

P.G. Department of Geography

M.A. Geography

Programme Outcomes

PO-1: Demonstrate an ability to develop a research proposal and carry out independent research

PO-2: Enhance the moral and ethical sensibilities of the students which may help them in becoming a good human being and responsible citizen.

PO-3: have an in-depth understanding of, and mastery of the literature in, at least one particular geographic subfield

PO-4: Demonstrate an ability to present and defend research work in oral, written, and graphic forms

Programme specific outcomes

PSO-1 Demonstrate in-depth knowledge of the theory, methods, and research in the discipline of geography and assess the capacity for the discipline of geography to provide a useful and robust forum for exploring, analyzing and responding to developments at the human-environment interface.

PSO-2 Understand the connect key theories, concepts, techniques and technologies within the subfields of human and physical geography, as well as geographic information science and technology, through real-world applied/practical applications at the local, regional, and global scales.

PSO-3 Learn to systems thinking and critical thinking and logical reasoning skills to analyze problems and potential solutions in socio-economic-ecological systems at the human-environment interface and practice obtaining, analyzing, and interpreting complex geographic data.

PSO-4 Articulating and communicate problems and potential solutions derived from data collection, analysis, modelling, results generation, to policy development.

PSO-5 Understand the effective communication of concepts and problems to both scientific and public audiences and at various education level school, colleges, etc.

PSO-6 Practice articulating and communicating solutions to geographic problems and policy or recommendations within team settings.

Course Outcomes

Course Name: Geomorphology

Class M.A. Geography Semester Ist

Objectives of the course: This course represents the interface between physical aspects of Geography and Geology, Oceanography, Glaciology etc. The course aims to sensitise the student to this interface. The course aims to familiarize the student with the conceptual framework for understanding the existing geomorphological landscapes and related processes. The course is designed to provide the student with a theoretical and empirical framework for understanding landscape evolution and the characteristics of individual types of geomorphic landscapes

Course Outcomes

(a) Knowledge and Understanding:

- The student can explain principal terms, definition and theories (e.g. conceptual approaches in geomorphology)
- The student can describe landforms and land forming in different climatic zones and tectonic regimes.
- The student can explain different theories and models for landscape evolution.
- The student can discuss the development of micro to mega scale landforms and their life spans.
- The student can assess the mode of formation, age and history for landforms in world.

(b) Intellectual Cognitive/Analytical skill:

Student are able to:

- Apply a precise geological language to describe and discuss geological processes, phenomena and theories.

- Demonstrate the ability to function individually, in cooperation and ethically with others.
- Acknowledge, evaluate and communicate the role of humans in and our dependency and impact on the earth system.
- Use libraries and scientific databases to retrieve relevant information, including the proper citation of sources.

(c) Practical skills:

Students are able to:

- Use field-based techniques to obtain and work with earth science data.
- Plan and carry out geomorphological field investigation (including, observation, interpretation, report)
- Search and find relevant information to elucidate geomorphological problems.
- Compare and discuss the formation of large scale landforms involving both exogenous and endogenous processes.

(d) Transferable skills:

Candidates will have had the opportunity to acquire the following abilities through the research training and research specified for the programme the skills necessary for a career as a researcher and/or for employment in a senior and leading

- Capacity in a relevant area of professional practice or industry; evaluating their own achievement and that of others;
- Self-direction and effective decision making in complex and unpredictable situations;
- Independent learning and the ability to work in a way which ensures continuing professional development

Course Name: Cartography

Class M.A. Geography Semester Ist

Objectives of the course: The objective of this course is to promote awareness of the various cartographic techniques available for graphic representation of relief, population, agriculture, industrial and transport data, the steps of construction of the techniques - their merits and demerits. An effort is made to help them develop manual skills of drawing maps based on some of the above-mentioned data. They are also told about benefits of GIS and computer-assisted cartography.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Demonstrate in-depth understanding of the spatial models and mathematical methods used in contemporary practice.
- Understand specialist bodies of knowledge in surveying and geospatial science.
- Be proficient in the recording, storage, management and reporting of spatial information.
- Use cartographic design skills for the visualisation and representation of information
- Communicate effectively by means of oral, written and graphical presentations to peers and a wider audience.

