

Digital Humanities Curriculum of M.Sc. Program



॥ त्वं ज्ञानमयो विज्ञानमयोऽसि ॥

1. Introduction

Master of Science (M.Sc.) in Digital Humanities at IIT Jodhpur is designed to address developments, implications, and inflections of digital technologies on historical and contemporary culture, and society. To contextualize, disciplinary evolutions of the natural sciences, social sciences, the arts and humanities and allied technologies have converged and diverged over the centuries. The digital scholarship in the social sciences, the arts and humanities is only emerging. One reason for the growth of digitization in the social sciences, the arts and humanities is not an emulation of the natural sciences, rather, discovering meaning in the application of information technology as an aid to fulfil the disciplines' basic tasks of preserving, reconstructing, transmitting, and interpreting the human record historically and contemporaneously.

Given the above, the primary objective of this program is to orient students in the ways in which the study of the humanities, social sciences, and similar areas has been transformed by the influence of digital technologies and economic compulsions. This confluence of disciplines has redefined the contours of the subject of "humanities". In the present context, a critical interrogation into the history of digital approaches to the humanities, modes of implementation of digital tools & platforms, issues related to the utilization of big data (through database construction, text markup, informatics, statistical analysis to name a few) are imperatives in contemporary research in Humanities. This interdisciplinary M.Sc program has been tailored to provide such critical insights into the key parameters that are continually influencing and impacting the amalgamation of diverse disciplines, especially digital technologies with humanities that will re-engineer emerging societal structures and behavior.

2. Objectives of the program

The M.Sc. DH program offers unique opportunities to redraw conventional disciplinary boundaries among the humanities, the social sciences, the arts, technology and engineering, and the natural sciences. Primary objectives of the program include (but are not limited to):

1. Exploring contested definitions of the digital humanities
2. Exploring debates about the digital humanities within the emerging field
3. Beginning to consider why the digital humanities matter beyond the academic field itself
4. Through hands-on experimentation, trying out various types of digital humanities analysis using heterogeneous datasets, tools, and methods

The students of the program will acquire a systematic understanding of digital humanities and the knowledge and skills to independently formulate and solve problems in the area of digital humanities which has large scale applications in industry and academia. After completion of the program, students will have acquired knowledge that is required for advanced work in jobs and organizations invested in digitization and the communication of information, documents, and culture occurs. To enhance collaborative workflows, the program will actively involve academics and resource people from other institutes and universities across the country and abroad.

3. Expected Graduate Attributes

After completing this program, a student will be able to develop an ability to:

1. In depth understanding of the fundamental concepts of broad areas in Humanities, Social Sciences, and application areas of basic computational tools.

2. Ability to undertake problems in multidisciplinary domains of Humanities, Social Sciences, Computer Sciences, Mathematics, and related disciplines.
3. Skills to demonstrate basic principles of Humanities and Social Sciences in digital domains through various application areas and analytical processes.
4. Ability to make effective oral and written technical communication.
5. Appreciation and adherence to norms of professional ethics.

4. Learning Outcomes

The student will have the ability to:

1. Demonstrate knowledge and understanding of the main field of study and significant in-depth knowledge in some subcategories of the digital humanities
2. Analyze, assess, and manage complex phenomena, questions, and situations related to the digital humanities as a field of study and work
3. Describe the prospects and limitations of science and technology in digital humanities, their role in society, and the individual's responsibility for how they are used

5. Major Thrust Areas of the M.Sc. Program

The major thrust areas of the M.Sc. DH program are:

- Archiving
- Cultural Heritage and Digital Preservation
- Data Analytics for Social Sciences
- Data Journalism
- Digital Marketing

Recommended elective courses for each specialization vertical:

Archiving	Cultural Heritage	Data Analytics for Social Sciences	Data Journalism	Digital Marketing
Images, Imaginations, and Digital Cultures	Images, Imaginations, and Digital Cultures	Introduction to AR/VR	New Media Studies	New Media Studies
Introduction to AR/VR	Introduction to Cultural Studies	Analysis of Social Media Networks	Analysis of Social Media Networks	Introduction to AR/VR
Digital Cinema	Introduction to AR/VR	Human Factors in Interaction Design	Web & Social Media Analytics (SME)	Analysis of Social Media Networks
Text Analytics	Digital Cinema	Qualitative and Quantitative Methodologies	Digital Publishing	Game Designing
Theory of Communication	Digital Storytelling	Big Data and Social Sciences	Civic writing/ Contextual Communication	Art, Aesthetics and the Public (HSS)
Curation Technologies	Introduction to Typography	Marketing Analytics	Theory of Communication	International Marketing (SME)
Digital photography and videography	Consumer Culture and Commodities	Text Analytics	Text Analytics	Consumer Behavior (SME)
Cultural semiotics	Digital photography and videography	Game Designing	Digital photography and videography	Online Marketing (SME)
Performing Arts in Digital Space	Digital Storytelling	Computational Social Science	Crowd Sourcing	Innovation & Digital Economy (SME)
Common Ontology	Performing Arts in Digital Space	Computational Economics	Computational Social Science	Creating Digital Products/Services (SME)

6. Topic Clouds and Mapping of Topic Clouds with proposed courses

Table 1. Topics and Mapping of Topic with Courses

Sl. No.	Topics	Category (Core/ Electives)	Course Title
1	Introduction and History of DH; Digitization of the Humanities; Usages of digitizations; Data Collection, Meta Data, Social Media Data, Data Curation, Structured and Unstructured Data; Ethics in Digital Environments (Copyright, Digital Rights, Open Access and Digital Knowledge Spaces)	Core	Foundations of Digital Humanities
2	Basic principles and mathematical preliminaries; Information-based learning; Similarity-based Learning; Probability-based Learning; Error-based Learning; Unsupervised learning; Case studies and application of ML in DH	Core	Machine Learning for Digital Humanities
3	The digital economy; network infrastructures; Economics of platforms; Digital markets; Digitization and Innovation	Core	Principles of Digital Economics
4	Discussion on and collective reading of texts, weekly seminar on select issues related to DH	Core	Seminar in Digital Humanities
5	Fundamentals of Programming and its application in Numerical Techniques (Root finding methods, Solution for system of linear equations, Power method)	Core	Programming Techniques
6	Performance of algorithms, Introduction of Data structures such as linked lists, stacks, queues, trees, binary trees.	Core	Data Structures and Algorithms
7	History of Civilizations and role of technology; Narratives of Progress; Social Construction of Technology - Colonial Technology; Diffusion and transfer of technology; Rise of the Internet and Digital Societies; Basics of archaeology (concept, methods, practices)	Core	Civilizations, Cultures, and Technologies
8	Literary history, literary terms and genres, literary cultures in history, impact of technology on literature, history of publishing, linguistic analysis, discourse analysis, semantics, South Asian literatures, oral and print cultures in literature	Core	Perspectives in Language and Literary Studies
9	DH as Convergent Practices; DH in Context (Versions of DH across the globe, Post-colonial DH, DH in the Global South); Methodologies; Offline and Online Data Collection (Surveys, Interviews, Focus Groups, Scraping); Qualitative Methods; Quantitative Methods	Core	Methods and Methodologies in Digital Humanities

