4 + 1 Year Integrated UG and PG Programme

w. e. f 2024-25 Academic Year

GRADUATE SCHOOL

Mahatma Gandhi University

P. D. Hills P O

Kottayam, Kerala

www.gs.mgu.ac.in

www.mgu.ac.in

Schools offering Majors

SL.No	School/Centre
1	School of Bio Sciences
2	School of Chemical Sciences
3	School of Computer Sciences
4	School of Environmental Sciences
5	School of Gandhian Thought and Development Studies
6	School of International Relations and Politics
7	School of Pure and Applied Physics
8	School of Social Sciences

Sl. No.	Major	Intake
SCIENCE		
1	Bio Sciences	6**
2	Chemistry	6
3	Computer Science	6
4	Environmental Science	6
5	Physics	6
SOCIAL SCIENCES		
1	Development Studies	5
2	Gandhian Studies	5
3	History	10
4	International Relations and Politics	10

Majors offered and Intake *1 seat shall be sanctioned over and above the intake in each major in the 3rd semester for students who opt for a change of major after two semesters.

**Progression to PG Shall be based on the specialization selected by students as Biochemistry (2 seats) Biotechnology (2 seats) and Microbiology (2 seats) based on merit.

Schools offering Minors/MDCs/AECs/VACs/SECs

SL.No	School/Centre
1	School of Artificial Intelligence And Robotics
2	School of Behavioural Sciences
3	School of Biosciences
4	School of Chemical Sciences
5	School of Computer Sciences
6	School of Data Analytics
7	School of Energy Materials
8	School of Environmental Sciences
9	School of Food Science And Technology
10	School of Gandhian Thought And Development Studies
11	School of Gender Studies
12	School of Indian Legal Thought
13	School of International Relations And Politics
14	School of Letters
15	School of Mathematics And Statistics
16	School of Nanoscience And Nano Technology
17	School of Pedagogical Sciences
18	School of Polymer Science And Technology
19	School of Pure And Applied Physics
20	School of Social Sciences
21	School of Tourism Studies
22	International and Inter University Centre for Nanoscience and Nanotechnology
23	K N Raj School of Economics

Scheme & Course Code for 4 + 1 Integrated UG and PG Programme
Graduate School
Mahatma Gandhi University
School of Pedagogical Sciences

Course Code	Title	Credits	Hours per Week		Level	Type
			Theory	Practical		
SEMESTER I						
	Major	4			Foundation (100-199)	
	Minor A	4			"	
	Minor B	4			"	
	MDC	3			"	
MG1MDCUPS101	Educational Technology and Digital Learning	3	2	1	100-199	MDC
MG1MDCUPS102	Environmental Policy and Governance	3	2	1	100-199	MDC
MG1MDCUPS103	Indian Schools of Philosophy and Philosophical Counselling	3	2	1	100-199	MDC
MG1MDCUPS104	Science of Science Education	3	2	1	100-199	MDC
	AEC (Eng)	3			"	
	AEC (Mal)	3			"	
SEMESTER II						
	Major	4			"	
	Minor A	4			"	
	Minor B	4			"	
	MDC	3			"	
MG2MDCUPS105	Digital Communication and social media	3	2	1	100-199	MDC
MG2MDCUPS106	History of Indian Education	3	2	1	100-199	MDC

MG2MDCUPS107	Indian Indigenous Knowledge Systems	3	2	1	100-199	MDC
MG2MDCUPS108	Reflective Teaching Practices	3	2	1	100-199	MDC
	AEC (Eng)	3			"	
	AEC (Mal)	3			"	
SEMESTER III						
	Major	4			Intermediate (200-299)	
	Major	4			"	
	Major	4			"	
	Minor A	4			"	
	MDC	3			"	
MG3MDCUPS201	Curriculum Development: Theories and Application	3	2	1	200-299	MDC
MG3MDCUPS202	Indian Values and Ethos	3	2	1	200-299	MDC
MG3MDCUPS203	Planning and Management of Instruction	3	2	1	200-299	MDC
MG3MDCUPS204	Web Technology in Education	3	2	1	200-299	MDC
	VAC	3			"	
MG3VACUPS205	Teaching and Research Aptitude	3	2	1	200-299	VAC
MG3VACUPS206	Assessment Techniques in OBE	3	2	1	200-299	VAC
SEMESTER IV						
	Major	4			"	
	Major	4			"	
	Major	4			"	

	Minor B	4			“	
	SEC	3			“	
	VAC	3			“	
MG4VACUPS207	Data Analysis and Interpretation in Research	3	2	1	200-299	VAC
MG4VACUPS208	Vedic Mathematics	3	2	1	200-299	VAC
	Internship/Fieldwork	2				
SEMESTER V						
	Major	4			Higher (300-399)	
	Major	4			“	
	Major	4			“	
	Major	4			“	
	SEC	3			“	
	VAC	3			“	
MG5VACUPS209	Child Rights Education	3	2	1	200-299	VAC
MG5VACUPS210	Standardization of Research Tools	3	2	1	200-299	VAC
SEMESTER VI						
	Major	4			“	
	Major	4			“	
	Major	4			“	
	Major (E)	4			“	
	Major (E)	4			“	
	SEC	3			“	
Total Credits		**133**				

SEMESTER VII

	Major	4			Advanced (400-499)	
	Major (E)	4			“	
	Major (E)	4			“	
	Minor A/B	4			“	
	Minor A/B (E)	4			“	
	Minor A/B (E)	4			“	
SEMESTER VIII						
	Major	4			“	
	Major (E)	4			“	
	Research Project	12			“	
	Major*	4			“	
	Major*	4			“	
	Major*	4			“	
	Total Credits	**44**				
SEMESTER IX						
	Major	4			PG Level (500-599)	
	Major	4			“	
	Major	4			“	
	Major	4			“	
	Major	4			“	
SEMESTER X						
	Research Project	20			“	
	Major**	4			“	
	Major**	4			“	
	Major**	4			“	
	Major**	4			“	

	Major**	4			“	
Total Credits		**40**				

*Only for 4-Years Honours Students
**Only for students who opt for theory courses instead of Research Project

Note: General foundations courses shall be offered by different schools. Students can flexibly choose the courses across disciplines.