(b) Intellectual Cognitive/Analytical skill:

Students are able to:

- a keen eye for detail as much of the work involves careful research and the collection and manipulation of data
- an eye for layout and design, good spatial awareness and colour vision
- analytical ability and problem-solving skills
- team working skills in order to produce maps quickly and effectively
- a methodical and systematic approach to work
- high standards of accuracy and attention to set procedures
- the ability to interpret data, graphical representations and symbols
- the ability to work independently

(c) Practical skills:

Students are able to:

- Describe the nature of maps and the history of mapping
- Use a variety of contemporary map products
- Interpret maps - on both quantitative and qualitative levels
- Apply cartographic design principles involved in map design and use graphics software for mapping purposes.
- Recognise available map resources
- Identify the principles involved in the map production process

(d) Transferable skills:

Students are able to:

- Use this software for prepare the various types of maps in geography with the help of cartographic Techniques of GIS software.
- Applied this software and cartographic techniques for analysis and study in rural settlement geography and urban settlement for planning and development.
- Understand the cartographic techniques and its tolls, functions, applied in agriculture geography and physical geography for assessment and visualization purpose.
- Help with these techniques, tool, methods, procedures; analysis potential and cartographic technique etc. prepare the project report considering all types of data related to geography of any selected study area or village.

Course Name: Population Geography

Class M.A. Geography Semester Ist

Objectives of the course: The aim of this course is to explain the geographical approach to the study of population. It focuses on analysis of broad spatial patterns of world population examining population resource relationship and population problems and policies of developed and less developed countries of the world.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Demonstrate an understanding of demographic changes in the world and their major determinants;
- Use demographic concepts and population theories to explain past and present population characteristics;
- Use demographic concepts and theories to understand contemporary socio-economic issues and current affairs; and,
- Apply demographic concepts and population theories into relevant policy settings

(b) Intellectual Cognitive/Analytical skill:

Students are able to:

- Students will acquire an understanding of and appreciation for the relationship between geography and culture.
- Students will acquire an understanding of and appreciation for the role that geography can play in community engagement.
- Students will develop the ethical aptitudes and dispositions necessary to acquire and hold leadership positions in industry, government, and professional organizations.
- Students will read, interpret, and generate maps and other geographic representations as well as extract, analyze, and present information from a spatial perspective.
- Students will understand through lectures but also local, regional, and/or international travel the interconnection between people and places and have a general comprehension of how variations in culture and personal experiences may affect our perception and management of places and regions.
- Students will have a general understanding of physical geographic processes, the global distribution of landforms and ecosystems, and the role of the physical environment on human populations.

(c) Practical skills:

Students are able to:

- Develop a solid understanding of the concepts of “space,” “place” and “region” and their importance in explaining world affairs.
- Understand general demographic principles and their patterns at regional and global scales.
- Able to locate on a map major physical features, cultural regions, and individual states and urban centers.
- Understand global and regional patterns of cultural, political and economic institutions, and their effects on the preservation, use and exploitation of natural resources and landscapes.

(d) Transferable skills:

Students are able to:

- General understanding of the various theoretical and methodological approaches in both physical and human geography and be able to develop research questions and critically analyze both qualitative and quantitative data to answer those questions.
- Able to present completed research, including an explanation of methodology and scholarly discussion, both orally and in written form and, wherever possible, utilize cartographic tools and other visual formats.

- Able to synthesize geographic knowledge and apply innovative research strategies to solve problems in resource conservation, environmental change, and sustainable development within the community, region, and world.
- Demonstrate an understanding of the fundamental principles, concepts and knowledge of Geotourism from the perspective of the National Geographic Society's guidelines.