10	Birth of the archive, archive in historical time, archive after the digital revolution, digital surrogate and born digital, modes of archiving, audio-visual essay, media collectives, digital film archives, emergent modes of exhibition	Core	Archiving and Databases
11	Client Hardware (Desktop vs. Mobile), Android Development, iOS Development, RESTful and Non-RESTful apps, Creating and Incorporating Web/Cloud Services, Mobile Sensors, Security and Trust Management, Privacy and Ethics, Usability and Accessibility	Core	Social Media Application Development
12	Socio-Economic Process, Concept Mapping, Intellectual Property Rights (IPR) tools, Patent, Design registrations, Trademark, Copyright, Trade Secret, Geographical Indications, Protection of New Plant Varieties. Searching and scanning IPR databases, Knowledge evolution, Societal Issues, Collaborative working. IP Filing process, Biodiversity & traditional knowledge, IPR in Trade and Commerce	Core	Foundations in IPR
13	The Production of Space, Identity, Maps, Representation, and Power; Panoptic Spaces; Spaces of Economic Diversity; Identity from Imagined Communities to Virtual Communities, Liveness, Telepresence, Connection and Disconnection; National Identity; Transnationalism and Diaspora	Core	Place and Identity in the Digital Age
14	Visual Cultures; Images as Performative Space; Digital media and Global Image; Images, Power, and Resistance; Netnography / Digital Ethnography	Elective	Images, Imaginations, and Digital Cultures
15	The culture concept, culture industry, media and culture, culture in the digital age, globalization, mass culture, popular culture, visual and material culture, cultural preservation	Elective	Introduction to Cultural Studies
16	Introduction to New Media, its theories and histories, its social, political and cultural implications; public domain and digital commons, network society, online streaming and authorship debates, piracy and IP rights; media lab as research space; New Media and Indian/global politics	Elective	New Media Studies
17	Augmented Reality, Virtual Reality, Mixed Reality, Tools, Environment, Interactivity, Human factor.	Elective	Introduction to AR/VR
18	Network Concepts, Graph, Connectivity, Software tools, NETworkX, Pajek	Elective	Analysis of Social Media Networks
19	End of celluloid, post-cinema, digital cinema and durational principles, slow cinema, emerging domains of exhibition and spectatorship, digital film archives and databases, streaming platforms and authorship debates, digital restoration and preservation, experimental cinema-visual art alliance in the days of the digital	Elective	Digital Cinema

20	Digital Environment, Application in Teaching, Advertising, Training, Immersive Environment	Elective	Digital Storytelling
21	Anthropomorphism, Multimodal Interfaces, Cognitive aspects, Qualitative and Quantitative Evaluation.	Elective	Human Factors in Interaction Design
22	Digital typesetting, Fonts format, Encoding techniques. Font Families and Formats, Curves, Typographic Principles, Symbols, Signs, Accents, Hierarchy and Scale, Tracking and Kerning, Rhythm and Composition, (X)HTML, Embedding, SVG Social Media FontLab, FontForge, Autotracing, Optimization.	Elective	Introduction to Typography
23	Natural Resource Management, Food Security, Agriculture, Migration, Environment, health, Disasters	Elective	Climate Change and Society
24	Consumption, markets, consumer society, commodity culture, consumption and class, material culture, overconsumption, consumer citizenship, global consumption, commodity flows	Elective	Consumer Culture and Commodities
25	Science and Technology studies, Ethnography of a laboratory, Social construction of reality, Social construction of nature, Discrimination in science, Actor Network Theory, Anthropology of non-humans, ecological understanding of world, Science and technology is colonial India, Science and Governance in India, History and Philosophy of Science and Technology, Technology and Art	Elective	Sociology of Science and Technology
26	Defining Cine-Politics as a conceptual tool, cinema, cultural politics and political lives in the subcontinent, Indian National Emergency of 1975-77 and its politico-cultural implications, state sponsorship, film policy and censorship, globalization of the dictatorial in the 1970s, digital remembering and archiving of evidence	Elective	Cine Politics under the National Emergency
27	Gender as social construction; Gender in Colonial History; Gender across geo-social scales; Gender and Migration; Feminisms; Gender, Science, and Technology (Household technologies; Medical technologies; Communication technologies); Video Games; Imagining and Representing Gender Gender in Literature and Culture; Postcolonial Studies; Normativity, Subversions, and Queer Studies; Global Gender Politics	Elective	Gender and Society
28	Art and Decadence, Social anthropology and art - the theory of Levis Strauss, Art and psychoanalysis - Jacques Lacan, Photography and Deleuze - A thousand plateaus, Art and Foucault, Nietzsche and Art.	Elective	Art, Aesthetics and the Public
29	Approaches to Sociocultural Theories, Relationship between self and society; Social integration and transformations; Social theories and world affairs; Technology, Culture, and Politics	Elective	Sociocultural Theories

30	The topic clouds for the course include contemporary topics in Digital Humanities and may be updated according to the instructor	Elective	Selected Topics in DH
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7. Curriculum of M.Sc. Digital Humanities

Table 2. Curriculum of M.Sc. Digital Humanities

Cat.	Course Level	Course Title	L-T-P-D	Credits	Cat.	Course Level	Course Title	L-T-P-D	Credits
Semester 1					Semester 2				
C	DHL5xx0	Foundations of Digital Humanities	3-0-2-0	4	C	DHL5xx0	Methods and Methodologies in Digital Humanities	3-0-2-0	4
C	MAL5xx0	Programming Techniques	2-0-2-0	3	C	DHL5xx0	Archiving and Databases	3-0-2-0	4
C	DHL6xx0	Perspectives in Language and Literary Studies	3-0-0-0	3	C	DHL5xx0	Machine Learning for Digital Humanities	3-0-0-0	3
C	DHL6xx0	Civilizations, Cultures, and Technologies	3-0-0-0	3	C	OAL7XX0	Foundations in IPR	1-0-0-0	1
C	DHL5xx0	Principles of Digital Economics	3-0-0-0	3	C	DHL5XX0	Place and Identity in the Digital Age	3-0-0-0	3
C	DHQ5xx0	Seminar	0-0-2-1	2	C	MAL5XX0	Data Structures and Algorithms	1-0-2-0	2
					E	XXXX	PE 1	3-0-0-0	3
			14-0-6-1	18				17-0-6-0	20
Semester 3					Semester 4				
PE	xxxx	PE2	3-0-0-0	3	PE	xxxx	PE5	3-0-0-0	3
PE	xxxx	PE3	3-0-0-0	3	PE	xxxx	PE6	3-0-0-0	3
PE	xxxx	PE4	3-0-0-0	3	OE	xxxx	OE2	3-0-0-0	3
OE	xxxx	OE1	3-0-0-0	3	P	DHD7xx0	Project 2	0-0-0-10	10
P	DHD7xx0	Project 1	0-0-0-5	5					
C	DHP7xx0	Social Media Application Development	1-0-2-0	2					
			13-0-2-5	19				9-0-0-10	19

