

BANASTHALI VIDYAPITH

Master of Philosophy (Geography)



Curriculum Structure

First Semester Examination, December, 2020
Second Semester Examination, April/May, 2021

BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH
(Rajasthan)-304022

July, 2020

100

No. F. 9-6/81-U.3

**Government of India
Ministry of Education and Culture
(Department of Education)**

New Delhi, the 25th October, 1983

NOTIFICATION

In exercise of the powers conferred by Section 3 of the University Grants Commission Act, 1956 (3 of 1956) the Central Government, on the advice of the Commission, hereby declare that Banasthali Vidyapith, P. O. Banasthali Vidyapith, (Rajasthan) shall be deemed to be a University for the purpose of the aforesaid Act.

Sd/-

(M. R. Kolhatkar)

Joint Secretary of the Government of India

NOTICE

Changes in Bye-laws/Syllabi and Books may from time to time be made by amendment or remaking, and a Candidate shall, except in so far as the Vidyapith determines otherwise, comply with any change that applies to years she has not completed at the time of change.

Sl. No.	Contents	Page No.
1	Programme Educational Objectives	4
2	Programme Outcomes	6
3	Curriculum Structure	9
4	Evaluation Scheme and Grading System	14
5	Syllabus	16

Programme Educational Objectives

Banasthali Vidyapith is an epitome of tradition and modernity. Vidyapith aims to preserve and inculcate the essential values and ideals of Indian culture. It believes in simple living and high thinking. Our educational ideology is based on the concept of fivefold education focusing on physical, practical, aesthetic, moral and intellectual aspects in order to develop a balanced personality.

Geography is concerned with human and physical environmental systems and their interaction, mapping and measuring natural and man-made resources, designing ways of using them, analyzing the distribution of welfare, recognizing and averting hazards and reviewing social institutions. Man's lifestyle is influenced by physical aspects in its immediate surroundings and Geography act as a bridge between man and its environment. Geography is also related to human dimension wherein man using the resources and creates its economic dimension. Various arenas of human aspects such as business, trade, commerce, agriculture, industry, navigation, military operations, spacecraft and administration needs Geography as a foundation.

Students will gain profound knowledge of current research problems, approaches, and insights regarding the interactions between the environment and society in the context of global change. Students learn to integrate scientific theories, findings, and procedures in order to analyze and model human-environmental systems.

The main objectives of the Master of Philosophy Geography programme are:

- To develop skills of assessing contrasting theories, explanations and policies; collecting, critically judging, evaluating and interpreting varied forms of evidence; preparing maps and diagrams; employing various methods of collecting and analyzing spatial and environmental information; combining and interpreting different types of evidence to tackle specific problems; and recognizing the ethical and moral dimensions of study.

- To develop oral presentation and report writing skills; and make meaningful contributions to improving legal/administrative structures and procedures relevant to the environment and sustainable development.
- To conduct independent research of a professional quality and describe specific research techniques and explain the literature and concepts in the conduction of original research.
- To communicate the results of research in both oral and written forms; entails demonstrating skills in oral presentation and the writing of formal papers during coursework, and ultimately, a dissertation.
- The opportunity to develop large-scale research management skills by completing a research thesis under academic supervision and guidance.
- To raise sensitivity for ethical codes of conduct, social values with help of eco-feminism, gender equality, social balance and respect for each strata of the society.

Programme Outcomes

- **PO1: Geography Knowledge:** The outcomes of the course are achieved both through focused study of selected specialized aspects of geographical research and through development of more general research skills and methods. Develop in-depth knowledge of some substantive area(s) of geography and geographical research; develop their capacity to frame research questions, to derive appropriate research designs, and develop awareness of alternative approaches.
- **PO2: Planning abilities:** A comprehensive understanding of techniques and a thorough knowledge of the literature, applicable to their own research; demonstrated some self-direction and originality in tackling and solving problems, and acted autonomously in the planning and implementation of research.
- **PO3: Design/development of solution for problems:** The research skills strengthen them to formulate hypothesis about any form of social, economic and environmental problems and collect facts to prove it.
- **PO4: Problem analysis:** Analyses the research problems occurring in our social and physical environment and develop methodology to depict and solve them. Demonstrate originality in the application of knowledge, together with a practical understanding of how research and enquiry are used to create and interpret knowledge in their field; shown abilities in the critical evaluation of current research problems and research techniques and methodologies.
- **PO5: Modern tool usage:** Use remote sensing and GIS techniques in medical, urban & rural settlements, environment, agriculture, resource, tourism and several other aspects from a geographical perspective. The applications can further enhance research in the discipline and contribute towards a better living environment. Acquired the skills to use library and internet resources independently and become critical and skilled readers of geographical and other research publications.

- **PO6: Leadership skills:** Develop a capability to manage research, including data management, conducting and disseminating research, working in a team and understanding codes of research practice and research ethics.
- **PO7: Professional Identity:** Understand, analyze and contribute towards the discipline adopting professions as an educator, researcher and specialist in different arenas of geography; develop their capacity to frame research questions, to derive appropriate research designs, and develop awareness of alternative approaches; develop a competence and confidence in using a range of quantitative methods of gathering, analyzing and interpreting evidence.
- **PO8: Geographical Ethics:** Apply ethical principles in personal, professional and social levels. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.
- **PO9: Communication:** Communicate effectively with the Earth Science community and with society at large, by discussing their research at several levels in the form of conferences, seminars and symposium. They are able to comprehend and write effective presentations, documentation, research publications and with writing communicate their ideas at regional, national and international levels.
- **PO10: The Geographer and society:** Students contribute as a researcher by identifying socio-economic and environment problems and suggest measures, solutions to overcome the problems. Nevertheless, geographical specialists play an important role in the national development. With the help of most talented geographers, geographical theories are as much as the solution of the great problems of the society and economy, for which they requires a synthetic geographical approach.

- **PO11: Environment and sustainability:** Employing various methods of collecting and analyzing spatial and environmental information; combining and interpreting different types of evidence to tackle environmental problems; and recognizing the ethical and moral responsibility towards sustainability.
- **PO12: Life- long learning:** Students develop lifelong learning towards major issues and develop an attitude to depict them through their publications and presentation. They also become critical and skilled readers of geographical and other research publications. The research provides them an essential strength to describe or solve problem associated to different zones of the discipline. Students are familiar with an appropriate range of intellectual and methodological traditions within geographical research and the social sciences.

