

**FOR PH.D. PROGRAM
IN GEOGRAPHY
(UNDER SEMESTER SYSTEM)
(Effective from January 2018)**



**SCHOOL OF GEOGRAPHY
GANGADHAR MEHER UNIVERSITY,
AMRUTA VIHAR, SAMBALPUR,
ODISHA**

BOARD FORMAT OF SYLLABUS OF Ph.D PROGRAM

Semester – I

Paper No	Title of Paper	Maximum Marks	Credits assigned
711	Recent Trends in Geography	80+20=100	4 Credits
712	Research Methodology - I	80+20=100	4 Credits
713	Research Methodology - I	80+20=100	4 Credits
714	Dissertation Or Review Writing/Presentation/Viva-voce)	150+25+25=200	8 Credits
		500	20 Credits

Ph.D Syllabus – 2018

P.G. Department of Geography

Gangadhar Meher University, Sambalpur

PAPER – 711:RECENT TRENDS IN GEOGRAPHY

		Lectures	Credits
A	Advance Geomorphology	8-10	1
	Mapping Techniques in Geomorphology		
	Slope classification maps		
	morphological maps		
	geomorphological mapping and land system mapping		
	Slope processes and slope profile development		
	environment's process on hill slopes		
	Model of hill slopes development		
	Techniques for the investigation of slow and rapid forms of mass movement		
B	Advance Human Geography	8-10	1
	Population Indices and Projection, Age sex Pyramid, Child Women Ratio, Dependency Ratio, Infant Mortality, Age Specific Mortality, Population growth rate, Population Projection.		
	Process of Urban growth and structural models with special reference to India		
	Quantitative Analysis of agricultural Characteristics: Indices of crop concentration, Crop diversification and crop combination.		
C	Applied Geography	8-10	1
	Natural Disaster Management: Hazards and Disasters, Components of comprehensive disaster preparedness plans, Risk assessment and vulnerability Analysis.		
	Regional and rural development planning: Concept of Centralized and Decentralized planning, Rural development and poverty alleviation policy.		
	Integrated watershed development and management: concept and framework, Steps in watershed management – basic information, development component		
D	Advance GIS & Remote Sensing	8-10	1
	Remote Sensing and Image interpretation, Visual Image Interpretation and Digital Image Processing, Geographical Information system, Integration of Raster and Vector data, Feature Based Topological functions, Interactive Data Exploration, Vector Data Query, Attribute data query. Global Positioning System, GPS Segments, GPS Positioning Types Absolute, Differential, Geo- positioning, GNSS: NAVSTAR, GLONASS, GALILEO.		

Suggested Reading:

1. Allison, Robert J. (ed.) 2002. Applied Geomorphology: Theory and Practice, John Wiley, Chichester UK.
2. Bloom, A. L. 1998/ 2001. Geomorphology. 3rd edition. Prentice Hall of India, New Delhi.
3. Chorley, R.J., Schumm, S. A. and Sugden, D. E. 1984. Geomorphology. Methuen and Company Ltd., London.
4. Fairbridge, R.W. (ed.) 1968. Encyclopaedia of Geomorphology. Reinhold Book Corporation., New York.
5. Goudie, Andrew (ed.) 2004. Encyclopedia of Geomorphology. Volume 2. Routledge, London. 7. Gregory, K.J. and Walling, D.E. 1973. Drainage Basin Form and Process. Edward Arnold, London.
6. Jensen, J.R., (2006) "Remote Sensing of the Environment – An Earth Resources Perspective", Pearson Education, Inc. (Singapore) Pte. Ltd., Indian edition, Delhi.
7. George Joseph, (2004) "Fundamentals of remote sensing", Universities press (India) P Ltd.
8. Lo and Albert K.W. Yeung (2006) "Concepts and Techniques of Geographic Information Systems" Prentice Hall of India, New Delhi.
9. Burrough, Peter A. and Rachael McDonnell,(1998), ,, Principles of Geographical Information Systems" Oxford University Press, New York.
10. Leica. A., (2003), GPS Satellite Surveying, John Wiley & Sons, use. New York Terry-Karen Steede, (2002).
11. Burrough, P.A. and McDonnell, R. 1998. Principles of Geographic Information Systems. Oxford University Press, Oxford.
12. David Ebdon: Statistics in Geography, Blackwell Publishers, 1991.
13. Pal, Saroj: Statistics for Geoscientists: Techniques and Applications, New Delhi: Concept, 1998.
14. Yule, G. U. & Kendal, M.G.: An introduction to the Theory of Statistics, 14th Ed, CharlesGriffin, London.
15. Bhalla, G.S. and Tyagi, D.S. (1989): Patterns of Agricultural Development in India, ISIO, New Delhi.
16. Gregor, H.F. (1970): Geography of Agriculture: Themes in Research, Prentice Hall, New Jersey.
17. Morgan, W.B. and Munton, R.J.C. (1971): Agricultural Geography, Methuen, London.
18. Singh, Jasbir and Dhillon, S.S. (1984) Agricultural Geography. Tata McGrawHill, New Delhi.
19. Symons, L.J. (1966): Agricultural Geography. Bell, London.