8. List of Proposed Courses

Table 3. Program Courses

Sr. No	Course Name	LTPD	Credit	Course Code	Course Level
Core Courses					
1	Foundations of Digital Humanities	3-0-2-0	4	DH	500
2	Methods and Methodologies in Digital Humanities	3-0-2-0	4	DH	500
3	Machine Learning for Digital Humanities	3-0-0-0	3	DH	500
4	Principles of Digital Economics	3-0-0-0	3	DH	500
5	Place and Identity in the Digital Age	3-0-0-0	3	DH	500
6	Archiving and Databases	3-0-2-0	4	DH	500
7	Seminar in Digital Humanities	0-0-2-1	2	DH	500
8	Programming Techniques	2-0-2-0	3	MA	500
9	Data Structures and Algorithms	1-0-2-0	2	MA	500
10	Civilizations, Cultures, and Technologies	3-0-0-0	3	DH	600
11	Perspectives in Language and Literary Studies	3-0-0-0	3	DH	600
12	Social Media Application Development	1-0-2-0	2	DH	700
13	Foundations in IPR	1-0-0-0	1	OA	700
Program Elective Courses					
14	Introduction to Cultural Studies	3-0-0-0	3	DH	700
15	New Media Studies	3-0-0-0	3	DH	700
16	Analysis of Social Media Networks	3-0-0-0	3	DH	700
17	Digital Cinema	3-0-0-0	3	DH	700
18	Digital Storytelling	3-0-0-0	3	DH	700
19	Human Factors in Interaction Design	3-0-0-0	3	DH	700
20	Introduction to Typography	3-0-0-0	3	DH	700
21	Consumer Culture and Commodities	3-0-0-0	3	DH	700

22	Images, Imaginations, and Digital Cultures	3-0-0-0	3	DH	700
23	Selected Topics in DH	3-0-0-0	3	DH	700
24	Introduction to AR/VR	3-0-0-0	3	CS	700
25	Sociology of Science and Technology	3-0-0-0	3	HS	700
26	Gender and Society	3-0-0-0	3	HS	700
27	Cine Politics under the National Emergency	3-0-0-0	3	HS	700
28	Art, Aesthetics and the Public	3-0-0-0	3	HS	700
29	Climate Change and Society	3-0-0-0	3	HS	700
30	Sociocultural Theories	3-0-0-0	3	HS	700

Detailed Course Content of Program Core Courses

Course Title	Foundations of Digital Humanities	Course No.	DHL5XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-2-0 [4]
Offered for	M. Sc. (Cr=0); M.Tech. (Cr=0)	Type	Compulsory
Prerequisite	None		

Objectives

1. Explain the broad spectrum and perspectives of Digital Humanities (DH)
2. Introduce the necessary tools and techniques to understand various DH research projects

Learning Outcomes

1. Understand the transdisciplinary nature of DH
2. Learn to apply tools for the collection and analysis of data from digital platforms
3. Understanding the basic ethics of data collection from digital platforms

Contents

Introduction and History of DH: Intersection of digital technology and humanities disciplines; the history of humanities computing – how and why it emerged (7 lectures)
Digitization of the Humanities: Theoretical Premises; Data in DH, Images and other visual cultures (10 lectures)
Usages of digitizations: Archiving and Databases; Mapping; role of place and space in cultural visibility; digital heritage (10 lectures)
Data Collection: New Media and Digital Platform, Meta Data, Social Media Data, Data Curation, Structured and Unstructured Data (10 Lectures)
Ethics in Digital Environments: Copyright, Digital Rights, Open Access and Digital Knowledge Spaces (5 lectures)

Laboratory

1. Introduction to Digital Tools like TAGS, twXplorer, ngram Viewer, AntConc, StoryMap, Voyant
2. Final Project

Text Books

1. Eileen Gardiner, Ronald G. Musto (2015), *The Digital Humanities: A Primer for Students and Scholars*, Cambridge University Press.
2. Chaudhuri, S. (2010), *The Metaphysics of Text*, Cambridge University Press
3. Gold, Matthew K. (2012), *Debates in the Digital Humanities*, University of Minnesota Press

Reference Books

1. Hockey, Susan. (2000), *Electronic Texts in the Humanities: Principles and Practice*, Oxford University Press.
2. Schreibman, S., Siemens, R., Unsworth, J. (2004), *Companion to Digital Humanities*, Oxford: Blackwell.
3. Shillingsburg, Peter. (2006), *From Gutenberg to Google. Electronic Representations of Literary Texts*, Cambridge University Press

Course Title	Perspectives in Language and Literary Studies	Course No.	DHL6XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	M.Sc. (Cr>=0); M.Tech. (Cr >= 0); B.Tech. (Cr>=75)	Type	Compulsory
Prerequisite	None		

Objectives

1. Introduce students to theories of literature.
2. Introduce students to basic theories of language, linguistics concepts, and literary cultures in translation.
3. Provide the students with a background in the development of computational tools for literary analysis

Learning Outcomes

1. Understand major trajectories in literary thought, trace the evolution of literary genres, and contextualize their contemporary significance.
2. Understand fundamental aspects of language and linguistic analysis.
3. Critically analyse literary texts using digital tools.

Contents

History of English Language and Literature: Literary Canon, Historical Events and Linguistic Shifts, Impact of technology on evolution of literature (5 lectures)
Literary Genres: The Epic, Drama, The Advent of the Novel, Poetry (6 lectures)
Literary Analysis and Criticism: Formalism, Close Reading and Textual Analysis, Structure, pattern, motif and metaphor analysis (5 lectures)
Fundamentals of Linguistics: Language Families, Syntax, Morphology, Phonology, Pragmatics (5 lectures)
Applied Linguistics: Theories of Language and Language Learning, Corpus and Discourse Analysis, Digital Tools for Language Learning and Textual Analysis (5 lectures)
Literary Cultures around the World: American Literature, World Literature, Literatures of the Commonwealth, Postcolonial and New Writing, South Asian Literatures (10 lectures)
Literature in the Digital Age: Cyberpunk fiction, Steampunk fiction, Science fiction, Digital Humanities Tools for Literary Analysis, Discourse and Corpus Analysis with Digital Tools, Data driven Literary Analysis (6 lectures)

Text Books

1. Terry Eagleton. 1983. *Literary Theory: An Introduction*. Minneapolis: University of Minnesota Press.
2. Abrams, M.H. *A Glossary of Literary Terms*. Cengage,2013.
3. Barry, Peter. *Beginning Theory: An Introduction to Literary and Cultural Theory*. Manchester University Press, 2002.
4. Sheldon Pollock. 2003. *Literary Cultures in History: Reconstructions from South Asia*. Berkeley: University of California Press.