Curriculum Structure

Master of Philosophy (Geography)

Semester - I

Course Code	Course Name	L	T	P	C*
TRM 601	Research Methodology	4	0	0	4
TRM 602	Teacher, Teaching and Higher Education	4	2	0	6
TRM 602L	Teacher, Teaching and Higher Education Lab	0	0	4	2
	Discipline Elective	4	0	0	4
	OR				
	Discipline Elective Lab	0	0	8	4
GEOG 624P	Term Paper	0	0	16	8
	Reading Elective- I	0	0	4	2
Semester Total:		12/8	2	24/32	26

Semester - II

Course Code	Course Name	L	T	P	C*
GEOG 622D	Dissertation	0	0	32	16
	Open Elective	4	0	0	4
GEOG 702S	Seminar	0	0	8	4
	Reading Elective- II	0	0	4	2
Semester Total:		4	0	44	26

List of Discipline Elective

Course Code	Course Name	L	T	P	C*
GEOG 605	Geography of Environmental Management	4	0	0	4
GEOG 606	Population Studies	4	0	0	4
GEOG 623	Geography of Settlements	4	0	0	4
GEOG 613L	Digital Cartography and Geoinformatics Lab	0	0	8	4

List of Reading Elective

Course Code	Course Name	L	T	P	C*
GEOG 611R	Climate Change and Future Crisis	0	0	4	2
GEOG 612R	Contemporary Social Challenges in India	0	0	4	2
GEOG 615R	Industrialization and Regional Development	0	0	4	2
GEOG 617R	Resource: Challenges and Management	0	0	4	2
GEOG 618R	Solid Waste Management for a Smart City in India	0	0	4	2
GEOG 620R	Tourism and Heritage	0	0	4	2
GEOG 621R	Population Dynamics and Welfare Programmes	0	0	4	2

* **L - Lecture hrs./week; T - Tutorial hrs./week; P-Project/Practical/Lab/All other non-classroom academic activities, etc. hrs./week; C - Credit Points of the Course**

Evaluation Scheme for Dissertation/Term Paper/Seminar

Course Code	Course Name	L	T	P	C
TRM 624P	Term Paper	0	0	16	8
GEOG 622D	Dissertation	0	0	32	16
GEOG 702S	Seminar	0	0	8	4

Term Paper:

Continuous Assessment (40 Marks)

1. Topic Selection + Literature Review – 20 Marks
2. Presentation – 20 Marks

Submission of Marks in Secrecy Section:

Before Diwali Break

End Semester Assessment (60 Marks)

1. Report Submission - 20 Marks
2. Presentation - 20 Marks
3. Viva-voce- 20 Marks

Dissertation:

Continuous Assessment (40 Marks)

Phase I: Topic Selection – 5 marks

Phase II: Synopsis Presentation – 10 Marks

Phase III: Submission and internal viva-voce – 25 marks

Submission of Marks in Secrecy Section:

After 40 days of commencement of classes

One Month before First Semester Examination

Before Commencement of End Semester Examination

End Semester Assessment (60 Marks)

Evaluation of Dissertation (By External Expert) – 60 marks

*Before submitting of M. Phil dissertation it is mandatory for students to submit atleast one research paper.

Seminar:

Continuous Assessment (40 Marks)

1. Topic Selection +Outline of the study - 20 Marks
2. Presentation - I – 20 Marks

Submission of Marks in Secrecy Section:

One month before End Semester exam

End Semester Assessment (60 Marks)

1. Report Submission - 20 Marks
2. Presentation - II - 20 Marks
2. Viva-voce - 20 Marks

Practical Evaluation of Teacher, Teaching and Higher Education Course (Teaching Practice)

1. Observation of Teaching Process under the Course In-charge.
2. Preparation of Sample Handout, Lecture Plan and Question paper.
3. Practice teaching to be undertaken by the Student to be evaluated by the Course In-charge.

Component	How	By whom	By when
Continuous Assessment (40 Marks)	Preparation of Sample Handout 5 marks	Course In-charge	Last week of August, 2020
	Lecture plan: Content analysis, Learning objectives, Method & strategies, Table of T.L.P. 10 marks	Course In-charge	Last week of September, 2020
	Preparation of Question paper and Use of ICT 10 Marks	Course In-charge	Second week of October, 2020
	3 class x 1hour 15 Marks	Course In-charge	First week of November, 2020
End Semester Exam (Teaching Practice) 60 Marks	Lecture Plan Submission 20 marks Final Teaching 40 Marks	External Examiner	December, 2020

Evaluation of Theory Paper

1. **The performance of the candidate shall be evaluated in two parts.**
 - i) 40 Marks : Two Internal Assessments of 20 marks each by way of continuous evaluation for each theory course by selecting two from the following
 - a) Assignments: Must be based on the relevant topics in order to enhance learning capabilities of students.
 - b) Journal/Library Notes: Develop reading skills among students and help them organize knowledge by making notes and developing relevant bibliographies/references on topics related to their relevant discipline.
 - c) Project Based Learning: Expansion of student's perspectives by providing them the opportunity to explore and study the real world problems/issues and connect it with their subject matter.
 - d) Field Work: Promotes empirical learning and broadens students' knowledge base, skills and understanding of the subject by providing them exposure to field.
 - e) Book Review: Reviewing relevant books related to the study area in order to make students familiar with existing knowledge and identify gaps.
 - f) Critical Summaries: Students have to identify key theories/models from their respective disciplines and analyze it critically.
 - g) Poster/Oral Presentation: Students learn the skill of communicating their research and understanding of the topics with others. They get to analyze and synthesize their ideas through designing creative demonstrations in the form of posters and PPTs. It leads to enhanced communicative skills and developed public speaking skills among students.
 - ii) 60 Marks : End Semester Exam
2. The respective Course In-Charge will give the assessment plan at the commencement of the semester to the Head of the Department.
3. The entire record of the assessment will be maintained by the Course In-Charge and submitted to the Head of the Department at the end of the term.

Evaluation Scheme and Grading System

Continuous Assessment (CA) (Max. Marks)					End-Semester Assessment (ESA) (Max. Marks)	Grand Total (Max. Marks)
Assignment				Total (CA)		
I	II	III	IV			
10	10	10	10	40	60	100

In all theory, laboratory and other non classroom activities (project, dissertation, seminar, etc.), the Continuous and End-semester assessment will be of 40 and 60 marks respectively. However, for Reading Elective, only End semester exam of 100 marks will be held. Wherever desired, the detailed breakup of continuous assessment marks (40), for project, practical, dissertation, seminar, etc shall be announced by respective departments in respective student handouts.

Based on the cumulative performance in the continuous and end-semester assessments, the grade obtained by the student in each course shall be awarded. The classification of grades is as under:

Letter Grade	Grade Point	Narration
O	10	Outstanding
A+	9	Excellent
A	8	Very Good
B+	7	Good
B	6	Above Average
C+	5	Average
C	4	Below Average
D	3	Marginal
E	2	Exposed
NC	0	Not Cleared

Based on the obtained grades, the Semester Grade Point Average shall be computed as under:

$$SGPA = \frac{CC_1 * GP_1 + CC_2 * GP_2 + CC_3 * GP_3 + \dots + CC_n * GP_n}{CC_1 + CC_2 + CC_3 + \dots + CC_n} = \frac{\sum_{i=1}^n CC_i * GP_i}{\sum_{i=1}^n CC_i}$$

Where n is the number of courses (with letter grading) registered in the semester, CC_i are the course credits attached to the i^{th} course with letter grading and GP_i is the letter grade point obtained in the i^{th} course. The courses which are given Non-Letter Grades are not considered in the calculation of SGPA.

The Cumulative Grade Point Average (CGPA) at the end of each semester shall be computed as under:

$$CGPA = \frac{CC_1 * GP_1 + CC_2 * GP_2 + CC_3 * GP_3 + \dots + CC_n * GP_n}{CC_1 + CC_2 + CC_3 + \dots + CC_n} = \frac{\sum_{i=1}^n CC_i * GP_i}{\sum_{i=1}^n CC_i}$$

Where n is the number of all the courses (with letter grading) that a student has taken up to the previous semester.