PAPER-712 : Research Methodology - I			
		Lectures	Credits
A	Scope of Research and Ethics	8-10	1
	Introduction and Scope		
	Research problem: Identification, Selection, Formulation of research objectives		
	Research design: Components, Types and Importance		
	Research ethics, institutional ethics committee		
	plagiarism-Pitfall		
B	Technical Writing	8-10	1
	Types of technical documents; Full length research paper, Short/Brief communications, Letters to editor, Book chapter, Review, Conference report, Project proposal.		
	Components of a full length research paper; Title/Topic statement, Abstract/key words, Aims and objectives, Hypothesis building, Rationale of the paper, Work plan, Materials and methodology, Results and discussion, Key issues and arguments, acknowledgement, conflict of interest statement, bibliography, Technical Resumes and Cover Letters.		
	Components of a research proposal; Project summary Key words, Origin of the proposal, Major Objectives Methodology, Instrument facility available in the PI'S department, Overview of status of Research and Development in the subject, importance of the proposed project in the context of current status, Bibliography		
C	Scientometrics	10-12	1
	How to cite and how to do referencing		
	Literature search technique using SCOPUS, Google Scholar, PUBMED, Web of Science, Indian Citation Index, and RG		
	Styles of referencing; APA, MLA, Oxford, Harvard, Chicago		
	Annotated bibliography		
	Tools for citing and referencing, Grammarly, Endnote etc		
D	Presentation and Communication skills	8-10	1
	Tables, Figures and pictures using Excel		
	PowerPoint slide preparation		
	Preparation of Posters		
	Electronic submission of manuscripts		
	Communication skills, oral and poster		

Paper-714**Marks-200(150+25+25)****RIVIEW WORK****(Report Writing + Seminar Presentation of the Report + Viva-voce)**

PAPER-713: Research Methodology – II			
A	IPR and Cyber Law	Lectures	Credits
	Patents	8-10	1
	Patents laws, process of patenting a research finding		
	Intellectual property (IP), Intellectual property right (IPR)		
	Copyright, Trademarks, GI		
	Cyber laws		
	COPE		
B	Quantitative data Analyses	10-12	1
	Types of data, Data collection – Methods and Tools		
	Hypothesis testing		
	Normal and Binomial distribution and their property		
	Tests of significance: Student <i>t</i> -test, <i>F</i> -test, <i>Chi-square</i> test		
	Correlation and Regression		
	ANOVA – One-way and Two-way, Multiple-range test		
C	Computer Fundamentals	10-12	1
	Introduction to MS-Office software: MS-Word (Track change)		
	MS-Excel		
	MS-Power Point		
	MS-Access		
	Features for Statistical data analysis using computers and software, Microsoft Excel Data Analysis Toolpak, SPSS		
D	Advanced Tools and Techniques (Geography)	8-10	1
	Map as a tool: Types of maps, Composite maps, Choropleth, Isopleth, Chorochromatic maps		
	Qualitative analysis: Participant observation, Ethnography, Interviewing and documentary evidences, Conversation and Discourse analysis, Visual research		

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