Department of Society-Technology Interface

School of Social Sciences

Syllabus-Pre Ph.D. Coursework

Doctor of Philosophy (Ph.D.)

in

Digital Society

Ph.D. Research Programme
Academic Year 2024-25

Central University of Rajasthan
NH-8, Bandar Sindri, Kishangarh
District Ajmer-305817, Rajasthan

DEPARTMENT OF SOCIETY TECHNOLOGY INTERFACE

CONCEPT NOTE

Ph.D. Programme in Digital Society (Ph.D. Digital Society)

The Department of Society Technology Interface, School of Social Sciences proposes to initiate the Ph.D. program in Digital Society for the upcoming academic session. The department focuses on the interdisciplinary areas having interfaces of Digital Technology with Society, Policy, Development and Management.

Indian society and economy is completely transferred owing to the intrinsic role played by the ICTs. The country is progressing exponentially towards reaping the developmental dividends arise out of the fast process of digitalization of society. The social-cultural-political-economic-policy narratives are completely shaped and consolidated around the uses of digital tools and technologies. Undoubtedly the country is in the midst of 'digital society'. Globally, need is felt around the development of futuristic academic discourses on "what can be" and "what ought to be" of that transformative process.

The Ph.D. programme is going to be a rich and rewarding research programme of the department, open to post-graduates from any branch of Social Sciences, Science, Technology, Management, Arts, Commerce or related allied fields. Any JRF candidate in above mentioned fields or any candidate who satisfies the CUET/ University entrance tests will be considered eligible for Ph.D. Programme.

The suggestive list of Ph.D. areas is as follows:

1. ICT and Development
2. Community Informatics
3. Digital Innovations and Entrepreneurship
4. Gender and Digital Ecosystem
5. Digital Technology and Livelihoods
6. Women and Digital Spaces
7. Internet, Society and Economy
8. Digital Divide
9. Digital World Order
10. Digital Marketing, Digital Social Marketing
11. Digital Integrated Marketing Communication
12. Digital Technology and Social Interfaces
13. Information Technology and Regulations
14. Data Privacy and Protection
15. Cyber Space, Law and Society
16. Social Media and Networking
17. Digital Emerging Technology
18. AI for Social Goods
19. Digital Commons
20. Big Data and Algorithm Biasness

Course Design of Ph.D. in Digital Society Academic Year 2022-23					
Course Code	Name of the Courses	Nature of the Course	Credits	Evaluation (Weightage %)	
				IA	EOSE
STI 701	Theories and Practices of Digital Society	Core	4	40	60
STI 702	Research Methodology	Core	4	40	60
STI 731	ICT and Development	Elective*	4	40	60
STI 732	Socio-Economic Dimensions of Digital Technology	Elective*	4	40	60
STI 733	Emerging Digital Technologies	Elective*	4	40	60
STI 734	Information Communication Technology Policy and Regulation	Elective*	4	40	60
STI 735	Research Ethics	Skill Enhancement Course	4	40	60
STI 736	Pedagogy for Higher Education	Skill Enhancement Course	3	40	60
STI 737	Practice Based Teaching	Skill Enhancement Course			
Total Credits			19		

*The research scholar has to opt for atleast one elective course from the list.

Course Code and Course Name	STI 701: **Theories and Practices of Digital Society**
Course Type	Core Course
Credits	4
Course Branch	Ph.D. in Digital Society
Grading Scheme	Internal exam I (20 marks) + Internal exam II (20 marks) + Final exam (60 marks)
Pre-Requisites (where applicable, specify exact course names)	-

Course Description
This course will provide an overview of the major theoretical orientation, frameworks and practices of Society, Political Economy, Development and Management in relation to digital society. The course will strengthen learning about theories, perspectives and frameworks that address the social implications of Internet and related information and communication technologies. Through this course, learners will have a thorough understanding of the underpinnings of important perspectives and practices related to digital society.