Course Name: Geographic Thought

Class M.A. Geography Semester Ist

Objective of Course: Main objectives of this course are to acquaint the students with the philosophy, methodology and historical development of geography as a professional field. This should enable the student to critically look at the contents of other courses at Postgraduate level as logically integrated with the broad currents of thought the subject has witnessed in the distant and recent past. The course aims at developing critical thinking and analytical approaches.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Understand the distinctiveness of geography as a field of learning in social as well as natural science.
- Trace the history and development of geographical thought from the ancient period to the present era.
- Acquaint themselves with the underlying philosophy and methodology of the subject.
- Demonstrate how the changes in relationship between man and his environment are reflected in the development of new thought.
- Evaluate how relevant geographical studies are for the human society.

(b) Intellectual Cognitive/Analytical skill:

Student will be able to:

- Examining the sciences of geography and Geography in the Second Half of the 20th Century and its trends in geographical thoughts.
- Compare between the fundamental concepts in geography these are General Geography v/s Regional Geography, Physical Geography v/s Human Geography, and Determinism Geography v/s Possibilist.

- To understand the present status and application of modern techniques and its uses in climatology, geomorphology, economics geography, and population geography.

(c) Practical Skills

Students are able to:

- Approach the discipline of Geography and the work of academic geographers with a more open and informed perspective on the plurality and commonality of ways geographers think, question, analyse and interpret.
- Critique and theoretically situate the ideas and research of geographers, including your own work and those of your peers, in a balanced, reasoned and constructive fashion.
- Exercise and improve your verbal, presentation and writing skills, through both individual and group work.

(d) Transferable Skills

Students are able to:

- Demonstrate an understanding and awareness of the complexities and limitations of constructing geographical arguments and interpretations contributing toward knowledge.
- Begin to feel part of an academic community, both within Western's Department of Geography and within Geography as an academic discipline, toward engaging and contributing to the broader academic and public debates of our time.

Course Name: Climatology

Class M.A. Geography Semester IInd

Objectives of the course: The overall objective of the course is to foster comprehensive understanding of atmospheric phenomena; dynamics and global climates.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Understand the introduction to Climatology considering weather & climate, role of climate in human life, aims, nature, scope, and some other sub division of the course.

- Understand the Atmosphere and their process and function, origin, composition, structure of Atmosphere.
- To examining the Insolation and Heat Budget and its factors effects and their relations to other some elements.
- Understand the concept of temperature and factors, horizontal, vertical and invasion of temperature.
- Identify the Atmospheric pressure and winds humidity and concept of precipitation and its types.
- To compare the Airmasses and Fronts, atmospheric destructions and its relation of local to global.
- Understand the climatic classification based of nature and variability in climatic variations by Koppen.s and Thornwaites climatologist.

(b) Intellectual Cognitive/Analytical skill:

Students are able to:

- Critically analyse the interactions between the atmosphere and the surface (topography, vegetation, built structures), and apply this understanding in an environmental decision-making context.
- Analyse and interpret the relationships between large-scale ocean-atmosphere processes and regional-local climates, using simple statistical techniques.
- Synthesise their understanding of climate processes at a range of scales to explain and critique the applications of climate modelling in research and policy contexts.

(c) Practical skills:

Students will be able to:

- Explain the physical laws governing the structure and evolution of atmospheric phenomena spanning a broad range of spatial and temporal scales.
- Apply mathematical tools to study atmospheric processes.
- Explain the principles behind, and use of, meteorological instrumentation.
- Describe, analyze and create graphical depictions of meteorological information.

(d) Transferable skills:

Students are able to:

- Create an original piece of research on a self-selected topic, and communicate their results in oral and written formats
- Apply an understanding of synoptic processes and the ability to interpret a range of graphical and visual data to the explanation of weather events and forecasting.
- Demonstrate critical and analytical skills to interpret and predict weather systems using weather products (model results, maps, satellite imagery, etc.).
- Present and communicate weather analyses and forecasts in a team or individually.