Self Learning Material

1. Merin Simi Raj, *History of English Language and Literature*, Department of Humanities and Social Sciences, Indian Institute of Technology-Madras, <https://nptel.ac.in/courses/109106124/>.
2. Rajesh Kumar and Shreesh Chaudhary, *Introduction to Modern Linguistics*, Department of Humanities and Social Sciences, Indian Institute of Technology-Madras, <https://nptel.ac.in/courses/109/106/109106080/>.

3. Sayan Chattopadhyay, *Introduction to Literary Theory*, Department of Humanities and Social Sciences, Indian Institute of Technology-Kanpur, <https://nptel.ac.in/courses/109/104/109104135/>.

Course Title	Civilizations, Cultures, and Technologies	Course No.	DHL6XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	M.Sc. (Cr>=0); M.Tech. (Cr >= 0); B.Tech. (Cr>=75)	Type	Compulsory
Prerequisite	None		

Objectives

1. This course introduces students to important historical and sociocultural processes that have crafted technologies over time and across civilizations.
2. Recognize how technological developments are related to socio-cultural values and practices and understand the roots of current technological society(ies)

Learning Outcomes

1. Students will be able to appreciate that technology is not an isolated, literate enterprise, it rather produces structures, machines, processes, systems that impact and inflect societies and civilizations

Contents

History of Civilizations and role of technology: Classical and Early Modern Philosophy (3 lectures); Narrative(s) of Progress; Industrial Revolution(s) (5 lectures) Industry and Innovation; Culture of Invention; Enlightenment and the Rise of Modern Science (6 lectures)
Social Construction of Technology - Colonial Technology (Race, Gender, Sciences and Technology) (6 lectures); Communication, Transportation and the changing world (4 lectures); Diffusion of Technologies and transfer of technology globally (4 lectures)
The Development of the Computer Industry; Rise of the Internet and Digital Society; Industrialization, Commodification and the Environment (5 lectures); Biotechnology (3 lectures)
Future of Science and Technology in the society and their changing relationship (6 lectures)

Text Books

1. Pacey, Arnold. *Technology in World Civilization*, 4th ed. Cambridge, MA: MIT Press, 2001.
2. Volti, Rudi, *Society and Technological Change*, 4th ed. New York: Worth Publishers, 2001

Self Learning Material

1. Digital Humanities Seminar Video Archive of the Open University, UK, <http://www.open.ac.uk/arts/research/digital-humanities/videos>

Course Title	Methods and Methodologies in Digital Humanities	Course No.	DHL5XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-2-0 [4]
Offered for	M. Sc. (Cr=0); M.Tech. (Cr=0)	Type	Compulsory
Prerequisite	None		

Objectives

1. Demonstrate in depth knowledge of selected methodologies related to DH
2. Introduce and explore avenues of new and emerging societal and cultural entities in DH
3. Introduce several qualitative and quantitative tools for DH projects

Learning Outcomes

1. Understand DH as a convergent array of practices.
2. Understand what DH means in different contexts
3. Capture, collect, and analyse a variety of data types related to DH project

Contents

DH as Convergent Practices: Digital methods in and about philosophy, society, culture, and language (5 Lectures)

DH in Context and Approaches (Theory and Methods): Versions of DH across the globe, Post-colonial DH, DH in the Global South (5 lectures)

Methodologies: Constructing Research Questions for a variety of disciplinary contexts (for e.g. in new media, social studies, mass communication and journalism, digital heritage) (7 lectures)

Offline and Online Data Collection: Surveys, Interviews, Focus Groups, Scraping (6 Lectures)

Qualitative Methods: Descriptive, Topic and Thematic Coding, Data analysis through NVivo and MaxQDA; (10 Lectures)

Quantitative Methods: Introduction to statistical techniques, and using of statistical tools (SPSS, STATA); Network Analysis (9 lectures)

Laboratory

1. Introduction to Digital Tools like Tableau, ArcGIS, SocioViz, NetVizz, MaxQDA, NVivo
2. Final Project

Text Books

1. Patricia Leavy (2017), Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches. Guilford Publications
2. P.L. Arthur & K. Bode (2014) Advancing digital humanities: Research, methods, theories. London: Palgrave Macmillan
3. Lewis Levenberg, Tai Neilson, David Rheams (2018), Research Methods for the Digital Humanities: Palgrave Macmillan

Reference Books

1. Johnny Saldana (2015), The Coding Manual for Qualitative Researchers, SAGE Publishing
2. Alexander Loth (2019), Visual Analytics with Tableau, John Wiley & Sons

Self Learning Material

1. Data Visualization (NPTEL): <https://www.youtube.com/watch?v=eFByJkA3ti4>

Course Title	Principles of Digital Economics	Course No.	DHL5XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	M. Sc. (Cr=0); M.Tech. (Cr=0)	Type	Compulsory
Prerequisite	None		

Objectives

1. Explain the basic theory in digital economics, including network effects, value creation models, digital business models and market modeling.
2. Introduce how the digital economy influences societies, environment, regulations, privacy, strategy, and financial operations.

Learning Outcomes

1. To get broad knowledge in digital economics and how the digital economy impacts its surroundings.
2. To perform network effect analysis of a value network and construct a business model.

Contents

Introduction: The Digital Economy, The Productivity Paradox, ICT, Growth and Productivity (6 lectures)

Network Infrastructures: Broadband Networks and the Transition to Fiber, The Relations between Network Operators in the Internet: Peering, Transit, and Net Neutrality (6 lectures)

Network Effects and Standards: Network Effects, Standard Wars (6 lectures)

The Economics of Multi-Sided Platforms, Economics of Platforms: The Basics, Reseller vs. Platform: The Choice of Business Model (6 lectures)

Digital Markets: Competition between E-retailers and Brick & Mortars, Business Models of Digital Goods

Personal Data, Price Discrimination and Privacy: Personal Data and Price Discrimination, The Cost of Privacy and the Privacy Paradox (6 lectures)

Experience Goods, Online Reviews and Recommender Systems: Search Goods and Experience Goods, Online Reviews and Recommender Systems (6 lectures)

Digitization and Innovation: Intellectual Property in the ICT Sector: The Effect of Digitization on Innovation: Crowdsourcing and Crowdfunding (6 lectures)

Text Books

1. Eric Brousseau, Nicolas Curien (2007); *Internet and Digital Economics: Principles, Methods and Applications*. Cambridge University Press.
2. Cellini P. (2007); *Internet Economics: Understanding Digital and New Media Markets*, Luiss University Press.
3. Luc Soete, Bas Ter Weel (2006); *The Economics of the Digital Society*, Edward Elgar Pub.