Course Content
1. Information Technology and Society: An Introduction
2. Social Shaping of Technology
3. Theories of Society and the Internet
4. Actor-Network Theory
5. Theories of Political Economy, Digital Collectives and Digital Commons
6. Theories of Development, Empowerment and Capabilities
7. Theories of Information Systems-Management, Strategic Management, Project Management, Systems Theory, PESTLE, Log frame
8. Globalization and Domestication
9. Mobile Phones, the Internet, and Perpetual Contact
10. The Presentation of Self Online
11. Social Implications of Online Data
12. Work & Economic Life Online
13. Microblogging among New and Old Media
14. The Internet and Democracy
15. The Knowledge Society

Learning Outcomes
• Explain theoretical insights, currents discourses and key concepts relating to the study of technology within several social science disciplines, including communications study, sociology, anthropology and political science.
• Provide understanding of the linkages between problems associated with technology and their interpretation and manifestation in the wider social context.
• Apply critical thinking using theories relating to technological determinism, social construction, materiality and neutrality that address society-technology relationship.
• Develop scientific perspectives around the historical evolution of technologies and their social relevance.

Text Book / References

1. Bimber, Bruce (2003) Information and American Democracy: Technology in the Evolution of Political Power. Cambridge: Cambridge University Press.
2. Boyd, Danah (204) It's Complicated: the social lives of networked teens. New Haven: Yale University Press.
3. Castells, Manuel (2009), Communication Power, Oxford: Oxford University Press.
4. Donner, Jonathan (2015) After Access: Inclusion, Development, and a More Mobile Internet, Cambridge: MIT Press.
5. Dutton, William (2013), Handbook of Internet Studies, Oxford University Press
6. Graham, Mark & Dutton, William (2014) Society and the Internet. Oxford: Oxford University Press.

Course Code and Course Name	STI 702: **Research Methodology**
Course Type	Core Course
Credits	4
Course Branch	Ph.D. in Digital Society
Grading Scheme	Internal exam I (20 marks) + Internal exam II (20 marks) + Final exam (60 marks)
Pre-Requisites (where applicable, specify exact course names)	-

Course Description
This course will provide an overview of the philosophical foundations of social science research methods. It will serve as a holistic introduction to modes of explanation and traditions of social inquiry that contribute to conceptual and methodological building blocks in the conduct of research. It will offer students a preliminary footing to appreciate the quantitative and qualitative traditions of research methods by assessing the strengths and limitations of each of the methods, the conditions under which each of the methods is used, the generalizability and purpose of each of the methods, as well as the ethical implications of doing research.

Course Content

Module I: Introduction to Research
- Introduction to research philosophies and methodologies
- The nature and process of research
- Research strategies
- Research designs
- Planning a research project and formulating research questions
- Getting started: reviewing the literature
- Ethics and informed consent

Module II: Quantitative Research
- The nature of quantitative research
- Sampling
- Structured interviewing
- Survey methods
- Questionnaires, Interview Schedules
- Asking questions
- Structured observation
- Content Analysis and Discourse Analysis
- Secondary analysis and official statistics
- Quantitative data analysis
- Using SPSS for analysis
- Chi square and ANOVA

Module III: Qualitative Research
- The nature of qualitative research
- Sampling in qualitative research
- Field observations
- Ethnography and Observations
- Participant and non-participant observation
- Interviewing in qualitative research
- Focus groups

- Language in qualitative research
- Documents as sources of data
- Qualitative data analysis
- Computer-assisted qualitative data analysis: using NVivo

Module IV: Mixed Methods Research
- Breaking down the quantitative/qualitative divide
- Mixed methods research: combining quantitative and qualitative research
- E-research: Internet research methods
- Writing and Publishing

Learning Outcomes

- Understand the different philosophies and traditions of research methodologies
- Learn about the nature and application of qualitative research methods to research
- Learn to conceptualize and formulate research design, sampling, and research questions
- Learn and apply ethical principles of conducting research including informed consent and ethical data collection practices
- Learn about qualitative data collection procedures such as field observations, formulating interview questions and conducting in-depth interviews, content analysis, discourse analysis. Learn about quantitative procedures such as sampling methods, confidence interval in statistics, survey methods, experimental design
- Apply research design and data collection skills by undertaking a research study
- Learn to analyse quantitative and qualitative data and write a mini research paper
- Understand the publication process in academic research