Course Name: Geography of India

Class M.A. Geography Semester IIInd

Objectives of the course: To provide an understanding of : The geographic dimensions of India in terms of its political and administrative characteristics. The physical and climatic attributes and their interface with developmental strategies. The human and economic dimensions of India in a spatial perspective.

Course Outcomes

(a) Knowledge and Understanding:

- Students will get an introduction to the main regions of the India in terms of both their uniqueness and similarities.
- Students will be exposed to historical, economic, cultural, social and physical characteristics of India.
- Students will learn the relationships between the global, the regional and the local, particularly how places are inserted in regional and global processes.
- In addition to the ability of understanding and reading maps, students will develop cartography skills and will be able to create maps on their own.
- Students will be introduced to demographic, social and cultural attributes such as migration, social relations and cultural identity

(b) Intellectual Cognitive/Analytical skill:

Students are to:

- Identifying and explaining the Indian Geographical Environment, from global to local scales.
- Showing an awareness and responsibility for the environment and India.

(c) Practical skills:

Students are able to:

- Identify natural regions of India based on physical environment and understand the regional variation due to differences in physical environment.
- Understand population of India in terms of their quality and spatial distribution pattern and the prospect and problems of population growth.
- Explain how economic activities in India are determined by both the physical as well as human environment.

(d) Transferable skills:

Students are able to:

- Applying geographical knowledge to everyday living.
- Applying knowledge of global issues to a unique scientific problem.
- Evaluating the impacts of human activities on natural environments special reference to India.

Course Name: Fundamentals of Remote sensing

Class M.A. Geography Semester IIInd

Objectives of the course: To expose the students with one of the most modern methods of data collection, using aerial photographs and satellite-based imageries. To develop the skill of interpretation and map making using remote sensing. To introduce the students about the application of this new technology in management and planning of resources.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Describe the geographic space with concepts and terms commonly used to build operating models in Remote Sensing.
- Describe Remote Sensing concepts, physical fundamentals and components and adequately use vocabulary, terminology and nomenclature of the discipline.

- Know about main Remote Sensing Systems and programs (sensors, platforms, etc.) and assess its potential to spatial analysis.
- Describe factors responsible for the main land cover behaviour. Use GIS software to perform different spatial analysis and satellite image digital analysis.

(b) Intellectual Cognitive/Analytical skill:

Students are able to:

- Appreciate the importance of microwave signal and learn important microwave devices.
- Describe the working principle of different RADAR systems and their applications.
- Understand the Satellite fundamentals and types of satellite.
- Explain the working of a Satellite communication system and its other subsystems.
- Know the applications of Satellites in different areas.
- Explain the working principle of Mobile communication and GSM Services.

(c) Practical skills:

- Analyse the principles and components of photogrammetry and remote sensing.
- Describe the process of data acquisition of satellite images and their characteristics.
- Compute an image visually and digitally with digital image processing techniques.

(d) Transferable skills:

Students are able to:

- Prepare documents of medium complexity, consisting of text, maps, graphs and tables to clearly present the design specifications of a data model for GIS application.
- Know and use main methods to improve, correct and interpret properly Remote Sensing Images.
- Use diverse techniques and instruments adequately to measure, locate and find bearings on a map and in a field. Photo-interpret basic environmental and socioeconomic variables using photographs taken in Spain.

- Know and use GIS and its geo-processes and functions. Know and apply some basic techniques to thematic mapping design.

Course Name: Urban Geography

Class M.A. Geography Semester IIInd

Objectives of the course: To familiarise the students with the theoretical foundations and recent trends in this branch of Geography. To provide an understanding of evolutionary, morphological and, functional attributes of urban places at different scales. To sensitize the students about contemporary urban problems.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Articulate the rationale for several approaches to urban geography and how it is possible to gain urban insights from each.
- Define the concepts of space, place, scale, urbanization, urbanism and planning and understand how they help us study cities from a geographical perspective.
- Describe current urbanization trends and projects for countries around the world, with a particular knowledge of the post WWII and contemporary Canadian urban context. Compare various approaches to land use, housing, and transportation issues.
- Demonstrate the integral role that space plays in shaping how urban residents express their social and cultural values.
- Analyze how cities are governed and how they could be more sustainable in the future.