Self Learning Material

1. E-Business, <https://nptel.ac.in/courses/110/105/110105083/>

Course Title	Archiving and Databases	Course No.	DHL5XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-2-0 [4]
Offered for	M. Sc. (Cr=0); M.Tech. (Cr=0)	Type	Compulsory
Prerequisite	None		

Objectives

1. Developing an understanding of the archive and its evolution in historical time till the days of the digital revolution
2. Exploring digital cinema and media, audio-visual essay, media collectives, and digital film archives
3. Tracing the trajectory of older information systems till the advent of the database with select case studies of the latter

Learning Outcomes

1. Develop greater familiarity with the philosophical and historical nuances of the archive
2. Become acquainted with the contemporary forms of digital archive, artwork, cinema, works of media collectives and their modes of exhibition
3. Have an understanding of database as an emerging mode of information network

Contents

Archive and Its Evolution: Introducing archive (2 lectures), Archive in historical time (5 lectures), politics and poetics of archiving (5 lectures), archive in the digital age (2 lectures)

Cinema and The Archive: Film archives (5 lectures), digital age and post-cinema (5 lectures), the end/future of celluloid (4 lectures)

Contemporary Art and The Emergent Space: Archive, art museums, installation art, audio-visual essay, media collectives and their practices, digital archive, case studies of digital film archiving initiatives, film databases (7 lectures)

Exhibition and Authorship: modes of exhibition and questions concerning authorship, piracy, law and the image (7 lectures)

Text Books

1. Friedrich, M., (2018), *The Birth of the Archive: A History of Knowledge*, University of Michigan Press.
2. Ernst, W., (2013), *Digital Memory and the Archive*, University of Minnesota Press.
3. Grau, O., Coones, W., and Ruhse, V., (eds.) (2017), *Museum and Archive on the Move: Changing Cultural Institutions in the Digital Era*, De Gruyter.

Self Learning Material

1. Indian Cinema, <https://indiancine.ma/>

Course Title	Machine Learning for Digital Humanities	Course No.	DHL5XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	M. Sc. (Cr=0); M.Tech. (Cr=0)	Type	Compulsory
Prerequisite	None		

Objectives

1. Introduce and explore a broad spectrum of perspectives in Machine Learning (ML)
2. Develop familiarity with a range of ML algorithms as applicable for Digital Humanities (DH)
3. Develop an understanding of software tools to implement ML algorithms

Learning Outcomes

1. Identify best-fit techniques for related research questions and data in DH
2. Basic ability to design, test and interpret ML models for DH

Contents

Introduction: Basic principles and mathematical preliminaries (5 Lectures)

Information-based learning: Decision Tree, ID3, ensemble learning (4 Lectures)

Similarity-based Learning: Feature space, Similarity measure, Nearest Neighbor, Feature selection (4 Lectures)

Probability-based Learning: Baye's theorem, Bayesian Learning, Probability density function, Binning, Bayesian Networks (6 Lectures)

Error-based Learning: Linear Regression, Support vector machines, Neural Networks (Perceptrons, Multilayer Network, Back Propagation) (9 Lectures)

Unsupervised learning: Clustering (K-means, Hierarchical), Dimensionality Reduction (4 Lectures)

Case studies and application of ML in DH (10 Lectures)

Text Book

1. Richard O. Duda, Peter E. Hart, David G. Stork. Pattern Classification (John Wiley & Sons)
2. John D. Kelleher, Brian Mac Namee, Aoife D'Arcy (2015), Fundamentals of Machine Learning for Predictive Data Analytics, (MIT Press).

Self Learning Material

1. Introduction to Machine Learning (NPTEL):
https://www.youtube.com/playlist?list=PLIg1dOXc_acbdJo-AE5RXpIM_rvwrerwR
2. Introduction to Machine Learning (NPTEL):
https://www.youtube.com/watch?v=r4sqKrRL2Ys&list=UUpGt_NffD1LUvX3fFerj_QA

Course Title	Place and Identity in the Digital Age	Course No.	DHL5XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	M. Sc. (Cr=0); M.Tech. (Cr=0)	Type	Compulsory
Prerequisite	None		

Objectives

1. To familiarize students with the intersection of what have undoubtedly become two "keywords" that transcend most social science disciplines in the digital age: place and identity.
2. Students will gain ideas of the role that place has in the formation of all types of identities – not just those of individual subjects and groups, but of regions, institutions, practices and even ecosystems.

Learning Outcomes

1. Students will learn to investigate the relationship between the production of space, practices of place, and embodied identity. The relationship between these categories has taken on a new level of importance with the emergence of digital technologies, as seen in both academic studies and in the broader cultural climate.
2. Students will learn topics that are situated at the intersection of space, place, identity, and digital technology such as mapping and power, location-aware and pervasive technologies, surveillance, virtuality, telepresence, empire in the digital age, transnational identity, and diaspora in an age of global connectivity.

Contents

Defining Space, Place, and Identity: The Production of Space (7 lectures); Identity and Space (7 lectures)

Practices of Representation: Mapping and Pervasive Computing (3 lectures); Maps, Representation, and Power; Panoptic Spaces (6 lectures); Spaces of Economic Diversity (5 lectures)

Identity from Imagined Communities to Virtual Communities: Imaginative Geographies (3 lectures); The Virtual and the Actual; Liveness, Telepresence, and Embodied Connectivity (5 lectures); Connection and Disconnection; National Identity; Transnationalism and Diaspora (6 lectures)

Text Books

1. Lefebvre, Henri. *The Production of Space*. Oxford: Blackwell Publishers, 1992. ISBN: 0631181776.
2. Massey, Doreen. *For Space*. Sage Publications, Ltd. 2005
3. Hubbard, Phil; and Kitchin, Rob. *Key Thinkers on Space and Place (Second Edition)*. Sage Publications Ltd. 2010.

Reference Book

1. Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (New York: Verso Books, 1983/2006). ISBN: 978-1844670864

Course Title	Social Media Application Development	Course No.	DHP7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	1-0-2-0 [2]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Compulsory
Prerequisite	None		

Objectives

1. Developing an understanding of the Mobile Application development framework
2. Creation of mobile solutions for various modern platforms, including major mobile operating systems.

Learning Outcomes

1. Familiarity with cross platform mobile application development techniques
2. Develop cross platform, interactive applications.