Student shall be required to maintain a minimum of 4.00 CGPA at the end of each semester. If a student's CGPA remains below 4.00 in two consecutive semesters, then the student will be placed under probation and the case will be referred to Academic Performance Review Committee (APRC) which will decide the course load of the student for successive semester till the student comes out of the probationary clause.

To clear a course of a degree program, a student should obtain letter grade C and above. However, D/E grade in two/one of the courses throughout the UG/PG degree program respectively shall be deemed to have cleared the respective course(s). The excess of two/one D/E course(s) in UG/PG degree program shall become the backlog course(s) and the student will be required to repeat and clear them in successive semester(s) by obtaining grade C or above.

After successfully clearing all the courses of the degree program, the student shall be awarded division as per following table.

Division	CGPA
Distinction	7.50 and above
First Division	6.00 to 7.49
Second Division	5.00 to 5.99
Pass	4.00 to 4.99

CGPA to % Conversion Formula: % of Marks Obtained = CGPA * 10

First Semester

TRM 601 Research Methodology

Max. Marks : 100

(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcome:

At the completion of the Course, the students will be able to –

- Develop understanding of the conceptual aspects of research approaches and techniques necessary for research area.
- Identify, explain, and apply the various research techniques and tools in conducting research.
- Prepare a coherent research proposal and report.
- Acquire Techniques of preparing Research Thesis or Dissertation along with publishable Research Papers.

Section - A

Research: Meaning, Objective, Motivation, types, approaches and significance. Research Process, Criteria of good research. Literature Review. Formulation of research problem and research hypothesis. Research design: Meaning, need and importance. Basic principles of experimental design. Sampling design: Census survey and sample survey, types of sampling, Criteria of good sample.

Section - B

Data collection: Types and sources of data, Methods of Data collection, Measurement scales. questionnaire design. Reliability and validity of a questionnaire. Classification and tabulation of data. Graphical representation of data. Interpretation of Mean, Median, Mode, Range, Standard Deviation, Framing of hypothesis and its testing.

Section - C

Types of research report: Articles, report, thesis. Layout of research report. Style of references: APA (American Psychological Association) and MLA (Modern Language Association), Bibliography. Plagiarism, Copyright issues, Publishing a paper. Citation counting & Impact factor, Citation index. Online and open access journals.

Recommended Books:

1. Jackson, L.S. (2009). *Research Methods and Statistics*. New Delhi, India: Cengage Learning.
2. Rao, G.N. (2012). *Research Methodology and quantitative Methods*. Hyderabad, India: B.S.
3. Kumar, R. (2011). *Research Methodology*. Los Angeles: Sage Publications.
4. Gray, C. and Malins, J. (2004). *Visualizing Research, A Guide to the Research Process in Art and Design*, England: Ashgate Publishing Limited
5. Oliver, P. (2004). *Writing Your Thesis*, New Delhi: Vistaar Publications, 2004.
6. Day, R. A., (1992) *How To Write and Publish a Scientific Paper*, Cambridge University Press, London.
7. Haroon, Dr. Mohammad (2013). *Indian Music: Research Methodology and Techniques*, ISBN:9788192465340.
8. Kothari, C. R. (2013). *Research methodology: Methods and techniques*. (2nd Ed.). New Delhi: New Age International Publishers.
9. Sinha, M.P. (2004). *Research Methods in English*. New Delhi: Atlantic Publishers.
10. सिंह, शशिभूषण, (2006), *शोध प्रविधि*, नई दिल्ली, हिन्दी बुक सेन्टर।
11. सिंह, कन्हैया, (2017), *हिन्दी पाठानुसंधान*, इलाहाबाद, लोकभारती प्रकाशन।
12. सत्येन्द्र, *अनुसंधान स्वरूप और आयाम*, सम्पा. गुप्त रमाकान्त, जोशी, ब्रजरतन, (2016), दिल्ली, वाणी प्रकाशन।

Suggested e-Learning Materials:

1. Research Methodology
http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit_Kumar-Research_Methodology_A_Step-by-Step_G.pdf
2. Research design
<http://libguides.usc.edu/writingguide/researchdesigns>
3. Chi-square test and its application in hypothesis testing
<http://www.j-pcs.org/article.asp?issn=2395-5414;year=2015;volume=1;issue=1;spage=69;epage=71;aulast=Rana>
4. शोध प्रविधि, विनयमोहन शर्मा
<https://archive.org/search.php?query=shodh%20pravidhi>

TRM 602 Teacher, Teaching and Higher Education

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	4	2	0	6

Learning Outcomes:

At the completion of the Course, the students will be able to -

- Acquire comprehensive understanding of the concept and process of teaching.
- Develop an appreciation of role of teachers in higher education and nation building.
- Prepare Handouts, Lecture plans and Question Paper.
- Understand the regulatory institutions of higher education in India.
- Demonstrate classroom teaching methods for better understanding of students.
- Acquire techniques to develop better rapport with students.

Section - A

Concept of Teaching, Instruction and Training, Instructional Objectives as Expected Changes in Behaviours. Methods of Teaching.

Section - B

Making of Effective Handouts and Lesson Plan.

Role and Prerequisites of Teacher in Higher Education.

Evaluation in Higher Education.

Section - C

Structure and Functions of Academic Bodies – UGC, ICSSR, ICHR, ICCR, CSIR, AICTE, NCTE.

Role of AI & ICT in Higher Education.

Recommended Books:

1. Aggarwal, J.C. (2012). Principles, *Methods & Techniques of Teaching*. New Delhi: Vikas Publishing.
2. Association of Indian Universities. (2003). *Globalization of Indian Higher Education*.
3. Mangal. S.K. & Manga. U. (2014). *Essentials of Educational Technology*. Delhi: PHI Learning.
4. M C Donough, J O & Christopher Shaw. (1980). *Materials and Methods in ELT: A Teacher's Guide*, London: Black Well Publisher.

5. Butt, G. (2008). *Lesson Planning*, London.
6. Bhardwaj, A. (1997). *Elements of Modern Curriculum*, New Delhi: Sarup & Sons.
7. Yalden, Janice. (1995). *Principles of Course Design for Language Teaching* Cambridge University Press.
8. Joanne, Collie & Stephen Slater. (2003). *Literature in the Language Classroom*. Cambridge University Press.
9. Markham, M. (2011). “*Teaching Creative Arts and Media*”, Berkshire: Open University Press.
10. शर्मा, डॉ. प्रभा, (2007). “कला शिक्षा शिक्षण”, जयपुर श्रुति पब्लिकेशन
11. श्रीवास्तव, रविन्द्रनाथ, (2017), *भाषा शिक्षण*, नई दिल्ली, वाणी प्रकाशन

Suggested e-Learning Materials:

1. For Objectives of Teaching English in India
<https://www.jstor.org/action/doBasicSearch?Query=articles+on+objectives+of+teaching+english>
2. Innovative Pedagogy
<https://res.mdpi.com/societies/societies-07-00030/.../societies-07-00030.pdf>
3. Critical Pedagogy
<https://www.researchgate.net/.../240724612>
4. For Grammar Translation Method and Communicative Language Teaching Method
<https://www.jstor.org/action/doBasicSearch?Query=articles+on+grammar+translation+method>

TRM 602L Teacher, Teaching and Higher Education Lab

Max. Marks : 100

(CA: 40 + ESA: 60)

L T P C

0 0 4 2

Learning Outcomes:

At the completion of the course, the students will be able to:

- Develop and enhance leadership and teaching skills.
- Demonstrate classroom teaching methods for better understanding of students.
- Prepare Effective Handouts, Lecture Plan and Question Paper.