Level	Foundation (100-199	Intermediate (200-299)	Higher (300-399)	Advanced (400-499)	PG Level (500-599)

Type	Major	Minor	MDC	SEC	VAC	AEC

	MAHATMA GANDHI UNIVERSITY **Graduate School**
	4 + 1 Integrated UG and PG Programme

School	School of Pedagogical Sciences		
Programme	4 + 1 Integrated UG and PG Programme		
Course Title	**Indian Schools of Philosophy and Philosophical Counselling**		
Course Type	MDC (Multidisciplinary Course)		
Course Level	100-199		
Course Code	MG1MDCUPS103		
Course Overview	This course aims to provide students with a comprehensive understanding of the major Indian schools of philosophy, their historical development, and their impact on various aspects of life and thought. It emphasizes critical thinking, analytical reasoning, and the application of philosophical concepts to contemporary issues.		
Semester	1	**Credit**	3
Total Student Learning Time	**Instructional hours for theory**	**Instructional hours for practical/lab work/fieldwork**	
	45 hours	30 hours	
Pre-requisite	• Proficiency in critical reading and writing. • Familiarity with basic philosophical concepts and historical context. • Basic knowledge of Indian culture and history.		

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome *Upon completion of this course, students will be able to;*	Learning Domains	PSO No.
1	Describe the evolution and key concepts of major Indian schools of philosophy.	Cognitive	
2	Analyze the philosophical arguments and theories within Indian schools of philosophy.	Cognitive, Affective	
3	Evaluate the relevance and application of Indian schools of philosophy in contemporary contexts.	Cognitive	
4	Synthesize insights from different Indian schools of philosophy to address modern philosophical questions.	Cognitive, Affective	
5	Develop and present well-reasoned arguments based on the philosophical traditions of India.	Cognitive, Psychomotor	
6	Reflect on the ethical and social implications of Indian philosophical thought.	Cognitive, Affective	

COURSE CONTENT

Module 1: Introduction to Indian Philosophy	10 Hours **(T)**
• Definition and scope of philosophy; significance of studying Indian philosophy. • Historical development and major periods in Indian philosophical thought. • Overview of orthodox (Astika) and heterodox (Nastika) schools.	
Module 2: Orthodox Schools (Astika)	15 Hours **(T)**+ 15 Hours **(P)**
• **Vedanta**: Key concepts, major texts, and leading philosophers. • **Sankhya**: Dualism, prakriti and purusha, and metaphysical concepts. • **Yoga**: Patanjali's Yoga Sutras, eight limbs of yoga, and practice. • **Nyaya**: Logic and epistemology, the Nyaya Sutras. • **Vaisheshika**: Categories (padarthas), atomism, and natural philosophy. • **Mimamsa**: Ritualism, the philosophy of dharma, and interpretive methods. • **Philosophical Counselling**- Practical Sessions	
Module 3: Heterodox Schools (Nastika)	20 Hours **(T)**+ 15 Hours **(P)**
• **Buddhism**: Four Noble Truths, the Eightfold Path, schools of thought (Theravada, Mahayana). • **Jainism**: Anekantavada, Syadvada, and ethics of non-violence (ahimsa). • **Carvaka**: Materialism and skepticism, critique of religion and ethics. • **Ajivikas**: Determinism and the philosophy of niyati (fate). • **Philosophical Counselling**- Practical Sessions	

Mode of Transaction	• **Classroom activities:** ➢ Discussion Circles/Personal Identity and Self-Understanding Sessions ➢ Role-Playing Scenarios/Case Study Analysis ➢ Peer Counselling Sessions • **Field activities:** ➢ Community Engagement Projects/ ➢ Workshops on Coping with Life Transitions/ ➢ Case studies and real-world applications. • **Lab-based activities:** ➢ Philosophical debates
Mode of Assessment	• Portfolio Development on Personal Identity and Self- Understanding • Presentations/Seminar/Assignment • Quizzes/MCQ • Counselling Session Reports • Final exam

Learning Resources

1. Dasgupta, S. (1922-1955). *A History of Indian Philosophy* (Vols. 1-5). Motilal Banarsidass.
2. King, R. (1999). *Indian Philosophy: An Introduction to Hindu and Buddhist Thought.* Edinburgh University Press.

3. Chatterjee, S., & Datta, D. (1984). *An Introduction to Indian Philosophy.* University of Calcutta.
4. Mohanty, J. N. (2000). *Classical Indian Philosophy.* Rowman & Littlefield Publishers.
5. Radhakrishnan, S., & Moore, C. A. (1957). *A Sourcebook in Indian Philosophy.* Princeton University Press.

Books on Philosophical Counselling:

1. Raabe, P. B. (Ed.). (2001). *Philosophical Counseling: Theory and Practice.* Praeger.
2. Marinoff, L. (1999). *Plato Not Prozac! Applying Eternal Wisdom to Everyday Problems.* HarperCollins.
3. Cohen, E. D. (2003). *The Philosophy Clinic: Practical Wisdom at Work.* Mayfield Publishing Company.
4. Koestenbaum, P. (1976). *The Counseling Philosopher: Philosophical Practice, Theory, and Research.* Lexington Books.