Text Book / References

- Alan Bryman. (2012). Social Research Methods Fourth edition, Oxford University Press
- Geertz, Clifford (1973). The Interpretation of Cultures. New York: Basic Books Inc.
- Hine, Christine (2005) Virtual Methods: Issues in Social Science Research on the Internet. Oxford; New York: Berg.
- Jones, Steve (1999) Doing Internet Research: Critical Issues and Methods for Examining the Net. Thousand Oaks, CA: Sage.
- Markham, Annette and Nancy Baym. (2009) Internet Inquiry: Conversations about Method. Thousand Oaks, CA: Sage.
- Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook. Thousand Oaks, CA: Sage.
- Wolcott, H. F. (2002). Sneaky kid and its aftermath: Ethics and intimacy in fieldwork. Walnut Creek, CA: Alta Mira Press. 8. Wolcott, H. F. (1994). Transforming qualitative data: Description, analysis, and interpretation. Thousand Oaks, CA: Sage.
- Warren, C.A.B. & Karner, Tracy X. (2005). Discovering qualitative methods: Field research, interviews, and analysis. CA: Roxbury Publishing Company.

Course Code and Course Name	STI 731: **ICT and Development**
Course Type	Elective
Credits	4
Course Branch	Ph.D. in Digital Society
Grading Scheme	Internal exam I (20 marks) + Internal exam II (20 marks) + Final exam (60 marks)
Pre-Requisites (where applicable, specify exact course names)	-

Course Outline

This course will introduce students to the debates and practices surrounding the uses of Information and Communication Technologies (ICTs) in Developmental process in the Global South. It will draw on resources from Anthropology, Development Studies, Economics, Geography, and History in order to examine the theoretical and conceptual frameworks that underpin development - as a practice, as a subject of research, and as a discourse. This course will provide an opportunity to reflect on local appropriateness, social inclusion and the range of arguments for and against any ICT for development project in a variety of contexts.

Course Content

1. Uneven Development and the Origins of ICTD: Unevenness in development; Digital divides.
2. Development Theory: Dependency, modernisation, structuralism, socialism, NeoMarxism and neoliberalism
3. Critiques of ICTD: Feminist, postcolonialist, and poststructuralist critiques
4. Development in the Network Society: Digital divides, Value chain disintermediation and e-commerce
5. ICTs as interventions for social development: The study of MDGs and SDG
6. ICTs as interventions for social development, Public Sector Reforms
7. Market creation, expansion and inclusion through ICTs, Rural Market Creations; Financial Inclusions and Mobile Money
8. Knowledge economies, technology entrepreneurship and innovation
9. Digital labour and Development

Learning Outcomes

- Explain the debates and practices surrounding the uses of information and communications technology and associated digital technologies in the development discourse.
- Provide various theoretical and conceptual frameworks underpinning the usage of technology in the development process drawn from development studies, economics, geography, and political science.
- Explore local appropriateness, social inclusion, and the range of arguments for and against any ICT for development projects in a variety of contexts.
- Demonstrate critical thinking in examining the implications of ICT and other digital technological interventions for social development and public sector reforms.

Text Book / References

1. Burrell, J. & Toyama, K. 2009. What Constitutes Good ICTD Research?‖. Information Technologies & International Development, 5(3): 82-94.
2. Castells, M., 2003. The Rise of the Fourth World in Held, D. and McGrew, A. (Eds). The Global Transformations Reader. Oxford: Blackwell. pp. 430-439
3. Crow, B., Zlatunich, N. & Fulfrost, B. 2009. Mapping Global Inequalities: Beyond Income Inequality to Multi-Dimensional Inequalities. Journal of International Development, 21:10511065.
4. Heeks, R. 2002. i-Development not e-Development: Special Issue on ICTs and Development. Journal of International Development, 14(1): 1-11.
5. Heeks, R. 2009. The ICT4D 2.0 Manifesto: Where Next for ICTs and International Development? Manchester: Centre for Development Informatics, Working Paper No. 42 (online resource).

Course Code and Course Name	STI 732: **Socio-Economic Dimensions of Digital Technology**
Course Type	Elective
Credits	4
Course Branch	Ph.D. in Digital Society
Grading Scheme	Internal exam I (20 marks) + Internal exam II (20 marks) + Final exam (60 marks)
Pre-Requisites (where applicable, specify exact course names)	-

Course Outline

This course examines how the emergence and evolution of the Internet, alongside a number of significant changes in the technological and political-economic environment, have transformed both the economy and societies at large. The class will discuss the new terms of competition in the information and communication technology (ICT) industries on a global scale. The course begins with a discussion of the social history of the Internet, followed by an analysis of the emergence of a global information economy and the role of ICTs in global markets.