Course Content:

Preparation of Sample Handout; Lecture Plan: Content Analysis, Learning Objectives, Methods and Strategies, Table of Teaching, Learning Process (T.L.P); Evaluation in Higher Education; Use of ICT.

Recommended Books:

1. Bawa, M. S., Nagpal, B. M. (2011). Developing Teaching Competencies. New Delhi: Viva Books.
2. Mangal, S. K., Mangal, U. (2014). Essentials of Educational Technology. Delhi: PHI Learning Private Limited.
3. Thamarasseri, I. (2012). Essentials of Educational Evaluation. New Delhi: Kanishka Publishers.
4. M C Donough, J O, & Christopher Shaw (1980). Materials and Methods in ELT: A Teacher's Guide. London: Black Well Publisher.

Suggested E-Learning Material:

- For Objectives of Teaching English in India
<https://www.jstor.org/action/doBasicSearch?Query=articles+on+objectives+of+teaching+english>
- Evaluation in Higher Education and Use of ICT.
<https://www.nyu.edu/classes/keefer/waoe/amins.pdf>

GEOG 624P Term paper**Max. Marks : 100****(CA: 40 + ESA: 60)****L T P C****0 0 16 8****Learning Outcomes:****After the completion of this course, students will be able to:**

- Understand the aspects of research area and formulate research problem.
- Develop analytical skill.
- Analyze the data and write research articles.
- Develop presentation skill.

Second Semester

GEOG 622D Dissertation

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	32	16

Learning Outcomes:

After the completion of this course, students will be able to:

- Formulate research proposals, hypothesis and collection of data.
- Develop skill in analysis of data and testing of hypothesis.
- Extract results and conclusions.
- Provide suggestions for the development of research area.

GEOG 702S Seminar

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	8	4

Learning Outcomes:

After the completion of this course, students will be able to:

- Identify and formulate research problem.
- Develop skills in data analysis.
- Develop presentation skills.
- Provide suggestions of related research problem.

Discipline Electives

GEOG 605 Geography of Environmental Management

Max. Marks: 100

L T P C

(CA: 40 + ESA: 60)

4 0 0 4

Learning Outcomes:

After the completion of this course, students should be able to:

- Elucidate fundamentals of environment.
- Depict the consequences of pollution and hazards and suggest measures to control them.
- Create awareness about the need of biodiversity conservation.
- Aware about modern concepts in environmental studies.

Course Content:

Section A

Concept of Environment, Biodiversity hot spots; Loss of Biodiversity and its conservation, Environmental Degradation, Quality Assessment of Air, Soil and Water, Environmental Impact Assessment and Strategies; Case Studies: Tehri Dam, Sardar Sarovar Project.

Section B

Concept of Sustainable Development, Eco-feminism and Eco-socialism, Environmental Challenges and Management in India: Desertification, Mining, Deforestation, Waste Disposal and Big Dam Controversies – Issues related with high dams (Narmada Sagar Project, Silent Valley); Eutrophication of Wetlands.

Section C

Environmental Movements in India: Chipko Movement and Narmada BachaoAndolan, Case studies Associated with Environmental Degradation: Famines in Tribal belt of Rajasthan; Jhum Cultivation in Meghalaya, Disaster: A case study of Utrtrkhand disaster (Kedarnath disaster, 2013).

Recommended Books:

1. Desombre, R. E. (2007). *The Global Environment and World Politics*. New York, NY: Continuum International.
2. Gautam, A. (2010). *Environmental Geography*. Allahabad, India: Sharda Pustak Bhawan.
3. Jadhav, S. B. (2012). *Environmental Geography*. Kanpur, India: Chandralok.

4. Mehtani, S., & Sinha, A. (2010). *Biogeography*. New Delhi, India: Commonwealth.
5. Khundrakpam, M. (2010), *Sustainable Management of Wetlands Central Valley of Manipur*, New Delhi, India: B.R.
6. Odum, E. P. (2005). *Fundamentals of Ecology* (5th ed.). Philadelphia and London, UK: W.B. Sanders Company.
7. Rajagopalan, R. (2005). *Environmental Studies: From Crisis to Cure*. New Delhi, India: Oxford University Press.
8. Salahuddin, M., (2011), *Waste Management in an Urban Area*, New Delhi, India: B.R.
9. Saxena, H. M. (2007). *Environmental Geography* (2nd ed.). Jaipur, India: Rawat.
10. Singh, R. B. (Ed.). (1990). *Environmental Geography*. New Delhi, India: Heritage.
11. Singh, R. B. (Ed.). (1995). *Studies in Environment and Development*. Varanasi, India: Rakesh.
12. Singh, S. (2012). *Environmental Geography*. Allahabad, India: Prayag Pustak Bhawan.
13. William, M.W., & John, G. (2004). *Environmental Geography- Science, Landuse and Earth system* (3rd ed.). New York, NY: John Wiley & sons.
14. नेगी, पी. एस. (2014). *पारिस्थितिकी एवं पर्यावरण भूगोल* (चतुर्थ सं.). मेरठ, भारत: रस्तोगी.

Suggested e-learning materials:

1. Environmental Degradation
<https://www.downtoearth.org.in/news/climate-change/why-environmental-degradation-is-a-big-health-risk-52153>
2. Sustainable development
<https://www.tandfonline.com/doi/full/10.1080/23311886.2019.165353>

GEOG 606 Population Studies

Max. Marks: 100	L	T	P	C
(CA: 40 + ESA: 60)	4	0	0	4

Learning Outcomes:

After the completion of this course, students should be able to:

- Map the world in terms of density, distribution and other demographic aspects.
- Identify the demographic characteristics of India.
- Elucidate the concept of population growth.
- Analyze population problems and policies of India.

Course Content:

Section A

Approaches for Population Studies, Methodological Problems in data collection, Basic Source of Data with special reference to India, Problems of handling population data. Mapping and presentation of population data.

Section B

Population Change and its Measures, Determinants of Fertility and Mortality, Migration- Type, Determinants and Consequences, Models (W.J. Reilly, George K.Zipf, S.A. Stouffer, Ravenstein, and Lee).

Section C

Population Growth and Distribution in India, Fertility and Mortality in India, Population compositions in India, Child marriage and Female feticide in India, Poverty alleviation and employment generation in India, Population factors in development planning, National Population Policy of India 2000.

Recommended Books:

1. Ahmad, A., Noin, D., & Sharma, H. N. (Eds.). (1997). *Demographic Transition- The third World Scenario*. Jaipur, India: Rawat.
2. Bhende, A. A., & Kanitkar, T. (2008). *Principles of Population Studies* (19thed.). Mumbai, India: Himalaya
3. Chaubey, P.K. (2011). *Population Policy for India- prespectives, issues and challenges*. New Delhi, India: Kanishka.
4. Chandana, R. C. (2014). *A Geography of population* (11thed.). New Delhi, India: Kalyani.

