Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of Teaching and Examination

M. Plan (Urban Planning)

Ist Semester

S. N.	Board of Study	Subject Code	Subject Name	Periods Per Week			Scheme of Examination Theory/Practical			Total Marks	Credit L+(T+P)/2
				L	T	P	ESE	CT	TA		
1	Architecture	503111(16)	Introduction to Planning History and Theory	3	1	-	80	20	20	120	4
2	Architecture	503112(16)	Urban Economics and Sociology	3	1	-	80	20	20	120	4
3	Architecture	503113(16)	Planning Techniques	3	1	-	80	20	20	120	4
4	Architecture	503114(16)	Demography &Quantitative Methods	3	1	-	80	20	20	120	4
5	Architecture	503115(16)	Geo Informatics in Planning	2	1	-	80	20	20	120	3
6	**Refer Table - I Elective - I**			3	1	-	80	20	20	120	4
7	Architecture	503121(16)	Planning Studio-1	-	-	11	125	-	75	200	6
8	Architecture	503122(16)	Geo Informaticsin Planning Lab	-	-	2	50	-	30	80	1
Total				**17**	**06**	**13**	**655**	**120**	**225**	**1000**	**30**

L-Lecture, **T**- Tutorial, **P**- Practical, **ESE**- End Semester Examination, **CT**- Class Test, **TA**- Teacher'sAssessment

Table - I (Elective - I)			
S. N.	**Board of Study**	**Sub Code**	**Subject Name**
1	Architecture	503131(16)	Ecology and Resource Development
2	Architecture	503132(16)	Environmental Planning
3	Architecture	503133(16)	Landscape Planning
4	Architecture	503134(16)	Rural Planning and Development
5	Architecture	503135(16)	Urban Design
6	Architecture	503136(16)	Housing
7	Architecture	503137(16)	Sustainable planning

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of Teaching and Examination

M. Plan (Urban Planning)

Ist Semester

S. N.	Board of Study	Subject Code	Subject Name	Periods Per Week			Scheme of Examination Theory/Practical			Total Marks	Credit L+(T+P)/2
				L	T	P	ESE	CT	TA		
1	Architecture	503111(16)	Introduction to Planning History and Theory	3	1	-	80	20	20	120	4
2	Architecture	503112(16)	Urban Economics and Sociology	3	1	-	80	20	20	120	4
3	Architecture	503113(16)	Planning Techniques	3	1	-	80	20	20	120	4
4	Architecture	503114(16)	Demography &Quantitative Methods	3	1	-	80	20	20	120	4
5	Architecture	503115(16)	Geo Informatics in Planning	2	1	-	80	20	20	120	3
6	**Refer Table - I Elective - I**			3	1	-	80	20	20	120	4
7	Architecture	503121(16)	Planning Studio-1	-	-	11	125	-	75	200	6
8	Architecture	503122(16)	Geo Informaticsin Planning Lab	-	-	2	50	-	30	80	1
Total				**17**	**06**	**13**	**655**	**120**	**225**	**1000**	**30**

L-Lecture, **T**- Tutorial, **P**- Practical, **ESE**- End Semester Examination, **CT**- Class Test, **TA**- Teacher'sAssessment

Table - I (Elective - I)			
S. N.	**Board of Study**	**Sub Code**	**Subject Name**
1	Architecture	503131(16)	Ecology and Resource Development
2	Architecture	503132(16)	Environmental Planning
3	Architecture	503133(16)	Landscape Planning
4	Architecture	503134(16)	Rural Planning and Development
5	Architecture	503135(16)	Urban Design
6	Architecture	503136(16)	Housing
7	Architecture	503137(16)	Sustainable planning

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M. Plan - 1
Subject: Introduction to Planning History and Theory
Total Theory Period: 40
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503111 (16)
Total Tutorial Period: 12

Course Objective:

The objective of this course is to initiate the student to the historic growth and development of settlements across civilizations and the evolution of civic planning as a discipline through theories and concepts of modern planning thought. The course shall be delivered through theoretical inputs and seminar presentations by students on selected topics.