Relevance of Learning the Course/ Employability of the Course
Studying Indian philosophy and philosophical counselling cultivates critical thinking, cultural sensitivity, and ethical reasoning. This interdisciplinary approach equips graduates to tackle complex issues in various professions. They can pursue academic roles, contribute to research, and work in counselling, education, corporate, and public sectors. Their skills are valuable in fostering personal growth, addressing societal challenges, and promoting well-being. Overall, this course enhances employability while nurturing individuals' intellectual and ethical capacities.

	MAHATMA GANDHI UNIVERSITY **Graduate School**
	4 + 1 Integrated UG and PG Programme

School	School of Pedagogical Sciences		
Programme	4 + 1 Integrated UG and PG Programme		
Course Title	Educational Technology and Digital Learning		
Course Type	MDC (Multidisciplinary Course)		
Course Level	100-199		
Course Code	MG1MDCUPS101		
Course Overview	This course aims to equip students with the knowledge and skills necessary to effectively integrate technology into educational settings. It covers a range of digital tools and pedagogical strategies, emphasizing the design and implementation of technology-enhanced learning environments.		
Semester	1	**Credit**	3
Total Student Learning Time	**Instructional hours for theory**	**Instructional hours for practical/lab work/fieldwork**	
	45 hours	30 hours	
Pre-requisite	• Proficiency in using common software applications • Familiarity with internet navigation, email communication, and basic troubleshooting of computer-related issues. • Basic knowledge of how students learn, including cognitive processes and motivational factors in education.		

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome *Upon completion of this course, students will be able to;*	Learning Domains	PSO No.
1	*Illustrate* the evolution and impact of educational technology.	U	1,4
2	*Utilize* a variety of digital tools to enhance teaching and learning.	A	2,3,4
3	*Develop* comprehensive lesson plans that incorporate educational technology.	A	1,2,4
4	*Evaluate* the effectiveness of digital learning strategies.	E	1,4,6
5	*Adapt* technology-integrated instructional strategies.	C	1,2,4
6	*Solve* challenges related to digital learning in educational contexts.	C	1,4,5,6

*(Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S))

COURSE CONTENT

Module 1: Foundations of Educational Technology	15 Hours
• Introduction to Educational Technology: Definition and Scope • Technology in Education: A Historical Perspective • Theoretical Frameworks: Behaviourism, Cognitivism, Constructivism • Current Trends and Future Directions: Emerging Technologies in Education. • Principles of Instructional Design: ADDIE model	
Module 2: Digital Tools and Resources for Education	15 Hours
• Interactive Whiteboards and Smart Classrooms • Learning Management Systems (LMS) • Educational Apps and Software: Tools for content creation and collaboration • Open Educational Resources (OER): Finding and utilizing OER • Virtual and Augmented Reality in Education	
Module 3: Designing Technology-Enhanced Learning	15 Hours
• E-Content Development: SWAYAM, MOOC • Blended and Flipped Classroom Models • Creating Digital Content: Videos, interactive modules. • Implementing and Assessing Digital Learning: Digital assessment tools. • Addressing Challenges in Digital Learning: Digital divide and accessibility, managing screen time and online behaviour	

Mode of Transaction	• **Classroom activities:** Lectures, discussions, tool demonstrations. • **Field activities:** Case studies, real-world applications. • **Lab-based activities:** Hands-on workshops, content creation exercises.
Mode of Assessment	• Quizzes • Tool evaluation reports • Presentations • Peer-reviewed projects • Final exam

Learning Resources

- Bates, A. W. (2015). *Teaching in a Digital Age*. Open Textbook.
- Picciano, A. G. (2017). *Theories and Frameworks for Online Education: Seeking an Integrated Model*. Distance Education.
- Selwyn, N. (2011). *Education and Technology: Key Issues and Debates*. Bloomsbury Academic.
- Thamarasseri, I. & Parey, M.A. (2014). *Instructional Technology*. New Delhi: APH Publishing Corporation
- Thamarasseri, I. (2018). *Technology & Innovations in Education*. New Delhi: Wisdom Press

Relevance of Learning the Course/ Employability of the Course
Understanding and effectively using educational technology is crucial in modern educational environments. This course prepares students to become proficient in integrating technology into their learning, enhancing their employability as educators, instructional designers, and educational technologists. They will be equipped to handle contemporary educational challenges, making them valuable assets in schools, colleges, and educational institutions globally.

	MAHATMA GANDHI UNIVERSITY **Graduate School**
	4 + 1 Integrated UG and PG Programme

School	School of Pedagogical Sciences		
Programme	4 + 1 Integrated UG and PG		
Course Title	Science of Science Education		
Course Type	MDC		
Course Level	100-199		
Course Code	MG1MDCUPS104		
Course Overview	The Science Education course is a transformative experience for bachelor's degree students passionate about teaching science. It offers an in-depth exploration of effective science teaching methodologies, curriculum development, and technology integration in education. This course equips aspiring educators with the skills to inspire and engage students through interactive and innovative teaching strategies. Covering both theoretical foundations and practical applications, it prepares students to foster curiosity, critical thinking, and a love for science in their future classrooms. Embark on this journey to become a catalyst for change in science education, shaping the next generation's minds.		
Semester	1	**Credit**	3
Total Student Learning Time	**Instructional hours for theory**	**Instructional hours for practical/lab work/field work**	
	30	30	
Pre-requisite	This course is specifically tailored for bachelor's degree students who are passionate about teaching and learning science. This course requires no prior teaching experience, just a readiness to engage in innovative educational methods and technology integration in learning. With a focus on creativity and an open mind, you're set to inspire future generations and significantly impact science education.		