5. Chopra, G. (2006). *Population Geography*. New Delhi, India: Commonwealth.
6. Cox, P. R. (1993). *Demography* (5thed.). New Delhi, India: Universal Book Stall.
7. Jay, W., & Pillai, V. K. (2017). *Demography- The Science of Population* (2nded.). Jaipur, India: Rawat.
8. Jhingon, M. L., Bhatt, B. K., & Desai, J. N. (2011). *Demography* (2nded.). New Delhi, India: Vrinda.
9. Premi, K. M., & Das, D. N. (2012). *Population of India 2011*. Delhi, India: B.R.
10. Qazi, S. A. (2010). *Population Geography*. New Delhi, India: APH.
11. Srivastava, S. C., & Srivastava, S. (2004). *Studies in Demography*. New Delhi, India: Anmol.
12. Tripathi, R. K. (2007). *Population Geography*. New Delhi, India: Commonwealth.
13. Weinstein, J., Pillai, A., & Vijayan, K. (2017). *Demography- The Science of Population* (2nded.). Jaipur, India: Rawat.
14. पंडा, बी. पी. (2007). *जनसंख्या भूगोल*. भोपाल, भारत: मध्यप्रदेश हिन्दी ग्रन्थ अकादमी.
15. बंसल, एस. सी. (2015). *जनसंख्या भूगोल (द्वितीय सं.)*. नई दिल्ली, भारत: आर. के.

Suggested e-learning materials:

1. Demographic Data of India
http://censusindia.gov.in/2011-prov-results/data_files/india/Final_PPT_2011_chapter3.pdf
2. National Population Policy 2000
<https://mohfw.gov.in/sites/default/files/26953755641410949469%20%281%29.pdf>

GEOG 623 Geography of Settlements

Max. Marks: 100	L	T	P	C
(CA: 40 + ESA: 60)	4	0	0	4

Learning Outcomes:

After the completion of this course, students should be able to:

- Depict the evolution of settlements and relate it to the geographical factors.
- Analyze morphology of the settlement.
- Depict the development of cities and relate with the classical theories of growth of cities.
- Classify cities functionally and elucidate models in Settlement Geography.

Course content:

Section A

Settlements: origin and evolution, classification, size and spacing of settlements, Pattern and Process of development of rural morphology, morphology of an Indian village and rural dwelling, rural service centres and their identification, Rural Problems, schemes and developmental programmes.

Section B

Origin and evolution of towns, stages of evolution of cities, Urbanization, Urban Morphology: theories (Concentric Zone theory, Sector theory and Multiple Nuclei theory), Urban land use, morphology of an Indian city.

Section C

Rank Size Rule, the Law of Primate City, Rural Urban Fringe, Suburb, Satellite Town, Conurbation, Umland, Urban Problems, Urban Planning and Master Plan, Sustainable Urban Planning, National Urbanization Policy.

Recommended Books:

1. Bansal, S. C. (2015). *Urban Geography* (2nd ed.). Meerut, India: Meenakshi.
2. Chisholm, M. (2009). *Rural Settlement and Land Use*. New Jersey, NJ: Transaction.
3. Daniel, P. (1989). *The Geography of Settlement* (2nd ed.). Edinburgh, Scotland: Oliver & Boyd.
4. Daniel, P. (2002). *Geography of Settlement*. Jaipur, India: Rawat.

5. Ghosh, S. (1998). *Geography of Settlements*. Kolkata, India: Orient Longman.
6. Hussain, M. (2003). *Urban Geography*. New Delhi, India: Anmol.
7. Mandal, R. B. (2001). *Introduction to Rural Settlement* (2nd ed.). New Delhi, India: Concept.
8. Mourya, S. D. (2014). *Settlement Geography*. Allahabad, India: Sharda Pustak Bhawan.
9. Oliver, P. (1987). *Dwellings: The House across the World*. Austin, TX: University of Texas Press.
10. Singh, R.Y. (2014). *Geography of Settlements* (2nd ed.). Jaipur, India: Rawat.
11. Wanmali, S. (1983). *Service Centres in Rural India: policy, theory, and practice*. New Delhi, India: B. R.
12. तिवारी, आर. सी. (2016). *अधिवास भूगोल* (अष्ट सं.). इलाहबाद, भारत: प्रयाग पुस्तक भवन.
13. बंसल, ए स. सी. (2009). *नगरीय भूगोल*. मेरठ, भारत: मीनाक्षी.
14. मौर्य, एस. डी., एवं सिंह, आर.एन. (2013). *नगरीय भूगोल* (द्वितीय सं.). इलाहबाद, भारत: शारदा पुस्तक भवन.
15. सिंह, आई. (2008). *अधिवास भूगोल*. नई दिल्ली, भारत: यूनिवर्सिटी.
16. सिंह, आर. (2005). *अधिवास भूगोल*. जयपुर, भारत: रावत.

Suggested e-learning materials:

1. Rural settlement
<https://rb.gy/r0syxn>
2. Settlement patterns
<https://www.britannica.com/place/India/Caste#ref487283>
3. Origin and evolution of towns
<http://www4.brandonu.ca/ebertsd/281/281f17unit02.pdf>
4. Functional Zones of a city
<http://egyankosh.ac.in/bitstream/123456789/27649/1/Unit-11.pdf>

GEOG 613L Digital Cartography and Geo informatics Lab

Max. Marks : 100

L T P C

(CA: 40 + ESA: 60)

0 0 8 4

Learning Outcomes-

After the completion of this course, students will be able to:

- Develop skill related to digital cartography – diagrammatic representation of data
- Develop skills in data generation, mapping for the implementation in planning.
- Develop skill of surveying using Global Positioning System.
- Enrich students about applications of geospatial technologies in various fields.

Course Content:

Digital Cartography - Meaning, Scope and Significance; Impact of geo-information technology on cartography; Comparison between digital and manual cartography; Cartographic methods and techniques: Graphs and Diagrams - Line diagram, Bar diagram, Pie diagram, Pyramid diagram; Mapping techniques - Dot, Choropleth, Isopleth; Thematic mapping – types and methods, Map Compilation: base data, thematic data; Remote Sensing: Platforms and Sensors; Resolution of Remote Sensing data: spatial, spectral, radiometric and temporal; Procurement of Satellite Imagery; Geographic Information Systems (GIS): Definition and Components, Spatial data in GIS- Raster and Vector; Image Classification – Supervised and Unsupervised, accuracy assessment; GPS- Introduction and Basic Components; Applications of Geospatial Technology in Agriculture mapping, Landuse/Landcover analysis, Urban change and Watershed management; Surveying with Global Positioning System(GPS)- Rapid static positioning technique and Stop & Go technique.

Recommended Books:

1. Bhatta, B. (2011). *Remote Sensing and GIS (2nd ed.)*. New Delhi, India: Oxford University Press.
2. Campbell, J. B., & Wynne, R. H. (2011). *Introduction to Remote Sensing (5th ed.)*. New York, NY: Guilford
3. Cracknell, A. P., & Hayer, L. (2009). *Introduction to Remote Sensing*. New York, NY: Taylor and Francis.