Course Content

1. Introduction: Lessons from the History of the Internet
2. Understanding of Networked Society
3. Understanding of the Concept, Characteristics, Nature and Scope of Digital Economy
4. Macro and Micro Economic Issues in Digital Economy
5. Policy and Regulations under Digital Economy
6. Innovation in the Digital Economy
7. The Internet, Big Data, and Economic Policy
8. Artificial Intelligence and Prospects of Economic Growth
9. Globalization: The Internet and The Cloud
10. Data Localisation and Data Sovereignty
11. APP Economy: Rules, Policy and Challenges before Societies
12. Electronic commerce
13. Threat to Digital Economy
14. World-wide cases of Digital Economy
15. Internet Poverty
16. Digital Divide in Digital Economy
17. Privacy, Openness, and Transparency under Digital Economy
18. Case Studies as Suggested by Instructor

Learning Outcomes

- To understand the critical role and effect of Internet in bringing the changes in socio-economic-political environment.
- To learn about approaches to understand inter-linkages of ICT, Global Markets and Economy.
- To critically understand the roles and interfaces of Internet, Society and Economy.

Text Book / References/Suggested Readings

1. Abbate, Jane (1999) Inventing the Internet, Cambridge, MA: MIT Press, pp. 43-146.
2. Arora, Payal (2019), The Next Billion Users : Digital Life beyond the West. Cambridge: Harvard University Press
3. Atkinson, Robert D. and Stephen J. Ezell (2012) Innovation Economics: The Race for Global Advantage, New Haven, CT: Yale University Press.
4. Brynjolfsson, Erik and Adam Saunders (2009) Wired for Information: How Information Technology Is Reshaping the Economy, Cambridge, MA: MIT Press.
5. Castells, Manuel (1996, second edition, 2009). The Rise of the Network Society, The Information Age: Economy, Society and Culture Vol. I. Malden, MA; Oxford, UK: Blackwell.
6. Castells, Manuel (1997, second edition, 2009). The Power of Identity, The Information Age: Economy, Society and Culture Vol. II. Malden, MA; Oxford, UK: Blackwell.

7. Castells, Manuel (1998, second edition, 2010). End of Millennium, The Information Age: Economy, Society and Culture Vol. III. Malden, MA; Oxford, UK: Blackwell.
8. Castells, Manuel (2001) The Internet Galaxy, Oxford: Oxford University Press.
9. David, Paul (2002) "The evolving accidental information super-highway," Oxford Review of Economic Policy 17(2): 159-187. At: http://oxrep.oxfordjournals.org/cgi/content/abstract/17/2/159 Kenney,
10. Don Tapscott (1996) The Digital Economy : promise and peril in the age of networked intelligence, New York : McGraw Hill
11. Himanen, Pekka (2002) The Hacker Ethic: A Radical Approach to the Philosophy of Business, New York: Random House
12. Martin and John Zysman (Spring 2016) "The Rise of the Platform Economy," Issues in Science and Technology, 32:3." At http://issues.org/32-3/the-rise-of-the-platformeconomy/
13. Naughton, John (2014) From Gutenberg to Zuckerberg: Disruptive Innovation in the Age of the Internet, New York: Quercus.
14. Peter Cowhey and Jonathan Aronson (2017) Digital DNA: Disruption and the Challenges for Global Governance, New York, Oxford. Prologue and Chapters 1-4, pp. xi-xxi and 3-93.
15. Peter F. Cowhey and Jonathan D. Aronson, (2009) Transforming Global Information and Communication Markets, Cambridge, MA, MIT Press.

Course Code and Course Name	STI 733: **Emerging Digital Technologies**
Course Type	Core Course
Credits	4
Course Branch	Ph.D. in Digital Society
Grading Scheme	Internal exam I (20 marks) + Internal exam II (20 marks) + Final exam (60 marks)
Pre-Requisites (where applicable, specify exact course names)	-

Course Outline

Building on the fundamentals of the technologies, the course will explores the uses and significances emerging digital technologies in modern day life and theory and practical aspect of the digital technologies will be learnt.