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains	PSO No.
	Upon completion of this course, students will be able to;		
1	Gain a Comprehensive Understanding of Science Education	U	
2	Elaborate on Planning and Evaluation Techniques in Science Education	E	
3	Implement Diverse Classroom Strategies for Effective Science Teaching	S	
4	Utilise Support Systems and Resource Materials Efficiently	A	
5	Design and Implement Effective Science Education Curricula	C	
6	Foster Inquiry and Critical Thinking Skills	An	

*(Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E) , Create (C), Skill (S))

COURSE CONTENT

Module 1	**Hours**	**CO No**
Science Education: Definitions of Science. Science as a process and product. Aims and Objectives of Teaching Science. Taxonomy of Educational Objectives. General Principles of Curriculum Development. Approaches to Curriculum Organisation.	15	1
Module 2	**Hours**	**CO No**
Planning and Evaluation in Science Education: Planning - Year Plan, Unit Plan, Lesson Plan. Evaluation - Achievement Test Construction and Administration. Standardised Test. Qualities of a good measuring tool. Continuous Evaluation (CE), Terminal Evaluation (TE)	15	2
Module 3	**Hours**	**CO No**
Classroom Strategies for Science Education: Lecture Method, Demonstration Method, Historical Method, Heuristic Method, Problem Method, Project Method, Individualised Laboratory Method,	15	3

Supervised Study, Dalton Plan, Cooperative Learning, Buzz Session, Brain Storming,		
Module 4	**Hours**	**CO No**
Support System and Resource Materials for Science Education: Science Laboratory, Science Library, Syllabus, Textbook, Resource Unit, Workbook, Teachers Handbook, Reference Books, Supplementary Readers, Audio-Visual Aids, Chalk/Black Boards, Charts, Models, Projectors (Slide/OHP/CRT/LCD/DLP), Improvised Aids. Audio/ Video Lessons. MOOCs.	**15**	**4**

Mode of Transaction	**Classroom activities:** Lecture, Discussion, Cooperative Learning, Buzz Session, Brain Storming **Field activities:** Lab Visit, Library Visit, Project work **Lab-based activities:** Demonstration Classes
Mode of Assessment	Assignment, Seminar, Internal Examination

Learning Resources

1. Rajan, K. M., Sindhu, B. S., George, J., Netto, S. G., & Sajan, R. K. (2008). *Teaching of physical science: Theory, perspectives and practice*. St. Joseph's Training College.
2. Mathews, J. (Ed.) (2008). *Teaching of natural science: Theory, perspectives and practice*. St. Mary's Training College.
3. Rajan, K. M (2004). *Science of Science Education*. St. Joseph's Training College.

Relevance of Learning the Course/ Employability of the Course
Embark on a transformative journey with our cutting-edge Science Education course, meticulously designed for those who aspire to shape the future through and integrate modern technology in education; you will be at the forefront of educational excellence. Master diverse teaching strategies and the art of curriculum development to harness the power of classroom resources to bring science to life for your students. Whether you aim to light up a traditional classroom, lead online learning platforms, or contribute to educational research and policy-making, this course equips you with the skills and knowledge to thrive in various educational landscapes. Join us and be part of a community of passionate educators committed to making a difference. With this course, you are not just preparing for a career in education; you are setting the stage for a lifetime of impact, inspiring curiosity and discovery in the minds of students across the globe. Your journey to becoming a sought-after educator in the science education sector starts here.

	MAHATMA GANDHI UNIVERSITY **Graduate School**
	4 + 1 Integrated UG and PG Programme

School	School of Pedagogical Sciences		
Programme	4 + 1 Integrated UG and PG Programme		
Course Title	Environmental Policy and Governance		
Course Type	MDC (Multidisciplinary Course)		
Course Level	100-199		
Course Code	MG1MDCUPS102		
Course Overview	This course provides an in-depth examination of environmental policy-making processes and governance structures at local, national, and international levels. Students will explore formulating, implementing, and evaluating environmental policies. Topics include environmental law, regulatory frameworks, stakeholder engagement, sustainable development, and recent developments in environmental governance. This course also examines the role of international agreements and institutions in addressing global environmental challenges, such as climate change, biodiversity loss, and pollution.		
Semester	1	**Credit**	3
Total Student Learning Time	**Instructional hours for theory**	**Instructional hours for practical/lab work/field work**	
	30 hours	30 hours	
Pre-requisite	• Basic Knowledge in Environmental Science • Observation Skills and Analytical Skills		

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains	PSO No.

	Upon completion of this course, students will be able to;		
1	Understand the key concepts and frameworks in environmental policy and governance.	Understand	
2	Analyse and critique environmental policies and their implementation.	Analyse	
3	Evaluate the role of various stakeholders in environmental governance.	Evaluate	
4	Apply theoretical knowledge to real-world environmental issues and case studies.	Apply	

*(Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E) , Create (C), Skill (S))

COURSE CONTENT

Module 1: Fundamentals of Environmental Policy and Governance	**Hours**	**CO No**
• Environment: Concept, Meaning, Types, and Components of Earth's environment • Environmental Policy: Concept and Definition, Key Components of Environmental Policies, Challenges and Considerations in Environmental Policy • Environmental Governance: Meaning, Definition, Significance, Types, Principles of Environmental Governance, Components of Environmental Governance, Challenges in Environmental Governance, Future Directions in Environmental Governance	T: 10 P: 10	
Module 2: Global and National Environmental Policies	**Hours**	
• Climate Change Policies • Air Quality Policies • Water Quality Policies • Biodiversity and Conservation Policies • Waste Management Policies • Sustainable Development Policies • Environmental Justice Policies • Natural Resource Management Policies • Energy Policy • Marine and Coastal Policy	T: 10 P: 10	
Module 3: Environmental Governance	**Hours**	
• International and National Organisations related to	T: 10	