4. Cromley, G. R. (1992). *Digital Cartography*. New Jersey, NJ: Prentice Hall.
5. Ganesh, A., & Narayanakumar, R. (2006). *GPS Principles and Applications*. Delhi, India: Satish Serial.
6. George, J., & Jeganathan (2018). *Fundamentals of Remote Sensing* (3rded.). Hyderabad, India: Universities Press.
7. Gopi, S. (2013). *Global Positioning System- Principles and Applications*. New Delhi, India: McGraw Hill.
8. Kumar, S. (2014). *Basics of Remote Sensing and GIS*, New Delhi, India: University Science Press Laxmi.
9. Lillesand T. M., Kiefer, R. W., & Chipman, J. W. (2008). *Remote Sensing and Image Interpretation* (6thed.). New York, NY: Wiley & Sons.
10. Lo, C. P., & Albert, K. W. Y. (2002). *Concepts and Techniques of Geographic Information System* (2nded.). New Delhi, India: Prentice-Hall.
11. Michael, N. D. (2000). *Fundamentals of Geographic Information Systems*. New York, NY: John Wiley & Sons.
12. Nag, P., & Kudrat, M. (1998). *Digital Remote Sensing*. New Delhi, India: Concept
13. Paine, D. P., & Kisher, J. D. (2012). *Aerial Photography and Image Interpretation* (3rded.). Sydney Australia: John Wiley & Sons.
14. Palet, A. N. (1992). *Remote Sensing Principles & Application*. Jodhpur, India: Scientific.
15. चौनियाल, डी. डी. (2010). *सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली*. इलाहबाद, भारत: शारदा पुस्तक भवन.

Suggested e-learning materials:

1. Principles and applications of GIS
<https://www.environmentalscience.org/principles-applications-gis>
2. GPS and Applications
https://www.cfa.harvard.edu/space_geodesy/ATLAS/applications.html

Reading Electives

GEOG 611R Climate Change and Future Crisis

Max. Marks : 100	L T P C
ESA : 100	0 0 4 2

Learning Outcomes:

After the completion of this course, students will be able to:

- Explain and analyze climate change.
- Predict consequences of climate change over several sectors of economy.
- Analyze effects of climate variability on domestic livestock.
- Describe current and past climate change policies in India.

Course Content:

Climate Change; Global warming and regional effect; Projected impact of climatic change in Asia over fisheries, human settlement, food supply, farming systems, health; Climate change and diseases; Climate Change and El-Nino; Impact of climate change on agriculture, soil, desertification (special reference to Rajasthan); Effects of climate variability on domestic livestock; Economics of climate change; Climate change policies of India.

Recommended Books:

1. Singh.A.(2015). *Climate Change and Agriculture*. Jaipur, India: Oxford Book Company.
2. Sharma, H.S.(2018). *Climate Change and Natural resource: A study of Indian Deserts*. New Delhi, India: Global.
3. Baros, V., & Field, C.B.(2014). *Climate Change, Impacts Adaptation and Vulnerability Part B Regional Aspect.*, New York, NY : Cambridge University Press.
4. Cowie, J.(2007). *Climate change and Biological Impacts*. Cambridge, UK : Cambridge University Press.

5. Agarwal, S.K. (2013). *Global Warming and Climate change*. New Delhi, India: A.P.H.
6. Romm, J. (2018). *Climate change what everyone needs to know*. New Delhi, India: Oxford University Press.

Suggested e-learning materials:

1. El-Nino and climate Change
<https://blogs.ei.columbia.edu/2016/02/02/el-nino-and-global-warming-whats-the-connection/>
2. Economics of climate change
<https://bfi.uchicago.edu/events/CC-climate>
3. Climate change policies in India
<http://envfor.nic.in/division/india-taking-climate-change-24-recent-initiatives>

GEOG 612R Contemporary Social Challenges in India

Max. Marks : 100

L T P C

ESA : 100

0 0 4 2

Learning Outcomes:

After the completion of this course, students will be able to:

- Analyze the socio cultural environment in India with respect to parameters like sex ratio, fertility and mortality.
- Understand about the causes and consequences of Gender discrimination in Indian society.
- Status of women and domestic violence in Indian society and need of women empowerment.
- Aware about the government policies concerning them.

Course Content:

Socio-cultural transformation and its relation with environment; Social diversity, Social well-being and Quality of life in India with reference

to major religion; Gender inequality in sex ratio, fertility, mortality and child marriage in India; Causes and consequences of Gender discrimination in Indian society with special reference to Literacy and occupational structure; Status of women and domestic violence in Indian society and need of women empowerment in modern India; Government Laws, Policies/schemes and International commitments to women empowerment.

Recommended Books:

1. Ahmad, A. (2006). *Social Geography* (Reprint). Jaipur, India: Rawat.
2. Chandana, R. C. (2014). *A Geography of population (11th ed.)*. New Delhi, India: Kalyani.
3. Jetli, K. N. (2010). *Human and Natural Resource of India*. New Delhi India: New Century.
4. Khullar, D. R. (2014). *India, A Comprehensive Geography.(3rd ed.)*. Ludhiyana, India: Kalyani.
5. Mehtani, S., & Sinha, A. (2010). *Social Geography*. New Delhi, India: Commonwealth.
6. Ranade, P. S. (1990). *Population Dynamics in India*. New Delhi, India: Ashish.
7. Singh, G. (2010). *Geography of India.(9th ed.)*. Delhi, India: Atma Ram.
8. Syed, M. H. (2010). *Social and Cultural Transformation in India*. New Delhi, India: Anmol.

Suggested e-learning materials:

1. Women Empowerment
<https://www.indiacelebrating.com/social-issues/women-empowerment/>
2. Socio-culture Transformation
<http://www.yourarticlelibrary.com/society/essay-on-socio-cultural-dynamics-in-indian-society/4022>

3. Social Diversity
<http://egyankosh.ac.in/bitstream/123456789/8326/1/Unit-16.pdf>
4. Gender Inequality
<https://www.indiacelebrating.com/social-issues/gender-inequality-in-india/>
5. Gender Discrimination
<http://www.dailyexcelsior.com/gender-discrimination-india/>
6. Occupational Pattern
https://www.ijmra.us/project%20doc/2018/IJRSS_JANUARY2018/IJMRA-13135.pdf
7. Domestic Violence
<https://www.youthkiawaaz.com/2010/02/domestic-violence-in-india-causes-consequences-and-remedies-2/>

GEOG 615R Industrialization and Regional Development

Max. Marks : 100

L T P C

ESA : 100

0 0 4 2

Learning Outcomes:

After the completion of this course, students will be able to:

- To describe and ascertain the concepts and theories to industrial location, industrial decentralization and agglomeration.
- To map and explain world industrial regions and associated factors of growth and problems.
- To assess the impact of growth of industries over environment.
- Suggests measures for the improvement of industrial growth.

Course Content:

Industries and their linkage, Aspects for the location of Industries and optimum industrial location, characteristics and problems of Industrial centralization, decentralization and agglomeration; World industrial problems with special reference to developed and developing countries. Regional imbalances in industrialization and role of Industrialization for the regional development with special reference to India and USA. Government policies and efforts for the development of industrialization with special reference to India. Impact of industrialization on environment; Industrial Hazards and Health.