Contents

Client Hardware (Desktop vs. Mobile) (2 Lectures)

Android Development, iOS Development, RESTful and Non-RESTful apps (5 Lectures)

Creating and Incorporating Web/Cloud Services, Mobile Sensors (4 Lectures)

Security and Trust Management, Privacy and Ethics, Usability and Accessibility (3 lectures)

Laboratory

1. Introduction to Android.O Xcode tour/Swift4
2. User Interface design with various layout models
3. State and Event handling
4. Fragments and Intents
5. Building data driven apps
6. Building and Distributing
7. Building apps for wear devices
8. Building Games
9. Virtual reality overview
10. Multiple devices and APIs
11. App store optimization

Text Books

1. Dusty Phillips (2014), Creating Apps with Kivy, O'Reilly Media.
2. Roberto Ulloa (2015), Kivy, Interactive Applications and Games in Python, Packt Publishing

Self Learning Material

1. Python Programming Resources: <https://pythonprogramming.net/>

Detailed Course Content of Program Elective Courses

Course Title	New Media Studies	Course No.	DHL7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Elective
Prerequisite	None		

Objectives

1. Help students in exploring the various possibilities offered by New Media and their impact on social, political and cultural domains
2. Create an understanding of concepts such as piracy, rights and the digital commons
3. Make students aware of the implications of New Media and the digital image for the public lives in India

Learning Outcomes

1. Develop a sustained interest in new media and its global politics
2. Formulate an informed acquaintance with the network society
3. Make a South Asian/Indian intervention into the field

Contents

New Media and Its Aftermath: Histories of New Media (3 lectures), politics of New Media (3 lectures), New Media research (4 lectures)

Public Domain and The Digital Commons: Digital Commons, copyright and IP, piracy (5 lectures), online streaming, fan-subbing and ownership/authorship debates (5 lectures)

Network and Cyber-Culture: Cyber-culture, video games, digital image and social media, media lab as research space (7 lectures)

New Media in Indian politics: Indian media economy (10 lectures), New Media, changing forms of politics and electoral behavior in India (5 lectures)

Text Books

1. Athique, A., Parthasarathi, V., and Srinivas, S. V., (eds.) (2018), *The Indian Media Economy*, Oxford University Press.
2. Sundaram, R., (2010), *Pirate Modernity: Media Urbanism in Delhi*, Routledge.
3. Manovich, L., (2016), *Instagram and Contemporary Image, Web*.
4. Manovich, L., (2001), *The Language of New Media*, MIT Press.

Self Learning Material

1. MIT Media Lab, <https://www.media.mit.edu/>

Course Title	Introduction to Cultural Studies	Course No.	DHL7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Elective
Prerequisite	None		

Objectives

1. Teach cultural studies as an interdisciplinary field which draws from and contributes to literature, media studies, cultural anthropology, and sociology amongst other disciplines.
2. Equip students with methods and frameworks to look at the central preoccupations of the field – identity, power, economy, culture, aesthetics, and social institutions.
3. Critically interrogate the benefits of cultural studies for both inter- and intra-disciplinary work.

Learning Outcomes

1. Understand major theories relating to historical and emergent ideas of culture and social thought.
2. Investigate processes of cultural production, consumption, and preservation using conceptual tools from the field of cultural studies.
3. Contextualize the role, applications, and significance of culture in the digital age.

Contents

Culture in the 19th and 20th centuries: The Emergence of the Culture Concept, Evolution of Culture, Culture and the Industrial Revolution (5 lectures), The Culture Industry (Value and Meaning), Culture as Commodity (Mass Culture) (5 lectures)

Culture and Politics: Aesthetics and Politics, National Culture, Cultural Semiotics and Political Life (5 lectures) Cultural Economy, Political Society (5 lectures)

Culture and Pedagogy: Culture and the Disciplines - Literary Studies, Anthropology, Sociology, History, Linguistics/Philology, Visuality Studies, Political Science (6 lectures), Understanding the Two Cultures - Natural and Human Sciences, Addressing the Pedagogical and Intellectual Divide (5 lectures)

Culture and Contemporary Life: Mapping the City, Urban Lives and Cultures (5 lectures), Knowledge Society, Technology, Precarity, Virtuality, Representation and Alternate Realities, Culture and Big Data (6 lectures)

Text Books

1. Simon During. 1993. *The Cultural Studies Reader*. London: Routledge.
2. Toby Miller. 2001. *A Companion to Cultural Studies*. Malden: Blackwell.
3. Tom Boellstorff. 2015. *Coming of Age in Second Life*. Princeton: Princeton University Press.
4. Tejaswini Niranjana and Wang Xiaoming (eds.) 2015. *Genealogies of the Asian Present: Situating Inter-Asia Cultural Studies*. New Delhi: Orient Blackswan.
5. Andrew Milner. 1994. *Contemporary Cultural Theory: An Introduction*. London: University College London Press: London.

Self Learning Material

1. Avishek Parui. *Introduction to Cultural Studies*, NPTEL Course Material, Department of Humanities and Social Sciences, Indian Institute of Technology-Madras, <https://nptel.ac.in/courses/109/106/109106136/>.
2. Liza Das. *Cultural Studies*, NPTEL Course Material, Department of Humanities and Social Sciences, Indian Institute of Technology-Guwahati, <https://nptel.ac.in/courses/109/103/109103019/>.
3. <http://culturalstudiesnow.blogspot.com/>

Course Title	Images, Imaginations, and Digital Cultures	Course No.	DHL7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Elective
Prerequisite	None		

Objectives

1. To familiarise students with the process of seeing as a social construct to explore the ways we produce, identify, understand, and consume images by studying visual materials from different historical and cultural milieu
2. To introduce students to how photography and images across time and space change visual discourse and people's lives
3. By contextualising everyday visual culture within larger social debates around power, politics, identity and resistance, this course aims to create a consciousness about the communicative power of visual images, and to equip students with interpretive tools for the evaluation of images.

Learning Outcomes

1. Students will be able to develop a sociological imagination of visual cultures and its impact on society
2. Students will be able to assemble a multi-perspective analysis of a given sociocultural issue related to images against local, global, international, and intercultural background
3. Map historical photographic concepts to current digital references.

Contents

Images, Imaginations, and Cultures; Photographs and other images as objects (of imagination) influencing cultures; Photography as a technology of the colonial state and as a transformation instrument of body politic (5 lectures); Race, Gender, Caste and other intersectionalities imagined in photographs and other images; Postcards (5 lectures) *Visual Cultures and the Process of 'Seeing'*: Subject-Object debate; Power, Knowledge and the Gaze (Imaging the 'Other'), Visual discourse; object-subject debate; space and visibility (5 lectures); Visual Cultures and Critical Theory (Foucault, Lacan, Derrida, Barthes) (5 lectures)

Images as Performative Space: Power, Knowledge and the 'Gaze' determining photographs and their power (5 lectures); Imaging the 'Other': Orientalism; class construction through photography (5 lectures)

Images and Mobilities: Maps and transportation representing physical, social and imaginative worlds (5 lectures)

Netnography/ Digital ethnography (3 lectures)

The future of Images; Images and the digital revolution - the road ahead (4 lectures)