Environment • International and National Agreements for environmental conservations • Environmental Initiatives of UNO • World & National Commissions on Environment • Environmental conferences and conventions • Constitutional and Legal Provisions on the Environment • Agencies of Environmental Conservation • Recent developments in environmental conservations.	P: 10	

Mode of Transaction	**Classroom activities:** Lectures, Discussions, Debates, Case Study Analysis **Field activities:** Field trip to a local environmental project (e.g., waste management facility, conservation area). Follow up with a reflective writing or group presentation. **Lab-based activities:** Familiarise environmental related measuring instruments and tools.
Mode of Assessment	• Exams and Quizzes • Written Assignments • Group Projects • Presentations • Participation and Engagement • Practical and Experiential Learning

Learning Resources

1. "Environmental Policy: New Directions for the Twenty-First Century" by Norman J. Vig and Michael E. Kraft
2. "Principles of Environmental Policy: Planning, Implementation, and Evaluation" by Mazmanian and Kraft
3. "Environmental Governance: Policy, Politics, and Practice" by J.P. Evans
4. "Governing the Environment: Politics, Policy, and Organization" by Spaargaren, Mol, and Buttel
5. "Climate Change and Society: Sociological Perspectives" by Riley E. Dunlap and Robert J. Brulle

Relevance of Learning the Course/ Employability of the Course
Learning the course "Environmental Policy and Governance" is vital for addressing global challenges like climate change and sustainability, providing students with expertise on how policies can mitigate environmental impacts and promote sustainable development. The course offers a comprehensive view essential for solving complex environmental issues. Students develop skills in designing, implementing, and evaluating policies, which are crucial for strategic planning and policy analysis. Understanding regulatory frameworks is key for careers in compliance, advocacy, and corporate sustainability, while the inclusion of environmental justice themes underscores the importance of equitable policy-making.

Students also enhance their collaborative skills, learning to engage with diverse stakeholders, which is crucial for effective environmental governance. Employability opportunities are broad, including roles in government agencies, sustainability consulting, corporate CSR, and NGOs focused on conservation and sustainability. Specialized roles such as environmental consultants, policy analysts, and sustainability managers are available, alongside academic and research positions in universities and think tanks. The course further enhances skills in analytical thinking, communication, and project management, while professional networking through industry connections, conferences, and workshops supports career growth and opportunities.

	MAHATMA GANDHI UNIVERSITY **Graduate School**
	4 + 1 Integrated UG and PG Programme

School	School of Pedagogical Sciences		
Programme	4 + 1 Integrated UG and PG Programme		
Course Title	History of Indian Education		
Course Type	MDC (Multidisciplinary Course)		
Course Level	100-199		
Course Code	MG2MDCUPS106		
Course Overview	The course "History of Indian Education" provides an extensive overview of the evolution of education in India from ancient times to the present. It covers key educational developments, philosophies, and reforms across different historical periods, highlighting their impact on contemporary education in India.		
Semester	2	**Credit**	3
Total Student Learning Time	**Instructional hours for theory**	**Instructional hours for practical/lab work/field work**	
	45 hours	30 hours	
Pre-requisite	• Basic knowledge of Indian history • Interest in educational systems and policies • Ability to engage with historical texts and educational theories		

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains	PSO No.
	Upon completion of this course, students will be able to;		
1	Understand the historical evolution of education in India from ancient to modern times.	U	

2	Analyze the impact of colonial and post-colonial educational policies	An	
3	Evaluate the contributions of key educational thinkers and reformers in India	E	
4	Develop a comprehensive view of contemporary educational challenges in the context of historical developments	C	

*(Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S))

COURSE CONTENT

Module 1: Ancient and Medieval Education in India	**Hours**	**CO No**
• Education in Ancient India: Vedic, Buddhist, and Jain educational systems • Gurukul system: Structure and Function • Education during the Mauryan and Gupta periods • Medieval India: Influence of Islamic education and Madrasas • Educational philosophies of ancient and medieval India	T: 15 P: 10	
Module 2: Colonial Education Policies and their Impact	**Hours**	
• Introduction to colonial education in India: Objectives and Policies • Macaulay's Minute and the English Education Act of 1835 • Establishment of universities and colleges in the 19th century • Impact of British educational policies on Indian society • Education and Indian Renaissance: Contributions of Raja Ram Mohan Roy, Swami Vivekananda, and others • Nationalist movements and education: Role of Mahatma Gandhi and Rabindranath Tagore • Challenges in colonial education	T: 15 P: 10	
Module 3: Post-Independence Education in India	**Hours**	
• Educational reforms in independent India: Radhakrishnan Commission, Kothari Commission, and subsequent policies • Development of primary, secondary, and higher education • Role of government and private sectors in education • Education for all: Policies and programs for inclusive education • Contemporary challenges: Quality, access, equity, and technology integration • Recent developments and future trends in Indian education	T: 15 P: 10	

Mode of	• **Classroom activities**: Lectures and Demonstrations, Interactive

Transaction	Workshops, Group Projects and Collaborations, Case Studies and Real-World Scenarios, Discussion Forums and Online Communities, Simulations • **Field activities**: Educational Institution Visits, Historical Site Visits, Interviews with Educators and Historians, Community Surveys • **Lab-based activities**: Archival Research, Digital Database Exploration, Creation of Educational Timelines and Visual Aids
Mode of Assessment	• Exams and Quizzes • Written Assignments • Group Projects • Presentations • Participation and Engagement • Practical and Experiential Learning