Course Content

1. Artificial Intelligence
2. Internet of Things (IoT)
3. Blockchain
4. Cloud Computing
5. Data Sciences
6. Cyber Security
7. 3D Printing and Design
8. Virtual Reality (VR)

Learning Outcomes

• Explaining the students about the fundamental concepts of digital technologies and associated technologies.
• Providing the students about the significance and uses of several networking technologies such as the Internet, World Wide Web and cloud computing.
• Develop understanding of key elements of computer networking and its usage for digital solutions which include Internet architecture, layer protocols, client-server architecture, etc.
• Apply knowledge of Internet based applications and services, including digital platforms, to socio-technical problems.

Text Book / References

1. B. Patel & Lal B. Barik, Internet & Web Technology ", Acme Learning Publishers
2. D. Comer, "The Internet Book", Pearson Education, 2009.
3. Godbole AS & Kahate A, "Web Technologies", Tata McGrawHill,2008.
4. Greenlaw R and Hepp E "Fundamentals of Internet and www" 2nd EL, Tata McGrawHill,2007.
5. Ivan Bayross, "HTML, DHTML, JavaScript, Perl CGI", 3rd Edition, BPB Publications.
6. Jackson, "Web Technologies", Pearson Education, 2008.
7. M. L. Young,"The Complete reference to Internet", Tata McGraw Hill, 2007.
8. Vijay Madisetti, Arshdeep Bahga, Ïnternet of Things, "A Hands on Approach", University Press
9. SRN Reddy, Rachit Thukral and Manasi Mishra, "Introduction to Internet of Things: A practical Approach", ETI Labs.
10. Melanie Swan, "Block Chain: Blueprint for a New Economy", O'Reilly, 2015.
11. Joel Grus, "Data Science from Scratch: First Principles with Python", O'Reilly Media
12. Saha, S.K., "Introduction to Robotics, 2nd Edition, McGraw-Hill Higher Education, New Delhi, 2014.
13. William Stallings, "Cryptography and Network Security", Pearson Education/PHI, 2006

Course Code and Course Name	STI 734: **Information Communication Technology Policy and Regulation**
Course Type	Core Course
Credits	4
Course Branch	Ph.D. in Digital Society
Grading Scheme	Internal exam I (20 marks) + Internal exam II (20 marks) + Final exam (60 marks)
Pre-Requisites (where applicable, specify exact course names)	-

Course Outline
The pace of technological change and innovation in the use of information and communication technologies (ICTs) poses significant challenges for policy-makers across a variety of issues, whilst regulation and policy will, in turn, shape the range of choices that can be made about the use, design and development of ICTs. Informed academic study of the network of networks that comprise the Internet must, therefore, be firmly grounded in a sophisticated understanding of the underlying technology and policy contexts in which these networks are embedded. In particular, valuable insights are to be gained by studying policy debates relating to the Internet in the broader context of ICT policy more generally, such that continuity and change can be observed.

Course Content
1. History and development of the ICT Policy and Regulation
2. Planning in India and ICT
3. Policy, Governance and Regulatory Frameworks
4. Stakeholders and Policy-making Process; Ministry of Electronics and Information Technology; R& D Institutions in ICT; National Knowledge Networks
5. Internet Proliferation and Governance; E-Infrastructures
6. Privacy and security
7. Content regulation and filtering
8. Consumer Protection under Digital age
9. Regulatory Responses to Public Debates on Emerging ICTs
10. Biometrics
11. Digital copyright, patents
12. Universal access, universal service and the digital divide, Net Neutrality
13. Government Programmes in India: Aadhar, Digital India, Make-in-India, Skills India, Digital Locker, Digitalisation of Socio-economic services
14. Information Technology Act 2000 (Amendment 2008); National Policy on Electronics 2012; National E-Governance Plan; National Security Policy 2013; National Policy on Universal Electronic Accessibility.
15. ICT and Economic Development; Private Sector regulation; Public Private Partnership

Learning Outcomes
• Examine fundamental concepts and key regulatory aspects relating to telecommunications industry and market.
• Explain the regulatory and policy implications of telecommunications, Internet and IT industry on the technological landscape and industrial development.
• Provide historical development of regulatory and policy frameworks in a comparative perspective
• Demonstrate the knowledge of various policy and regulatory issues and concepts surrounding digital technologies, including privacy, security, digital copyright, intellectual property rights, etc.