Course Contents:

The course would include the following broad areas of planning knowledge

Unit – I

The City in History: Settlements in Different Civilizations. Overview of City Planning in Mesopotamian, Egyptian, Greek and Roman Civilizations. Renaissance and Its Impact on City Form and Structure. Town Planning Thought and Principles in Ancient and Medieval India. Industrial Revolution: Post Industrial Revolution Settlement Planning: Impact of Industrial Revolution on City Form, Population Density and Infrastructure Breakdown. Birth of Civic City Planning

Unit – II

Classical Concepts of City Form- Concepts of Garden City, City Beautiful, Linear City and others. Contribution to Modern City Planning by Lewis Mumford, Patrick Geddes, Peter Hall, Jane Jacobs, Chadwick and others. Theories of Urban Structure and Land Use- Concentric Zone Theory, Sector Theory, Multiple Nuclei Theory, Land Use and Land Value Theory etc.Theories of Settlement Systems in Regional Context -Spatial Models of Location, Size and Spacing of Settlements; Rank Size Rule; Central Place Theory; Loschian Theory; Cumulative Causation Theory; Core Periphery Model; Growth Poles and Centres; Gravity Model; Classification of Settlements

Unit – III

Relevance of the Subject: Settlement Formation and Growth as a Response to Social, Economic, Religious, Political and Cultural Needs. Need for Civic Planning. City-Region Relationship: Structure of City Regions, Area of Influence, Dominance; Rural-Urban Fringes; Metropolitan Region; Socio-Economic Impacts of Growth of Urban Areas; Push and Pull Factors; Rural-Urban Migration; Location of New Regional Economic Activities; Impact of Technology on Urban Forms; Transportation and Urban Form; Other Emerging Issues in Planning

Unit – IV

Models of Planning: Pluralism in Planning; Systems. Approach to Planning: Rationalistic and Incremental Approaches, Mixed Scanning, Advocacy Planning and Action Planning, Equity Planning

Unit – V

Types of Plans: Master Plan, Development Plan, Structure Plan, Strategic Plan, Sectoral Plan, Zonal Plan, Local Area Plan, Action Area Plan Etc.

Reference Readings:

- Planning Theory, Healey P., Pergamon Press
- Planning Theory, Allmendinger Philip, Palgrave MacMillan
- Cities of the World: World Regional Urban development, Brunn S.D.et all.
- City Assembled: The Elements of Urban form through History, Kostof Spiro, Thames and Hudson
- Contemporary Urban Planning, Levy John M, Longman
- Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century, Hall Peter
- Urban and Regional Planning Since Independence : Retrospect and Prospect : Technical papers, National Town and Country Planners Congress, Mysore, Ministry of Urban Affairs and Employment
- Urban Planning: Theory and Practice, Rao M.P., CBS Publishers

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan - 1
Branch: Architecture
Subject: **Urban Economics and Sociology**
Code: 503112 (16)
Total Theory Period: 40
Total Tutorial Period: 12
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Course Objective:

The course consists of two parts of Economics and Urban sociology, as essential inputs to the Planning profession.

Urban Economics:

The objective of the course in Economics is to apprise students of the theoretical underpinnings in economics so as to enable them comprehend urban problems from the point of view of economic reasoning. The course is of an introductory level enabling students to acquire a fair amount of economic reasoning to analyse urban issues and would focus primarily on applications in the planning profession.

Sociology:

The primary objective of the course in Urban Sociology is to train the students in the sociological study of life and human interaction. The course is so designed as to enable the students follow the sociological interpretations of the structures, processes, changes and problems of an urban area and by doing so providing inputs for planning and policy making.
Thus the overarching objective of the course shall be to educate students about the nature and changing character of the city and the urban experience - including the larger social, political, and economic dynamics of urban change - so as to provide a more nuanced appreciation of the contemporary, comparative, and historical context in which urban planning skills and sensibilities have been developed and could be applied.

Course Contents:

Urban Economics:

The following contents included in the course would be delivered with focus on linking the theoretical aspects with applications in planning, and the problems and assignments would focus specifically on these.