Learning Resources

- Radhakrishnan, S. (1947). *A history of education in ancient India*. Hind Kitabs.
- Basu, B. D. (1974). *Education in India under the British rule*. Cosmo Publications.
- Kumar, K. (2005). *Education and social change in South Asia*. Orient Longman.
- Thamarasseri, I. (2017). *History of Western Philosophy.* New Delhi: Dominant Publishers & Distributors (P) Ltd.
- Thamarasseri, I. (2018). *History of Indian Education*. New Delhi: Wisdom Press

Relevance of Learning the Course/ Employability of the Course
Learning this course is highly relevant for understanding the complex historical backdrop that shapes contemporary education in India. The course provides critical insights into the evolution of educational philosophies and practices, enabling students to appreciate the diversity and richness of India's educational heritage. Proficiency in the history of Indian education enhances career opportunities in academia, policy-making, educational consultancy, and research. It equips students with a deep understanding of historical contexts, essential for addressing current educational challenges and contributing to the development of effective educational policies and practices. The course fosters critical thinking and analytical skills, making graduates valuable assets in various professional domains, including education, social sciences, and cultural studies. The hands-on, practical approach ensures that students are well-prepared to apply historical knowledge to contemporary educational contexts and innovations.

	MAHATMA GANDHI UNIVERSITY **Graduate School**
	4 + 1 Integrated UG and PG Programme

School	School of Pedagogical Sciences		
Programme	4 + 1 Integrated UG and PG		
Course Title	Reflective Teaching Practices		
Course Type	MDC		
Course Level	200-299		
Course Code	MG2MDCUPS108		
Course Overview	This course is tailored for first-year students enrolled in a 4+1-year degree programme. It is designed to introduce the theory and practice of reflective practices in teaching. The course will cover foundational concepts, practical techniques, and strategies for implementing reflective teaching in educational settings. Through three comprehensive modules, students will learn to critically analyse their teaching methods and continuously improve their instructional effectiveness.		
Semester	1	**Credit**	3
Total Student Learning Time	**Instructional hours for theory**	**Instructional hours for practical/lab work/field work**	
	30	30	
Pre-requisite	This course is specifically tailored for students passionate about teaching. To join the "Reflective Teaching Practices" course, students must be good enough to articulate thoughts in writing and make journal entries. Effective communication skills, including active participation in discussions and providing constructive feedback, are essential. Students should demonstrate open-mindedness, a commitment to continuous professional growth, and self-awareness to assess and improve their teaching practices critically. These qualities ensure readiness for the reflective and analytical nature of the course.		

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome *Upon completion of this course, students will be able to;*	Learning Domains	PSO No.
1	Familiarise different models and frameworks of reflection	U	
2	Identify personal and professional benefits of reflective practice	An	
3	Develop a personal plan for ongoing reflective practice	S	
4	Implement reflective practices in the classroom	A	
5	Monitor and adjust teaching methods based on reflective insights	E	
6	Development and implementation of a reflective practice plan	C	

*(Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S))

COURSE CONTENT

Module 1	**Hours**	**CO No**
Foundations of Reflective Teaching: Definition, key concepts and significance of reflective teaching. Historical context and development of reflective practices. Key theorists and contributions of Dewey. Schön's Reflective Practice Model, Kolb's Experiential Learning Cycle, and Gibbs' Reflective Cycle.	15	1
Module 2	**Hours**	**CO No**
Techniques and Tools for Reflection: Reflective Writing - Journals and diaries, Blogs and online platforms, Peer Observation and Feedback - Methods for peer observation, Constructive feedback techniques, and Collaborative reflection. Video Analysis and Self-observation - Recording and analysing teaching sessions, Implementing Reflective Teaching - Before, during and after lessons. Developing Reflective Learners, modelling reflective practices, promoting metacognition and self-regulation, and Creating a Culture of Reflection.	15	2, 4
Module 3	**Hours**	**CO No**

Implementing Reflective Practices: Designing a Reflective Practice Plan - Setting goals and objectives, selecting appropriate reflective techniques, creating a timeline and action plan, and developing strategies for integrating reflection into daily routines. Encouraging student feedback and participation, Overcoming common challenges. Monitoring Progress and Making Adjustments - Tracking progress, documenting reflections, analysing feedback, making adjustments and using reflective practice in collaborative settings. Long-term strategies for maintaining reflective practices, Continual professional development through reflection, Reflecting on the impact of reflective practices on teaching and learning	15	3, 5, 6

Mode of Transaction	**Classroom activities:** Lecture, Discussion, Cooperative Learning, Buzz Session, Brain Storming **Field activities:** Lab Visit, Library Visit, Project work **Lab-based activities:** Demonstration Classes
Mode of Assessment	Assignment, Seminar, Internal Examination

Learning Resources

1. Brookfield, S. D. (2017). *Becoming a Critically Reflective Teacher* (2nd ed.). San Francisco, CA: Jossey-Bass.
2. Schön, D. A. (1983). *The Reflective Practitioner: How Professionals Think in Action*. New York, NY: Basic Books.
3. Gibbs, G. (1988). *Learning by Doing: A Guide to Teaching and Learning Methods*. Oxford: Further Education Unit, Oxford Polytechnic.
4. Dewey, J. (1933). *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process*. Boston, MA: D.C. Heath.
5. Boud, D., Keogh, R., & Walker, D. (1985). *Reflection: Turning Experience into Learning*. London: Kogan Page.

Relevance of Learning the Course/ Employability of the Course
Learning the "Reflective Teaching Practices" course is essential for educators seeking to enhance their teaching effectiveness. By engaging in reflective practices, teachers gain insights into their instructional methods, identify areas for improvement, and adapt their strategies to meet diverse student needs. This continuous self-assessment fosters personal and professional growth. Employers highly value educators who practice reflective teaching, as it demonstrates a commitment to excellence and adaptability. Reflective teachers are better equipped to handle classroom challenges, implement innovative teaching techniques, and create inclusive learning environments, making them desirable candidates in education.