Text Book / References
1. Banzal, S. (2010). Equitable Communication for All: Polices and Regulatory Issues. ITU-APT Foundation, New Delhi.
2. Bedi, K., P. Singh and S. Sandeep (2001) Government@net: New Governance Opportunities for India. New Delhi, Sage Publications.

3. Bhatnagar, S. (2000). Enhancing Telecom Access In Rural India: Some Options. Paper presented at India Telecom Conference, Asia-Pacific Research Center, Stanford University.
4. Bhatnagar, S. and R. Schware (2000) Information and Communication Technology in Development: Cases from India. New Delhi, Sage Publications.
5. Chopra, A. (2005). Bridging India's Digital Divide: Some Policy and Technological Options. PhD Thesis University of Hohenheim, Stuttgart, Germany.
6. Chowdhury, S. and Datta, D. (2009). Indian Telecom: Regulation, Spectrum Allocation and Dispute Management. IIMB Management Review.
7. Dasgupta, S., Paul, R., & Fuloria, S. (2011). Factors Affecting Behavioral Intentions towards Mobile Banking Usage: Empirical Evidence from India. Paper presented in conference.
8. Naughton, John A Brief History of the Future: From Radio Days to Internet Years in a Lifetime. 2000. New York: The Overlook Press.
9. Singhal A. and M.E. Rogers (2001) India's Communication Revolution from Bullock Carts to Cyber Nets. New Delhi, Sage Publications.
10. Venkat subramanian, K. Approach paper on "India development as knowledge society", Planning Commission, New Delhi.
11. Zittrain, Jonathan The Future of the Internet - And How to Stop It. 2008. New Haven: Yale University Press.
12. Blackman, Colin. and Srivastava, Lara. (2011). Telecommunications Regulation Handbook, 10th Anniversary Ed., The International Bank for Reconstruction and Development / The World Bank, InfoDev, and The International Telecommunication Union.
13. Rajaraman, V. (2012). History of Computing in India: 1955-2010. IEEE Computer Society.

Pedagogy of Higher Education
Credits: 03
Skill Enhancement Course

[About 45 hours of interactive learning events that will include lectures, discussions with practice sessions and additional off the class self-learning activities]

Aim and Outline of the course:
The course is designed for the research scholars (may call the prospective teacher of higher education or PhD Entrants) to join higher education institutes as professionals. A researcher generally engages in the teaching-learning process after completing their research and sometimes participates in teaching-learning during their research period as a teacher assistant. Therefore, it is required to give them exposure to the teaching-learning process for conceptual understanding and skill development.

This course will help them understand the teaching-learning process basics, curriculum and assessment, and classroom management. This course will also help scholars be more effective while presenting in seminars and conferences.

Besides developing conceptual knowledge of pedagogy skills this course covers contemporary higher education issues like choice-based credit system, online learning, open-book examination, web-based and research-based pedagogical tools and MOOCs etc.

The scholars would develop insight into the significance of pedagogical knowledge and its implication in their professional life on completing the course. Thus the scholars who complete this course will be fully equipped to teach well immediately as they join any educational institute.

Learning Outcomes
On successful completion of this course the participants will be able to:
- Describe teaching-learning processes especially in context of higher education
- Develop an instructional plan as per the teaching strategy needed.
- Design learning events using different teaching methods
- Use activities and exercises as per the required teaching approach
- Develop web based and research-based pedagogical tool
- Explore the ways to handle diverse group of learners in the classroom
- Use technology effectively to facilitate and support e-learning
- Prepare assessment rubric for achievement testing of students and portfolio
- Demonstrate enhanced competency in communication with students
- Use visual aids and technology in offline and online classes.
- Make effective presentations in seminars and conferences.
- Deliver lectures and facilitate discussions and other activities in the classroom situation.

Target Audiences
The course is designed as a compulsory course for the research scholars of all disciplines. However it may be useful for students of the masters programmes who may be taking this course as an elective to enhance their employability.

Prerequisite

The prerequisite for the course is a bachelor's degree in any discipline.