(b) Intellectual Cognitive/Analytical skill:

Students are able to:

- communicate in connection with research questions with other experts and the general public, including both written and oral presentations
- show a critical approach to relevant knowledge within human geography, including their own academic knowledge and attitudes

- independently assess methodological, ethical and practical challenges in research work
- initiate and provide constructive input to professional development work

(c) Practical skills:

The candidate will develop independent working methods and skills, and will be able to:

- conduct a self-defined piece of research in line with academic, methodological and ethical guidelines.
- analyze data and theory, and draw conclusions on correlations between these within the human geographic academic and research field
- apply a scientific mindset when dealing with research questions

(d) Transferable skills:

Students are able to:

- Skills in research and data collection, analysis and evaluation.
- Planning and problem-solving skills
- Creative thinking and the ability to recognise the moral and ethical issues involved in debates.
- independently substantiate academic choices in research
- apply scientific methods to the analysis of practical problems and help solve problems

Course Name: town and Country Planning

Class M.A. Geography Semester IIIrd

Objectives of the course: The major objective of this paper is to highlight the role of geographic concepts and methods in settlement planning at the micro level. Divided into four units, it deals with conceptual and methodological issues, planning strategies, and case studies.

Course Outcomes

(a) Knowledge and Understanding:

Students will demonstrate the ability to

- Acknowledge scope and breadth of planning theories as it has emerged historically and in its contemporary manifestation.
- An overview and understanding of the history of Planning.
- Learn modern and contemporary theories of Planning.

- Practical understanding of the basic ecological processes in relation to planning.
- Understand Land Use Planning and the relationship of Environment with planning.
- Learn about environmental aspect of planning.

(b) Intellectual Cognitive/Analytical skill:

- Students will understand legal principles governing the protection of the environment in India.
- Students will aware about various Central Acts and State Acts having bearing on planning.
- Students will learn legal procedure of plan preparation and legal aspects pertaining to the same.

(c) Practical skills:

Students will demonstrate the ability to:

- Develop planning insight and make acquaintance with various planning related exercises.
- Learn to conduct empirical research through case studies.
- Learn to work as team / group member / leader.

(d) Transferable skills:

- Students will develop a strong background in research methodology and other methods useful in planning practice.
- Students will learn to envisage future trends based on modeling and simulation techniques.
- Students will learn to demonstrate simulate differential policy approach under varying conditions.

Course Name: Research Methodology in Geography

Class M.A. Geography Semester IIIrd

Objectives of the course: This paper is to familiarise the students with basics of research and its significance. It aims to make them understand the ways data are collected, classified, tabulated and analysed. It also trains them to differentiate between casual and research based statement that helps them in their life.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Examining the introduction of research, motivation in research, types of research, significance of research, research process and criteria of good research.
- To understand the research problems, selecting research problems, literature review and to study the hypothesis, its types, sources, formation of hypothesis and utility of hypothesis in scientific research.
- To understand the research design, need, features, basic principal and developing of research plan, and sampling design and its basic types, steps, characteristics of sampling design.
- Study about type's data and methods of data collection and study the processing and analysis of data using different statistical methods.
- Understand the interpretation and report writing, techniques, precaution of interpretation, layout of research report, types of reports and oral presentation mechanics of writing a research report.

(b) Intellectual Cognitive/Analytical skill:

Students should be able to:

- Demonstrate the ability to choose methods appropriate to research aims and objectives.
- Understand the limitations of particular research methods.
- Develop skills in qualitative and quantitative data analysis and presentation.
- Develop advanced critical thinking skills.
- Demonstrate enhanced writing skills

(c) Practical skills:

Students will able to:

- Assess critically the following methods: literature study, case study, structured surveys, interviews, focus groups, participatory approaches, narrative analysis, cost-benefit analysis, scenario methodology and technology foresight.
- Critically assess research methods pertinent to technology innovation research.