Furthermore, this course enhances employability by equipping educators with critical thinking, self-awareness, and problem-solving skills. Graduates can confidently contribute to educational reforms, mentor colleagues, and lead professional development initiatives, advancing their careers and positively impacting the education system.

	MAHATMA GANDHI UNIVERSITY **Graduate School**
	4 + 1 Integrated UG and PG Programme

School	School of Pedagogical Sciences		
Programme	4 + 1 Integrated UG and PG Programme		
Course Title	Digital Communication and social media		
Course Type	MDC (Multidisciplinary Course)		
Course Level	100-199		
Course Code	MG2MDCUPS105		
Course Overview	The course "Digital Communication and Social Media" focuses on the principles, strategies, and practical applications of digital communication technologies and social media platforms in contemporary society. It is designed to give students an in-depth understanding of how digital communication transforms personal, professional, and public spheres.		
Semester	2	**Credit**	3
Total Student Learning Time	**Instructional hours for theory**	**Instructional hours for practical/lab work/field work**	
	45 hours	30 hours	
Pre-requisite	• Fundamental understanding of digital technologies and internet usage • Ability to use computers and basic software applications • Basic knowledge of how to navigate and use major social media platforms		

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains	PSO No.
	Upon completion of this course, students will be able to;		
1	Understand and apply various applications of digital	Understand &	

	platforms and social media in day-to-day life.	Apply	
2	Create and manage high-quality digital content across various social media channels.	create	
3	Navigate ethical and privacy issues in digital communication.	Evaluate	
4	Develop effective digital communication strategies tailored to different platforms and audiences.	Create	

*(Learning Domains: Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S))

COURSE CONTENT

Module 1: Basics of Communication	**Hours**	**CO No**
• Communication: Meaning, characteristics of communication, Elements of Communication, Functions of Communication, Communication Cycle. • Types of Communication: Verbal and Non-verbal, Formal and Informal, Intrapersonal and Interpersonal Communication • Group Communication: Meaning, Multimedia, Mass Communication, Mass Media • Barriers to effective communication	T: 15 P: 10	
Module 2: Digital Communication	**Hours**	
• Digital Communication: Meaning, definition, origin and development of digital communication, Principles of Effective Digital Communication • Digital Technologies: Internet, Mobile Devices, Computers and Software, etc. • Communication Platforms: Social media, Messaging Apps, Email, Video Conferencing, Blogs and Websites etc. • Applications of Digital Communication: Personal Communication, Professional Communication, News and Publications, Marketing and Advertising, Public Relations, Education etc. • Trends in Digital Communication: Artificial Intelligence and Automation, Interactive Content, Augmented Reality (AR) and Virtual Reality (VR), etc. • Digital Initiatives in Higher Education • Challenges in Digital Communication • Recent developments in Digital communication	T: 15 P: 10	
Module 3: Social media	**Hours**	

• Introduction to Social Media Communication: Meaning, Definition and Scope, History and Evolution • Social Media Platforms and Tools: Purposes and Benefits, Social Media Strategies, Audience Engagement and Community Building, social media in day-to-day life. • Ethical Considerations: Transparency and Honesty, Privacy and Confidentiality, Authenticity and Originality, Cultural Sensitivity, Responsible Influencing, Challenges and Issues • Legal Considerations: Intellectual Property Rights, Privacy Laws, Advertising and Marketing Regulations, Content Moderation and Liability, etc. • Trends and recent developments in social media	T: 15 P: 10	

Mode of Transaction	**Classroom activities:** Lectures and Demonstrations, Interactive Workshops, Group Projects and Collaborations, Case Studies and Real-World Scenarios, Discussion Forums and Online Communities, Simulations **Field activities:** Content Creation Projects, Online Surveys, Public Interactions and discussions **Lab-based activities:** Social Media Platform Simulation, Content Creation and Editing
Mode of Assessment	• Exams and Quizzes • Written Assignments • Group Projects • Presentations • Participation and Engagement • Practical and Experiential Learning

Learning Resources

1. "Digital Communication: A Practical Guide for Media Professionals" by Steven M. C. Smith
2. "The Digital Mindset: What It Really Takes to Thrive in the Age of Data, Algorithms, and AI" by Maarten Vanneste
3. Contagious: How to Build Word of Mouth in the Digital Age" by Jonah Berger

Relevance of Learning the Course/ Employability of the Course
Learning this course is very relevant in today's digitally interconnected world, where digital platforms play a central role in personal, professional, and academic communication. Understanding digital communication strategies and social media dynamics allows individuals and organisations to effectively reach and engage with diverse audiences and foster meaningful relationships. As today's world increasingly prioritizes online presence, proficiency in digital communication and social media becomes a valuable asset, enhancing career opportunities and equipping learners with the tools to drive innovation and growth in various industries. Moreover, the course emphasizes ethical

practices and data-driven decision-making, ensuring that students are prepared to handle the responsibilities and challenges of modern digital communication effectively. The course "Digital Communication and Social Media" significantly boosts employability by equipping students with essential, in-demand skills in digital marketing, content creation, social media strategy, and analytics. These competencies are essential for a wide range of roles, including social media manager, digital marketing specialist, content strategist and analyst making graduates highly attractive to employers across various industries. The hands-on, practical approach of the course, combined with its focus on current digital trends and technologies, ensures that students are well-prepared to meet the demands of the modern job market.