Recommended Books:

1. Gautam, A. (2010). *Advanced Economic Geography*. Allahabad, India: Sharda Pustak Bhawan.
2. Guha, J.L., & Chattoraj, P.R. (2009). *Economic geography – A Study of Resources*. (9thed.). Kolkata, India: The World Press.
3. Hartshorne, T. A., & Alexander, J. W. (2009). *Economic Geography*. (8thed.). New Delhi, India: Prentice Hall.
4. Leong, G. C., & Morgan, G. C. (2010). *Human and Economic Geography*. (2nded.). New Delhi, India: Saurabh.
5. Sharma, T.C. (2013). *Economic Geography of India*. Jaipur, India: Rawat.
6. Siddharth, K. (2018). *Economic Geography*. (3rded.). Allahabad, India: KitabMahal.
7. गौतम, ए. (2015). *आर्थिक भूगोल*. मेरठ, भारत: रस्तोगी.
8. प्रताप, आर. (2006). *औद्योगिक भूगोल*. नई दिल्ली, भारत: यूनिवर्सिटी.
9. मामोरिया, सी. (2012). *आर्थिक भूगोल* (द्वितीय सं.). आगरा, भारत: साहित्य भवन.
10. सिंह, के. एन., एवं सिंह, जे. (2010). *आर्थिक भूगोल के मूलतत्व* (11 वाँ सं.). गोरखपुर, भारत: ज्ञानोदय.

11. सिंह, के. (2009). *आर्थिक भूगोल के मूलतत्व : संसाधन उपयोग, संरक्षण एवं आर्थिक विकास का अध्ययन* (11 वॉ सं.). वाराणसी, भारत: ज्ञानोदय.
12. लोढ़ा, आर. (2009). *औद्योगिक भूगोल* (चतुर्थ सं.). जयपुर, भारत: हिन्दी ग्रन्थ अकादमी.

Suggested e-learning materials:

1. Industrial centralization and decentralization
<https://ebrary.net/7783/management/centralisation>
2. Regional imbalances in industrialization
<http://www.yourarticlelibrary.com/india-2/top-9-causes-responsible-for-regional-imbalances-in-india/63001>
3. Industry and Environment
https://postconflict.unep.ch/publications/sudan/07_industry.pdf
4. Industrial Hazards
<https://www.slideshare.net/ShmmonAhmad/industrial-hazard-pdf>

GEOG 617R Resource: Challenges and Management

Max. Marks : 100

L T P C

ESA : 100

0 0 4 2

Learning Outcomes:

After the completion of this course, students will be able to:

- Analyze the resources and their scarcity.
- Depict the problems arising from resource scarcity.
- Describe resource related problems.
- Suggest measures to conserve resources like water, forest, energy, biodiversity etc.

Course Content:

Resource and Technological Development Stages; Use and misuse of resources; Resource depletion and emerging issues: desertification, deforestation, Loss of Biodiversity, Energy crises, water scarcity and conflicts; Future prospects of energy resources with special reference to India; Resource disputes: river water sharing in India (Narmada, Krishna, Cauvery and Sutlej Yamuna Link-SYL); Conservation of resources (Water, Forest and Energy); Community participation and resource management; Watershed as a unit of resource management; Resource management in India with special reference to arid regions.

Recommended Books:

1. Gautam, A. (2010). *Advanced Economic Geography*. Allahabad, India: Sharda Pustak Bhawan.
2. Guha, J.L., & Chatterraj, P.R. (2009). *Economic geography – A Study of Resources*. (9thed.). Kolkata, India: The World Press.
3. Hartshorne, T. A., & Alexander, J. W. (2009). *Economic Geography*. (8thed.). New Delhi, India: Prentice Hall.
4. Jetli, K. N. (2010). *Human and Natural Resource of India*. New Delhi, India: New Century.
5. Khullar, D. R. (2014). *India, A Comprehensive Geography*. (3rd ed.). Ludhiana, India: Kalyani.
6. Leong, G. C., & Morgan, G. C. (2010). *Human and Economic Geography*. (2nded.). New Delhi, India: Saurabh
7. Pandey B.M. (Ed.) (2005). *Natural Resource Management*. New Delhi, India: Mittal.
8. Qazi S.A. and Qazi N.S (2007). *Natural Resource Conservation*. New Delhi, India: APH.
9. Siddharth, K. (2018). *Economic Geography*. (3rded.). Allahabad, India: KitabMahal.
10. Singh, G. (2010). *Geography of India*. (9th ed.). Delhi, India: Atma Ram.

11. Trivedi P.R. (2010). *Natural Resource Conservation*. New Delhi, India: APH.
12. बंसल, एस. सी. (2015). *भारत का भूगोल* (तृतीय संस्करण). मेरठ, भारत: मीनाक्षी.
13. मामोरिया, सी. (2018). *भारत का वृहत भूगोल*. आगरा, भारत: साहित्य भवन.
14. सिंह, के. (2009). *आर्थिक भूगोल के मूलतत्व : संसाधन उपयोग, संरक्षण एवं आर्थिक विकास का अध्ययन* (11 वॉ सं). वाराणसी, भारत: ज्ञानोदय.
15. सिंह, जे. (2009). *संसाधन भूगोल*. नई दिल्ली, भारत: राधा.

Suggested e-learning materials:

1. Resource Scarcity
<https://www.ipinst.org/wp-content/uploads/2015/06/rscar0408.pdf>
2. Resource Scarcity and adequacy
<http://www.yourarticlelibrary.com/economy/important-ideas-concepts-developed-in-economy/25276>
3. Use and misuse of natural resource
<https://www.ugc.ac.in/oldpdf/modelcurriculum/Chapter2.pdf>
4. Economic development and Resource
<https://helpsavenature.com/how-do-natural-resources-affect-economic-development>.
5. Watershed and resource management
http://kiran.nic.in/pdf/publications/Watershed_Development.pdf

GEOG 618R Solid Waste Management for a Smart City in India

Max. Marks : 100

L T P C

ESA : 100

0 0 4 2

Learning Outcomes:

After the completion of this course, students will be able to:

- Understand about the concept, characteristics, rules of solid waste management.

- Learn about biochemical processes and energy recovery from municipal solid waste.
- Learn about the collection, transportation, segregation, composting and disposal of Municipal solid Waste.
- Assess the issues and challenges of Solid Waste Management faced in India.

Course content:

Municipal Solid Waste Management: Characteristics and Quantities, Collection, Transportation, Segregation, Processing and Disposal of Municipal Solid Waste, Landfill; Biochemical Processes and Composting; Energy Recovery from Municipal Solid Waste; Current Issues in Solid Waste Management; Construction and Demolition (C&D) Waste Management – Overview; C&D Waste – Regulation, Beneficial Reuse of C&D Waste Materials; MSW Rules 2016, Electronic Waste (E-Waste) Management – Issues and Status in India; E-Waste Management Rules 2016 and Management Challenges, Swachh Bharat Mission so far.