(d) Transferable skills:

Students should be able to:

- Demonstrate the ability to choose methods appropriate to research aims and objectives.
- Understand the limitations of particular research methods.

- Develop skills in qualitative and quantitative data analysis and presentation.
- Develop advanced critical thinking skills.
- Demonstrate enhanced writing skills

Course Name: Fundamentals of G.I.S and G.P.S

Class M.A. Geography Semester IIIrd

Objectives of the course: The main objective of this course is to expose the students to fundamental principles of Geographical Information Systems and Global Positioning System including basic concepts and definitions, methods and techniques.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Understand the introductory part of GIS software, its tool, functions, data import, scale factors, and basics of digitization.
- Use this software for prepare the various types of maps in geography with the help of cartographic Techniques of GIS software.
- Applied this software and cartographic techniques for analysis and study in rural settlement geography and urban settlement for planning and development.
- Understand the cartographic techniques and its tolls, functions, applied in agriculture geography and physical geography for assessment and visualization purpose.

(b) Intellectual Cognitive/Analytical skill:

Students are able to:

- Understand the fundamental theory of Geographic Information Science behind Geographic Information Systems (GIS), and in so doing build an awareness of what GIS can and cannot be used for.
- Become proficient in the use of GIS tools to conduct spatial analyses and build maps that are fit-for-purpose and effectively convey the information they are intended to.
- Build confidence in teaching your-self how to undertake new analyses (unfamiliar to you) using GIS, troubleshooting problems in GIS, and seeking help from the GIS community to solve your problems

- Use GIS analyses to address applied problems and/or research questions
- Become effective in building maps that can be shared with non-GIS users.

(c) Practical skills:

Students will acquire the basics of GIS and will use GIS to:

- Explore mapped data.
- Relate GIS with remote sensing technologies.
- Analyze spatial data, using GIS analysis tools.
- Develop and manage geo databases.
- Create maps, images and apps to communicate spatial data in a meaningful way to others.

(d) Transferable skills:

Students are able to:

- Apply GIS analysis to address geospatial problems and/or research questions.
- Demonstrate proficiency in the use of GIS tools to create maps that are fit-for-purpose and effectively convey the information they are intended to.
- Effectively communicate and present project results in oral, written, and graphic forms.
- Demonstrate confidence in undertaking new (unfamiliar) analysis using GIS, troubleshoot problems in GIS, and seek help from software/website help menus and the GIS community to solve problems.

Course Name: Geography and Ecosystem

Class M.A. Geography Semester IIIrd

Objectives of the course: To appraise the students with the interrelationship between man and the environment in which he lives and also his linkages with other organisms. The students are to be made aware of the importance of conserving biodiversity to maintain ecological balance. Examples of some man induced ecological changes have been highlighted and restoration measures suggested.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Understand the fundamental concept related to environment, meaning, structure, types, component, geography and environment, man's interaction with environment.
- To study about the nature, scope, basic concept, interdisciplinary science, and study methods.
- Understand the types, functions and component of ecosystem and biodiversity, its types, conservation methods, and preservation of ecosystem.
- To understand the environmental global problems such as deforestation, desertification, depletion of ozone, global warming, La-nina and El neon.
- Understand the role of environmental legislation laws and acts for environment protection and conservation.
- Study the environmental planning and management for future and also understand the climatic changes and its effect on environment and human being.

(b) Intellectual Cognitive/Analytical skill:

Students will be able to:

- Understand core concepts and methods from ecological and physical sciences and their application in environmental problem-solving.
- Appreciate key concepts from economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions.
- Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.

(c) Practical skills:

- Students will be able to locate on a map major physical features, cultural regions, and individual states and urban centres.
- Appreciate that one can apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes.
- Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world.