Course Content

1. **Overview of Teaching and Learning (6 hours)**
    a. Concept of Pedagogy, Andragogy and Heutagogy
    b. Understanding Teaching and related terms, the relationship with learning
    c. Understanding learner and learning cycle
    d. Taxonomy of teaching objectives (Revised Bloom's taxonomy),
    e. Writing learning outcomes

2. **Curriculum and Instruction (8 hours)**
    a. Curriculum: Concept and Facets,
    b. Credit Framework and Choice-based Credit System
    c. Instruction: Concept, Design and instructional media
    d. Developing Instructional Plans

3. **Teaching Strategies and Approaches (9 hours)**
    a. Expository vs Inquiry Strategy (shifting from behaviourism to constructivism)
    b. Individualized to small group/ large group Approaches,
    c. Scenario-Based, Online and Blended Approach, Introduction of MOOCs
    d. Designing Learning Events and Activities for Student Engagement
    e. Component of effective lectures delivery

4. **Pedagogical skills and tools (8 hours)**
    a. Concept of TPACK
    b. Pedagogical Skills - Scanning the class, starting a session, skill of achieving closure skills, skills to lead session, Skill to secure attention (switch over), scaffolding skills, time management, skill to handle challenging situations.
    c. Technological Skills- Using different apps and platforms for teaching, Use of Open Educational resources (OER), developing assignments and learning material using different apps and software
    d. Communication skills - Presenting in Public, Participating in Discussions and Formal Meetings

5. **Assessment and Evaluation (8 hours)**
    a. Concept of Assessment, Assessment for learning, of learning, as learning,
    b. Receiving and Giving Feedback
    c. Assessment rubrics, Assessment Portfolio, Reflective journal
    d. Designing an Achievement test - Objective and Descriptive / Open book question paper
    e. Grading System (Absolute, Relative, CGPA, Conversion of grades to percentage etc)
    f. Conducting Examination, - Face to Face, Online Exams (Proctored and non-Proctored Exams)
    g. Project Reviews and Viva-Voce Examinations

6. **Classroom Management (6 hours)**
   a. Organizing the Physical environment
   b. Managing learner's behaviour through action research
   c. Counselling, Guidance and Mentoring
   d. Effective Academic leadership
   e. Resource Management

Mode of Transaction
The content will transact through interactive lectures, activities, web lectures, assignments, discussions and seminars and practice sessions (video recorded to provide feedback).
Assessment: CIA and EoSE as per provisions of the university ordinances

Course Title: Practice-Based Teaching *(original draft prepared by Dr Anjali Sharma)*

Course code: (to be confirmed as per the department)

Credits:03 (About 60 hours of practical teaching sessions and additional preparatory work to support the teaching)

Aim and Outline of the course:

The course is designed for the research scholars in the continuation of the foundation course of Pedagogy for higher education. As per the expectation of National Education Policy 2020, researchers need to be professionally equipped along with conceptual knowledge and understanding of Pedagogy. Developing teaching skills during the PhD will be a good value addition to a scholar's profile and will help them develop essential pedagogical /teaching skills required for their professional life.

This course is a practice-based course where a scholar is expected to be formally involved in various aspects of delivering a course and will include formal teaching sessions under the guidance of a supervisor.

Learning Outcomes: On completion of the course the participants will be able to:

- Prepare the Instructional plans for the given course
- Write Learning Outcomes for the planned learning event
- Design Learning Events as per the LO
- Deliver Lectures
- Formally speak in Public and make formal presentations
- Support the course instructors / teachers in various aspects of teaching, learning and assessment
- Give effective feedback and provide support to students

Pre-requisites: Successful completion of the course 'Pedagogy for Higher Education'

Contents:

The course contents will depend on the teaching requirement of subject specific discipline. The participant expected to be involved in the whole cycle of delivery of a course for which the following is suggested.

1. Developing Instructional Plans,
2. Writing Learning Outcomes for each session
3. Designing learning activities as per the Instructional Plan and LO
4. Design Cooperative and Collaborative Activities for the students.
5. Delivering Lectures and organizing Seminars,
6. Preparing Handouts / Learning Course Readers
7. Moderating Panel Discussions, Facilitating Group Discussions
8. Facilitating Practicals / Field Visits / Project work / Studio (as per the need)
9. Assessment - developing rubrics, preparing question papers of different types, and assessing answer scripts with written feedback, preparing results etc (for one formative and one summative Assessment)

10. Giving written and verbal feedback on presentations, assessment, reports etc (one-time only)
11. Writing Project Review Report (2 Reports)
12. Develop Open Educational Resources pool in the specific discipline
13. Conduct Seminar /conference and group discussions for the students. (3 Seminars/conference and 2 group discussions)
14. Writing and delivering formal public speeches like welcome notes, introducing speakers, vote of thanks etc. (2 in number from the mentioned activities)
15. Mentoring and Counselling students (5 students only)

Assessment: This will be a non-graded course. The participant will be awarded 'S' for satisfactory performance and 'NS' for non-satisfactory performance on completion of around 60 hours of practical teaching which may be a mix of classroom lectures, formal seminars, facilitating laboratory/studio/field sessions.