Recommended Books:

1. Bhatia, S. C. (2007). *Solid & Hazardous Waste Management*. New Delhi, India: Atlantic.
2. Hosetti, B. B. (2016). *Prospects & Perspectives of Solid waste Management*. New Delhi, India: New Age International.
3. Mohd, S. (2011). *Waste Management in an Urban Area*. New Delhi, India: B. R.
4. Singh, J. & Ramanathan, A. L. (Ed.), (2015). *Solid waste Management Present & Future Challenges*. New Delhi, India: I.K. International.
5. Yasmin, S. (2013). *Solid waste Management*. New Delhi, India: Global Research.

Suggested e-learning materials:

1. MSW Management Rules 2016, Govt. of India
<http://cpcb.nic.in/>
2. Electronic Waste Management Rules 2016, Govt. of India
<http://cpcb.nic.in/>

3. Biochemical Processes and Composting
http://ecochem.com/t_compost_faq2.html
4. Energy Recovery from Municipal Solid Waste
<https://www.epa.gov/smm/energy-recovery-combustion-municipal-solid-waste-msw>

GEOG 620R Tourism and Heritage

Max. Marks : 100

L T P C

ESA : 100

0 0 4 2

Learning Outcomes:

After the completion of this course, students will be able to:

- Describe tourism, its major concepts, development and trends associated with it.
- Able to identify major tourist sites, heritage sites.
- Understand policies and challenges of tourism in India and Rajasthan.
- Explain the role of tourist organizations, foreign capital and globalization on tourism.

Course Content:

Geographical Basis of Tourism and Infrastructure for the development of Tourism; Types of tourism; Identification of tourism sites for regional development; Heritage sites and their significance in tourism; Impacts of Tourism: Physical, Economic & Socio- Cultural; New trends in Tourism: creation & development of tourists spots; Growth, Policies and challenges of Tourism in India and Rajasthan; Tourism organizations and their role for the development of Tourism and employment; Role of foreign capital and impact of Globalization on tourism; Physical and Social barriers of Tourism and solutions.

Recommended Books:

1. Bhatia, A. K. (2002). *Tourism Development: Principles and Practices*. New Delhi, India: Sterling pub.
2. Chen, A. (2015). *The Principles of Geotourism*. Beijing, China: Springer-Verlag.
3. Cooper, C., & Cooper, R. (2012). *Worldwide Destinations: The Geography of Travel and Tourism*. New York, NY: Routledge.
4. Dowling, R., & Newsome, D. (Eds.). (2005). *Geotourism*. Oxford, UK: Elsevier.
5. Garg, D. (2009). *Geography of Tourism*. New Delhi, India: Mohit.
6. Jayapalan, N. (2013). *An Introduction to Tourism*. New Delhi, India: Atlantic.
7. Kamra, K. K. (2104). *Tourism An Overview*, New Delhi, India: Kanishka.
8. Kaushal, P., & Sharma, S. P. (2011). *Ecological and Environmental Impact of Tourism*. New Delhi, India: Kanishka.
9. Micheal, H. C., & Page, J. S. (2014). *Geography of Tourism and Receration*, New York, NY: Routledge.
10. Nelson, V. (2013). *An Introduction to the Geography of Tourism*. Jaipur, India: Rawat.
11. Pathania, K. S., & Kumar, A. (2008). *Tourism in India*, New Delhi, India: Regal.
12. Sharma, S. P. (2011) :*Tourism Education Principales, Theories and Practices*. (2nded.). New Delhi, India: Kanishka.
13. नेगी, जे. (2007). *पर्यटन एवं यात्रा के सिद्धान्त*. नई दिल्ली, भारत: तक्षशिला.
14. शुक्ला, आर. एवं शुक्ला, आर. (2009). *पर्यटन भूगोल*. नई दिल्ली, भारत: अर्जुन.
15. सारण, बी. आर. (2008). *पर्यटन उत्पाद एवं प्रबन्ध*. नई दिल्ली, भारत: कनिष्क.

Suggested e-learning materials:

1. Concept of Tourism
[https://unstats.un.org/unsd/tradeserv/Workshops/Madrid/IWTS_Item09\(Philippines\).pdf](https://unstats.un.org/unsd/tradeserv/Workshops/Madrid/IWTS_Item09(Philippines).pdf)
2. Concept and types of Tourism
http://oer.nios.ac.in/wiki/index.php/Forms_of_Tourism
3. Impact of Tourism
<http://trcollege.edu.in/articles/74-development-and-impact-of-tourism-industry-in-india>
4. Growth of Tourism in India
<http://www.yourarticlelibrary.com/tourism/growth-of-tourism-in-india-its-impact-on-employment-and-economic-development/14110>
5. Impact of Globalization on tourism
<https://www.asianentrepreneur.org/globalization-tourism/>

GEOG 621R Population Dynamics and Welfare Programmes

Max. Marks : 100**L T P C****ESA : 100****0 0 4 2****Learning Outcomes:****After the completion of this course, students will be able to:**

- Understand and Explain the Concept and Components of Population Dynamics.
- Analyze the Trend, Patterns and Determinants of Mortality, Fertility and migration.
- Explain regional Variations and determinants of population.
- Evaluate the role of values in the generation of Population policies and compare them on regional basis.

Course Content:

Concept and Components of Population Dynamics; Population Growth: Trends and Theories (Malthusian Theory, Demographic Transition Theory); Measuring Mortality, Mortality Patterns and Trends-, HIV/AIDS Pandemic,

Fertility: Trend, Patterns and Determinants; Migration: Trends and Patterns, Displacement of population: Intra–state and interstate; Population and Resource Relationship; World Population: Major issues for the 21st Century (Population and environment); Population Dynamics: Regional Variation and Determinants; Fertility, Urbanization: Challenges and Opportunities; Population Programmes in India: A Critical Appraisal; the role of values in Population Policy, Comparative Study of Population Policies: India and China.

Recommended Books:

1. Adnaik, N. S. (2018). *Textbook of population geography*. Kanpur, India: International.
2. Chandana, R. C. (2014). *A Geography of population* (11thed.). New Delhi, India: Kalyani.
3. Chaubey, P.K. (2011). *Population Policy for India- prespectives, issues and challenges*. New Delhi, India: Kanishka.
4. Jhingon, M. L., Bhatt, B. K., & Desai, J. N. (2011). *Demography* (2nded.). New Delhi, India: Vrinda.
5. Weinstein, J., Pillai, A., & Vijayan, K. (2017). *Demography- The Science of Population* (2nded.). Jaipur, India: Rawat.
6. पंडा, बी. पी. (2007). *जनसंख्या भूगोल*. भोपाल, भारत: मध्य प्रदेश हिन्दी ग्रन्थ अकादमी.
7. बंसल, एस. सी. (2015). *जनसंख्या भूगोल (द्वितीय सं.)*. नई दिल्ली, भारत: आर. के.

Suggested e-learning materials:

1. Migration
http://www.un.org/en/development/desa/population/migration/publications/migrationreport/docs/MigrationReport2017_Highlights.pdf
2. Migration: Trends and Patterns
<https://onlinelibrary.wiley.com/doi/full/10.1111/padr.12291>
3. Comparative Study of Population Policies: India and China.
https://www.academia.edu/9907005/Population_policies_and_development_in_China_and_India_comparative_perspectives
4. Urbanization: Challenges and Opportunities
<http://hdr.undp.org/en/content/rapid-urbanisation-opportunities-and-challenges-improve-well-being-societies>