(d) Transferable skills:

- Students will understand global and regional patterns of cultural, political and economic institutions, and their effects on the preservation, use and exploitation of natural resources and landscapes.
- Students will understand the key concepts in physical geography of environmental systems, process linkages, variable scale, and "cause and effect" and how they relate to the influence of climate, geology, and human activities in shaping the earth surface.
- Students will be able to use accepted field, laboratory, geospatial, and statistical techniques to quantify the quantity, characteristics, and history of physical phenomena for geographic research and natural resources management.
- Students will be able to use the scientific method including critical thinking, sampling, hypothesis formulation and testing, and controlled experimentation to assess environmental problems, and be able to effectively communicate research objectives, methodology, results, interpretations, and conclusions in oral and written formats.
- Students will be able to synthesize geographic knowledge and apply innovative research strategies to solve problems in resource conservation, environmental change, and sustainable development within the community, region, and world.

Course Name: Regional Planning

Class M.A. Geography Semester IVth

Objectives of the course: To understand and evaluate the concept of region in geography and its role and relevance in regional planning. To identify the issues relating to the development of the region through the process of spatial organization of various attributes and their interrelationship and to identify the causes of regional disparities in development, perspectives and policy imperatives.

Course Outcomes

(a) Knowledge and Understanding:

- Students will acquire a solid base of knowledge in the principles and practices of learning, including urban spatial structure, local public finance, economics of development, infrastructure provision, and globalization.
- Students will develop the skills necessary for the effective practice of planning, including its purpose, meaning and history; methods that envision

future change; elements of plans; adoption, administration, and implementation of plans; speaking for the disadvantaged; laws and policies of environmental planning.

(b) Intellectual Cognitive/Analytical skill:

- Student will be able to discover, reflect on and evaluate what is the central knowledge base for specific planning processes
- Student will be able to evaluate and develop alternative methods and procedures used to organize specific planning processes related to knowledge development, planning methods, participation and mobilization processes.
- Students will learn the values and ethical standards affecting the practice of planning, including the values of justice, equity, fairness, efficiency, order, and beauty; the values of fair representation and equal opportunity; and respecting complex legacies.

(c) Practical skills:

- Develop coherent solutions to urban and other land management issues, that respect the diverse (and sometimes conflicting) needs of planners, engineers, architects, land developers, elected officials, and citizens including using the methods of plan creation, plan adoption, and plan implementation to bring about the greatest public good while mitigating foreseeable negative impacts.

(d) Transferable skills:

- Student will be able to carry out an independent project that highlights and analyzes the specific planning processes.
- Students will develop the values necessary for the effective practice of planning, including problem-solving skills; research skills; written, graphical, and oral skills; computational skills; collaboration with peers; meeting professional standards; forecasting and scenarios; implementation of plans; working with diverse communities.

Course Name: Quantitative Methods in Geography

Class M.A. Geography Semester IVth

Objectives of the course: To provide knowledge of statistical techniques and their application in geography and train the students to apply these techniques and methods to the analysis of the geographic problems.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Understand the introduction of geo-sciences system and statistical techniques and characteristics of data.
- To examining to probability assessment and their calculation procedures and applications and uses in different field of geography.
- Understand the concept of sampling and designing and conducting a sample survey for data collation and data analysis.
- Evaluate, calculate and understand the parametric statistics in geo-science system small sized sample and Non Parametric Statistics in geo-science system of various test and techniques.
- To understand the regression analysis in geo sciences system and calculation, application in various field of geography.

(b) Intellectual Cognitive/Analytical skill:

Student will be able to:

- Synthesize how physical, chemical, and biological principles affect how humans interact with our environment;
- Integrate the spatial scales of human-environment connections at local, regional and global scales and
- Appreciate that geography as an academic and professional discipline gathers techniques from diverse disciplines to offer important knowledge and analytical techniques that have application in solving important human problems.

(c) Practical skills:

Student will able to;

- Demonstrate an understanding of basic descriptive statistics and regression methods as they apply to problem solving in Geography.
- Perform basic data manipulation, statistical calculations and graphical presentation by hand, and using computer spreadsheets or statistical software (e.g. Excel, SPSS).