Note:

1. The 60 hours of practical teaching and the work on associated activities should ideally be done in one semester. However, these may be spread over two semesters also.
2. The contents listed above are representative in nature and will be balanced by the supervisor in a manner that the scholar is able to accomplish the tasks without feeling overburdened. It is suggested that the department and guide/instructor may take 60% of those activities (specifically designing learning course/hangouts, Instructional plan and Assessment) and may decide about the remaining 40 % of activities on their own. The teaching practice sessions may be spread over one or more courses.
3. The teaching practice should cover theoretical as well practical/studio classes. The allocation of the courses should be connected with the area of research being undertaken by the scholar and must be only a small part of a given course. It is not meant to replace the 'teaching load' of the supervisor.

Course Code and Course Name	STI 735: **Research Ethics**
Course Type	Skill Enhancement Course
Credits	4
Course Branch	Ph.D. in Digital Society
Grading Scheme	Internal exam I (20 marks) + Internal exam II (20 marks) + Final exam (60 marks)
Pre-Requisites (where applicable, specify exact course names)	-

Course Outline

The course will cover general concerns in research ethics as well as research ethics issues that may be specific to the learners' own research. The general topics covered in the form of lectures are: - Academic integrity including plagiarism, self-plagiarism - Research data and result bias, manipulation, and fabrication - Research methods and requirements for verifiability and reproducibility - Handling of personal and sensitive information - Research with dual-use implications

Course Content

- Introduction to Research, Ethics and Academic Honesty
- Ethics in Writing
- Academic Integrity :Research Misconduct/Fabrication/Unethical Practices
- Academic/Research:Falsification, Manipulation or Tempering of Data
- Literature Review and Proper Use of E-Resources
- Using Design thinking Methods to Avoid Plagiarism
- Writing Quality Academic Publications: Challenges to avoid plagiarism
- Scientific Reading, Cite and Write
- Report writing using popular word processing packages such as MS word, Open Office etc.
- Style Manuals and Bibliographies. Ex. APA, MLA, Chicago, IEEE
- Introduction to Reference Management Tools (RMT)
- Features and Functionalities of Anti-Plagiarism Software
- Detection of Plagiarism by using Different Online Tools
- Agencies and Organisation dealing with plagiarism issues (eg. Retract/Deluze)
- Plagiarism Policies, Penalties and Consequences

Learning Outcomes

On completion of the module, candidates will possess the following:
- Knowledge: - Overview of research ethics; the institutional arrangement and ethical standards - In-depth understanding of requirements and methods for ensuring the verifiability and reproducibility of scientific results - Understanding of the scientific, ethical and legal implications of scientific misconduct in the planning, execution or reporting of the research - Knowledge of legal and ethical requirements for the acquisition, handling, and storage of personal and sensitive information - Awareness of the obligations of research to society.
- Skills: - Ability to identify ethical and legal issues and requirements in the conduct of research - Ability to discuss causes and means for the prevention of misconduct and questionable research practices - Ability to identify research applications outside the intended domain raising ethical and legal concerns.
- General Competence: - Ability to reflect on own and others research practice and its adherence to ethical standards.

Text Book / References
- Collste, G, Introduction to Ethics.   - De Peol & Royakkers 2011, Ethics, Technology and Engineering, 8.3 The Engineers Responsibility for Safety (pp 223-238)   - Good research practice, Vetenskapsrådets rapportserie, 3:2011 http://www.vr.se/download/18.3a36c20d133af0c1295800030/1340207445948/Good +Research+Practice+3.2011_webb.pdf   - The Menlo Report. Ethical Principles Guiding Information and Communication Technology Research. http://www.caida.org/publications/papers/2012/menlo_report_actual_formatted/m enlo_report_actual_formatted.pdf   - The Uppsala Code of Ethics for Scientists, Journal of Peace Research 4/1984