Reference Books

1. Karlekar, Malavika., (2013), *Visual Histories: Photography in the Popular Imagination*, Oxford University Press
2. Chaudhary, Zahid R., (2012), *Afterimage of Empire: Photography in Nineteenth-Century India*, University of Minnesota Press
3. Benjamin, Walter. 1936 (2008). *The Age of Art in the Age of Mechanical Reproduction*. London: Penguin.
4. Nakamura, Lisa. 2008. *Digitizing Race: Visual Cultures of the Internet*. Minneapolis: University of Minnesota Press.
5. Malek Alloula, 1986, *The Colonial Harem*, University of Minnesota Press

Self Learning Material

1. Digital Humanities Seminar Video Archive of the Open University, UK,
<http://www.open.ac.uk/arts/research/digital-humanities/videos>

Course Title	Analysis of Social Media Networks	Course No.	DHL7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr \geq 0); M.Sc. (Cr \geq 30); M.Tech. (Cr \geq 0); B.Tech. (Cr \geq 100)	Type	Elective
Prerequisite	None	Anti-requisite	Social Networks, Social Network Analysis

Objectives

1. The course introduces social network analysis, its mathematical foundations, and analyzing tools (Pajek or NodeXL or UCINET or Others).
2. Students will be introduced to different types of online networks and how to use them to answer social, economic, and other queries.

Learning Outcomes

1. Students will be able to acquire social media data, formulate a hypothesis, and find an answer out of network data.

Contents

Introduction: Overview and Aspects of Networks, Ego Network, Characteristics of Social Networks. (3 Lectures)

Mathematical Foundation for Social Network Analysis: Graphs, Matrices. (4 Lectures)

Network Data: Sources, Sampling and bounding, Ethical considerations, and Collection Techniques. (4 Lectures)

Network Data Management: Data format, Import, Cleaning, Transformation, Export, Visualization (3 Lectures)

Information Diffusion Analysis: Centrality and Network Value, Influence, Epidemics Modeling (3 Lectures)

Clustering and Grouping: Community detection, election campaign analysis. (3 Lectures)

Networks in Their Surrounding Contexts: Homophily, Affiliation, Behaviour Modeling (3 Lectures)

Markets and Strategic Interaction in Networks: Network Models of Markets, Bargaining and Power in Networks, Sponsored Search Markets, Network Effects and Economy (5 Lectures)

Voting: Group Decision-Making, Information Aggregation (3 Lectures)

Case Studies: Wiki Networks, YouTube, Flickr, Twitter, Facebook, Email Communication Network, Thread Network (11 Lectures)

Text Books

1. David Easley and Jon Kleinberg (2013), Networks, Crowds, and Markets: Reasoning About a Highly Connected World, Cambridge University Press.
2. S. Borgatti, M. Everett and J.C. Johnson (2013), Analyzing Social Networks, Sage.
3. Derek L. Hansen, Ben Shneiderman and Marc A (2011), Analyzing Social Media Networks with NodeXL, Morgan Kaufmann

Reference Books

1. Albert-Laszlo Barabasi (2016), Network Science, Cambridge University Press.
2. Mark Newman (2018), Networks, Oxford University Press
3. Wouter de Nooy, Andrej Mrvar, Vladimir Batagelj (2018), Exploratory Social Network Analysis with Pajek, Cambridge University Press

Self Learning Material

1. Complex Networks, <https://www.barabasilab.com/course>
2. NPTEL Lecture, Social Networks <https://nptel.ac.in/courses/106106169/#>

Course Title	Digital Cinema	Course No.	DHL7XX0
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Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Elective
Prerequisite	None		

Objectives

1. Help in exploring various democratic possibilities offered by digital cinema
2. Create an understanding of the digital in the domain of exhibition and spectatorship
3. Create an understanding of the digital platforms for cinema-visual art collaborations

Learning Outcomes

1. Sustain an interest in digital cinema, its liberating principles and politics
2. Develop an informed acquaintance with the experimental cinema-visual art alliance in the days of the digital
3. Understand the implications of the digital for non-industrial film forms

Contents

The End/Future of Celluloid: Concepts and historical debates (3 lectures), introducing digital (2 lectures), post-cinema as a concept (2 lectures)

Digital Cinema and Durational Principles: Durational principle in the days of the digital (5 lectures), slow cinema as a concept and resultant debates (10 lectures)

Spectatorship and Authorship: streaming platforms and authorship debates (5 lectures), new festivals and exhibition spaces, screen dynamics and high definition image, emergent forms of spectatorship (5 lectures)

Emergent Forms: digital film archives and databases (5 lectures), experimental cinema, visual art, and the digital (3 lectures), the politics of the digital (2 lectures)

Text Books

1. Koch, G., Pantenburg, V., and Rothohler, S., (eds.) (2012), *Screen Dynamics: Mapping the Borders of Cinema*, Austrian Film Museum.
2. Torlasco, D., (2013), *The Heretical Archive: Digital Memory at the End of Film*, University of Minnesota Press.
3. Denson, S., and Leyda, J., (2016), *Post-Cinema: Theorizing 21st-Century Film*, Reframe Books.

Course Title	Consumer Culture and Commodities	Course No.	DHL7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Elective
Prerequisite	None		

Objectives

1. Facilitate students to understand and critically investigate consumption in contemporary, urban life.
2. Acquaint students with theories that will help them locate consumption vis-à-vis sociocultural contexts, identities, and markets.
3. Elaborate key areas of consumption such as shopping spaces and experiences, domesticity, advertising, tourism and fashion using examples from the Indian context.

Learning Outcomes

1. Understand major concepts and theories in consumption and consumer culture.
2. Investigate processes of consumption empirically in various aspects of contemporary life.
3. Understand key political and moral concerns around consumption regarding ecology, sustainability, and socio-economic class.

Contents

Understanding Consumption: Theories of consumption, mass consumption, commodity culture, consumerism (6 lectures), Consumption and Class, Leisure Consumption, Habitus, Cultural Capital and Consumption (5 lectures)

Objects, Materials and Social Contexts: Subject-object distinctions, ontology of things, human-nonhuman interactions, anthropology of material culture (6 lectures), theories of matter and materiality, thing theory, study of objects (5 lectures)

Media and Consumerism: Advertising, consumption, media industry, branding and commoditization (5 lectures)

Consumption in the Indian context: Economic liberalization, rise of the Indian middle-class lifestyles, conspicuous consumption in the Indian context (5 lectures)

Consumer Citizenship: Overconsumption and hoarding, who is the Consumer Citizen, Ecological Citizenship, Ecohabitus, Consumption and Environment (5 lectures)

Consumption in the Digital Age: Materiality in the digital era, the problem of stuff in the digital age, online consumer citizenship, hashtag politics (5 lectures)

Text Books

1. Sassatelli, R., (2007), *Consumer culture: History, theory and politics*, Sage.
2. Miller, D., (1987), *Material Culture and Mass Consumption*. 1st Edition, Wiley-Blackwell.