	MAHATMA GANDHI UNIVERSITY **Graduate School**
	4 + 1 Integrated UG and PG Programme

School	School of Pedagogical Sciences		
Programme	4 + 1 Integrated UG and PG Programme		
Course Title	Indian Indigenous Knowledge Systems		
Course Type	MDC (Multidisciplinary Course)		
Course Level	200-299		
Course Code	MG2MDCUPS107		
Course Overview	This course aims to provide students with a comprehensive understanding of Indian indigenous knowledge systems (IIKS), their historical development, and their impact on various aspects of life and thought. It emphasizes critical thinking, analytical reasoning, and the application of IIKS concepts to contemporary issues, with special focus on Kerala's mathematical heritage, Indian scientific heritage, and Indian technological heritage.		
Semester	Second Semester	**Credit**	3
Total Student Learning Time	**Instructional hours for theory**	**Instructional hours for practical/lab work/fieldwork**	
	45 hours	30 hours	
Pre-requisite	• Proficiency in critical reading and writing. • Familiarity with basic cultural and historical contexts of Indian indigenous communities. • Basic knowledge of global indigenous cultures and histories.		

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome *Upon completion of this course, students will be able to;*	Learning Domains	PSO No.
1	Describe the evolution and key concepts of major Indian indigenous knowledge systems.	Cognitive	
2	Analyze the cultural and philosophical arguments within Indian indigenous knowledge systems.	Cognitive, Affective	
3	Evaluate the relevance and application of Indian indigenous knowledge systems in contemporary contexts.	Cognitive	
4	Synthesize insights from different Indian indigenous knowledge systems to address modern questions.	Cognitive, Affective	
5	Develop and present well-reasoned arguments based on the traditions of Indian indigenous knowledge systems.	Cognitive, Psychomotor	

6	Reflect on the ethical and social implications of Indian indigenous knowledge systems.	Cognitive, Affective	

COURSE CONTENT

Module 1: **Introduction to Indian Indigenous Knowledge Systems**	10 Hours **(T)**
• Definition and scope of Indian indigenous knowledge systems; significance of studying IIKS. • Historical development and major periods in IIKS. • Overview of indigenous knowledge in various regions of India.	
Module 2: Key Indian Indigenous Knowledge Systems	15 Hours **(T)**+ 15 Hours **(P)**
• Tribal Knowledge Systems: Community wisdom, spiritual practices, ecological management. • Ayurvedic Knowledge Systems: Traditional medicine, holistic health practices. • Vedic and Post-Vedic Indigenous Knowledge: Agricultural practices, astronomy, mathematics. • Kerala's Mathematical Heritage: Contributions of Kerala mathematicians, such as Madhava of Sangamagrama, and the Kerala school of astronomy and mathematics.	
Module 3: Application of Indian Indigenous Knowledge Systems	20 Hours **(T)**+ 15 Hours **(P)**
• Sustainable Development: Use of indigenous knowledge in environmental management and conservation. • Health and Well-being: Traditional medicine, holistic health practices, and community health strategies. • Education: Indigenous pedagogies, learning methods, and knowledge transmission. • Indian Scientific Heritage: Contributions to fields like metallurgy, architecture, and engineering; significant scientific texts and treatises. • Indian Technological Heritage: Traditional crafts, innovations in water management, textile technology, and other indigenous technologies.	

Mode of Transaction	• **Classroom activities:** ➢ Discussion Circles/Personal Identity and Self-Understanding Sessions ➢ Role-Playing Scenarios/Case Study Analysis ➢ Peer Counselling Sessions • **Field activities:** ➢ Community Engagement Projects/ ➢ Workshops on Coping with Life Transitions/ ➢ Case studies and real-world applications. • **Lab-based activities:** ➢ Philosophical debates
Mode of Assessment	• Portfolio Development • Presentations/Seminar/Assignment • Quizzes/MCQ • Final exam

Learning Resources

Core Books on Indian Indigenous Knowledge Systems:

1. Agrawal, A. (1995). Indigenous and Scientific Knowledge: Some Critical Comments. Indigenous Knowledge and Development Monitor, 3(3).
2. Gadgil, M., Berkes, F., & Folke, C. (1993). Indigenous Knowledge for Biodiversity Conservation. Ambio, 22(2/3), 151-156.
3. Gupta, A. K. (2012). Anil K. Gupta: Science, Sustainability and Society. Springer.
4. Pati, R. N., & Lalitha, K. (2002). Tribal Development in India: Past, Present and Future. Sarup & Sons.
5. Sen, S. N. (1999). Ancient Indian History and Civilization. New Age International.

Books on Kerala's Mathematical Heritage:

1. Joseph, G. G. (2000). The Crest of the Peacock: Non-European Roots of Mathematics. Princeton University Press.
2. Plofker, K. (2009). Mathematics in India. Princeton University Press.
3. Bag, A. K. (1979). Mathematics in Ancient and Medieval India. Chaukhamba Surbharati Prakashan.

Books on Indian Scientific and Technological Heritage:

1. Subbarayappa, B. V. (1989). Contributions to the History of Indian Science. Indian National Science Academy.
2. Chattopadhyaya, D. (1986). History of Science and Technology in Ancient India: The Beginnings. Firma KLM.
3. Kumar, D. (Ed.). (2000). Science and Empire: Essays in Indian Context, 1700-1947. Anamika Prakashan.

Relevance of Learning the Course/ Employability of the Course
Studying Indian indigenous knowledge systems cultivates critical thinking, cultural sensitivity, and ethical reasoning. This interdisciplinary approach equips graduates to tackle complex issues in various professions. They can pursue academic roles, contribute to research, and work in education, corporate, and public sectors. Their skills are valuable in fostering personal growth, addressing societal challenges, and promoting well-being. Overall, this course enhances employability while nurturing individuals' intellectual and ethical capacities.