- Evaluate the roles of probability theory and sampling distributions in drawing inferences about populations based on samples.

(d) Transferable skills:

Students are able to:

- Explain the role of quantitative information in geographic research and applications.
- Identify when and where statistical procedures are appropriate.
- Understand how geographic concepts and techniques can inform local to global policies and actions related to natural hazards, land use, human rights, and environmental change; and
- Think relationally about intertwined concepts such as community and economy, society and environment, and citizenship and globalization.

Course Name: Fundamentals of Agricultural Geography

Class M.A. Geography Semester IVth

Objectives of the course: To familiarize the students with the basics in agricultural geography, starting from its nature, contents, progress, approaches, determinants etc., to the important concepts like cropping intensity, crop-concentration, crop pattern, crop combinations, diversification, commercialization, agricultural development etc. and provide them with the understanding of agricultural regionalization, landuse and land capability classifications as well as classification of agricultural types.

Course Outcomes

(a) Knowledge and Understanding:

Students are able to:

- Examining the introduction to agriculture, nature, scope, significance and development of agriculture geography, approaches to study.
- To understand the agricultural system its meaning and concept, whittlesey's classification of agricultural system, types of agricultural, study of the following types of agricultural in respect of area, salient features and their problems.

- Understand the agricultural regionalization and modes in agricultural geography and their classification of agricultural models and some theories.

(b) Intellectual Cognitive/Analytical skill:

Student will be able to:

- Describe the nature of economics as a science that deals with solving the problems of scarcity.
- Assess the factors affecting the production and costs.
- Analyze business of enterprises in different market structures.
- Analyze business cycle using aggregate demands and aggregate supplies.

(c) Practical skills:

Students are able to:

- Evaluate and argument how to use knowledge about economics categories applied in daily work of agricultural subjects.
- Recognize how economics laws affect the market of agricultural and food products market.
- Explain how market factors of production are functioning.
- Using analysis of supply and demand to analyze economic developments in the market.

(d) Transferable skills:

- Understand the agricultural statistics & land use survey techniques and agrarian revolution, meaning & merit and demerit of green revolution and white revolution.
- Understand the fundamental concept, land use, crops, agricultural production and envelopment and study the determinants of agricultural activities, physical determinants, and socio-economic determinants.

Course Name: Field based Project Report

Class M.A. Geography Semester IVth

Objectives of the course: The project report will involve statement of objectives and scope of field investigation; methods of field work for studies of different scales (macro, meso, and micro); preparation of a questionnaire; sampling techniques, collection, processing, representation, analysis and interpretation of

data/information. The candidates are required to write a project report on small assigned problem involving field investigations.

Course Outcomes

(a) Knowledge and Understanding:

- Field surveys enhance our understanding about patterns and spatial distributions, their associations and relationships at the local level.
- Field surveys facilitate the collection of local level information that is not available through secondary sources.
- Field studies enable the investigator to comprehend the situation and processes in totality and at the place of their occurrence.
- Field survey helps to understand the theoretical concepts better.

(b) Intellectual Cognitive/Analytical skill:

- Students experience the geography of a particular region which theoretical texts can't do.
- Develops an understanding and sensitivity about the culture and people of field area. This may change your biased views about that community.

(c) Practical skills:

- To gather required information so as the problems under investigation is studied in depth as per the predefined objectives.
- All the geographical skills are used in practical during field work. You get to learn and apply the skills of sampling, data collection, data processing, making questionnaires, map making, statistical techniques to derive results, observational skills and skills of interviewing etc.

(d) Transferable skills:

- Gives chance to enjoy a wide variety of environments and landscapes.
- Student will able to carry out an independent project that highlights and analyzes the specific planning processes.
- Students will develop the values necessary for the effective practice of planning, including problem-solving skills; research skills; written, graphical, and oral skills; computational skills; collaboration with peers; meeting

professional standards; forecasting and scenarios; implementation of plans; working with diverse communities.