Reference Books

1. Douglas, M. and Isherwood, B., (1996), *The World of Goods: Towards an Anthropology of Consumption*, Routledge.
2. Corrigan, P., (1997), *The Sociology of Consumption*, Sage.
3. Appadurai, A., (1986), *The Social Life of Things: Commodities in Cultural Perspective*, 1st Edition, Cambridge University Press.
4. Falk, P, and Campbell, C., (eds.). (1997), *The Shopping Experience*, Sage.

Self Learning Material

1. Consumer Culture, <https://www.sciencedirect.com/topics/social-sciences/consumer-culture>
2. NPTEL Lecture, <https://nptel.ac.in/courses/110/105/110105074/>
3. NPTEL Lecture, <https://nptel.ac.in/courses/109/107/109107139/>

Course Title	Digital Storytelling	Course No.	DHL7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Elective
Prerequisite	None		

Objectives

1. Understand and examine the new tenets of storytelling in the digital age through thoughtful analysis of trends, topics, consumption and digital tools used.
2. Analyze the changing roles of storytellers for news, businesses and nonprofit organizations.
3. Increase ability to come up with big, original ideas and creatively.

Learning Outcomes

1. Develop a deeper sense of why and how we create and value stories
2. Learn about the ways digital communication technologies can expand and enhance narrative techniques
3. Develop narrative technique and the ways digital elements can interact with traditional written narratives to change the ways an audience experiences story
4. Learn how to match narrative techniques to an audience

Contents

New Technologies, Creative Opportunities: Evolution, Digital Entertainment, Convergence (4 Lectures)

Creating Story-Rich Projects: Interactivity, Character Dialogue, Emotion (6 lectures), Social Media, Transmedia, Project creation (6 lectures)

Harnessing Digital Storytelling for Pragmatic Goals: Teaching, Advertising, Training (9 Lectures)

Media and Models: Mobile Device and Applications, Video Games (6 lectures), Interactive Cinema, Interactive TV, Electronic Kiosks, Immersive Environments (6 lectures)

Digital Storytelling Tools (5 Lectures)

Text Book

1. C.H., Miller, Digital Storytelling, A Creator's Guide to Interactive Entertainment, Focal Press, 2004

Reference Books

1. Seth Gitner, (2015), Multimedia Storytelling for Digital Communicators in a Multiplatform World, Routledge Publishers.
2. Joe Lambert (2013), Digital storytelling capturing lives, creating community, Routledge Publishers.

Course Title	Human Factors in Interaction Design	Course No.	DHL7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Elective
Prerequisite	None		

Objectives

1. Introduce the study of human-computer interaction and user interface design.
2. Explain theoretical understanding of the field and some practical UI design skills.

Learning Outcomes

1. Develop prototypes based on the interaction design principles.
2. Participate as usability testers in evaluating the designs of others.

Contents

Introduction: Definitions, Interaction Design Principles, Paradigms, Vision, Theory, Models, Frameworks (5 Lectures)

Introduction to human factors: Role of psychology, physiology in interaction design, Human Factors Perspective, Cognitive Aspects (5 Lectures)

Social and Emotional Interaction: Conversation, Remote Interaction, Co-presence, Expressive Interface, Emotion Design, Anthropomorphism (8 Lectures)

Interfaces: Types of Interface, natural Interface (5 Lectures), Multimodal, Wearables, Brain Computer Interface (5 Lectures)

Data Gathering and Analytics: Data Collection Techniques, Quantitative and Qualitative Analysis, Data at Scale (7 Lectures)

Evaluation Techniques: Types of Evaluation, Usability Testing, Analytics and A/B testing, Predictive Models (7 Lectures)

Text Book

1. Sharp, H, Y, Rogers, J, Preece, INTERACTION DESIGN beyond human-computer interaction, John Wiley & Sons (2019)

Reference Books

1. Ratner, Julie (ed); Human factors and web development; Lawrence Erlbaum Associated (2003)
2. Sanders, Mark S; McCormick, Ernest J; Human factors in engineering and design, McGraw Hill (1993)
3. Zunse, Leonard; Visual perception of form; Academic Press (1990)
4. Journal of Human Computer Interaction

Self Learning Material

1. NPTEL Lecture, <https://nptel.ac.in/courses/106/103/106103220/>
2. NPTEL Lecture, <https://nptel.ac.in/courses/106/106/106106177/>

Course Title	Introduction to Typography	Course No.	DHL7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Elective
Prerequisite	None		

Objectives

1. Introduce the evaluation of various types
2. Explain the elements and principles of design as they relate to type
3. Explain the use of technical, aesthetic and conceptual understanding of typography in practical scenarios

Learning Outcomes

1. Develop the ability to understand, recognize and apply the elements and principles of typography and typographic hierarchy
2. Develop typesetting techniques through the use of industry-standard software (Adobe Illustrator, Adobe PhotoShop, Adobe InDesign)
3. Develop an understanding of interactive and digital multimedia communication in relation to typography

Contents

Introduction: Digital typesetting, Fonts format, Encoding techniques. (2 Lectures)
Font Families and Formats: Unicode, Non-Unicode, Post-Script, True type, Open type, Compact Font, Meta Font, Indic (8 Lectures)
Curves: Hermite, B-Spline, Bezier Curve, NURBS, properties, algorithms, subdivision (10 Lectures)
Typographic Principles: Letter, Word, Paragraph, Page (4 Lectures)
Typographic Details: Symbols, Signs, Accents, Hierarchy and Scale, Tracking and Kerning, Rhythm and Composition (5 Lectures)
Web Typography: (X)HTML, Embedding, SVG (5 Lectures)
Editing and Creating Font: Principles, FontLab, FontForge, Autotracing, Optimization (8 Lectures)

Text Books

1. Steven G. Krantz (2003), Handbook of Typography for the Mathematical Sciences, CRC Press
2. Yannis Haralambous, P. Scott Horne (2007), Fonts and Encodings: From Unicode to Advanced Typography, O'Reilly Media
3. Ellen Lupton (2004), Thinking With Type, Princeton Architectural Press.

Course Title	Selected Topics in DH	Course No.	DHL7XX0
Department	IDRP-DH	Structure (L-T-P-D [C])	3-0-0-0 [3]
Offered for	Ph.D. (Cr>=0); M.Sc. (Cr >=30); M.Tech. (Cr>=0); B.Tech. (Cr>=100)	Type	Elective
Prerequisite	None		

Objectives

1. Introduce the students to the latest upcoming fields in the area of DH

Learning Outcomes

1. Apply the knowledge of recent topics to specific research areas in the field of DH

Contents

The topic cloud for the course include contemporary topics in DH and may be updated according to the instructor.

Text Book

Relevant Textbook and/or research papers to be announced by the instructor.

Self Learning Material

Relevant Textbook and/or research papers to be announced by the instructor.