Unit – I

Twin Themes of Economics – Scarcity and Efficiency; Market, Functions and Equilibrium; Micro v/s Macro Economics, Positive v/s Normative Economics. Laws of Demand and Supply; Market Demand and Supply; Equilibrium in the Market. Elasticity of Demand and Supply; Price, Income and Cross Elasticity. Average, Marginal and Total Costs and Revenue; Derivation of Revenue and Cost Curves; Producers Surplus and Consumer Surplus Market and Types of Market, Product Pricing (Average Cost and Marginal Costs Principle); Factor Pricing (Marginal Productivity Theory)

Unit – II

Resource Categories; Land and Returns to Land, Taxing Land and Rents; Environmental Externalities; Market Inefficiency with Externalities; Corrective Policies; Climate Change Measurement of Economic Activities, Basic Economic Growth Models (concept only), Human Development Index (Tools of economics, namely, input – output technique, game theory and linear programming shall be introduced to the students conceptually)

Sociology

Unit – III

Industrial Revolution and the Birth of Urban Sociology; Economic, Social and Cultural Processes of Urbanization and its Effects on Social Alienation, Class Formation and the Production or Destruction of Collective and Individual Identities; Theories of Karl Marx, Émile Durkheim, Max Weber and Georg Simmel. Human ecology, Urbanism and Urban Sociology; The Chicago School; Elitism and Power of Place; Indological (Ghurye); Structural-Functional (M. N. Sriniwas); Dialectical (D. P. Mukherji, A. R. Desai); Subaltern (R. Guha); Non Brahmin (Phule, Dr. Babasaheb Ambedkar); Feminist (Neera Desai, Leela Dube)

Unit – IV

Urban Enclaves and Ghettos; Fear and Disorder; Gentrification; Integration and Segregation; Race and Ethnicity; Sociology of Gender; Urban Crime; Poverty and Homelessness; Immigration and Migration; Sociological Impact of Globalisation**.** Inclusive Cities- Overview - Definition, Concepts, Elements of Inclusivity; Exclusion and Related Issues, Disparities, Social Fragmentation, Existing Divisiveness; Need for Inclusion of the Disadvantaged, Marginalized and other Week and Vulnerable Social Groups.

Unit – V

Disparities and Equal Opportunities: *Disparities* – Gender, Race, Religion, Social Disparities; *Gender* – Gender Discrimination; Feminist Planning Theory; *Caste and Religion* – Characteristics, Disadvantaged Castes and Ethnic Minorities; *Special Needs* – Lack of Supportive Assistance, Issues; Assessing Specific and Special Needs; Planning and Designing for the Differently Abled, Elderly, Children, and Pregnant Women; Planning Rights and Responsibilities; Provision of Equal Opportunities; Social Sustenance; Exploring Emerging Relevant Concepts and Monitoring Systems.

Reference Readings:

Urban Economics:

- Economics, Paul A. Samuelson et all, Tata Mc Graw Hill Publication
- Micro Economics, Dominick Salvatore, Schaum's Outline Series, Mc Graw Hill
- Micro Economics, N.C. Ray, Macmillan
- Micro Economics, Anindya Sen, Oxford University Press
- Economics, Alec Chrystal et all, Oxford University Press
- Economics – An Analytical Introduction, Amos Witztum, Oxford University press
- General Economics, Deepashree, Tata Mc Graw Hill Publication
- Economics – A Primer for India, G. Omkarnath, Orient Blackswan

Sociology:

- Sociology, Anthony Giddens, Wiley
- Sociology, John J. Macionis, Pearson
- Urban Sociology : Images and Structure, Flanagan, William G., Prentice Hall
- Urban Problems in Sociological Perspective, Shannon, Thomas R., Waveland Press Inc
- The Metropolis and Mental Life, Simmel, Georg, New York: Free Press
- Key Concepts in Urban Studies, M. Gottdiener, Sage London
- Sociological Thought, Abrahm M. F. and Morgan J. H., MacMillan India,Madras
- The Oxford Companion to Sociology and Social Anthropology, Das Veena, Vol. I and II, OUP, New Delhi
- Social Change in Modern India, Srinivas M. N., Oxford University Press, Delhi.
- A Subaltern Studies Reader, Guha R., Oxford University Press, New Delhi
- The Sage Handbook of Sociology, Bryn Turner et all, Sage
- Capability and Well-Being, Sen, Amartya and M. Nussbaum. Oxford Clarendon Press
- Inclusive Growth In India, R.U. Singh A.K. Thakur, Deep and Deep Publications
- Sen's Capability Approach and Gender Inequality: Selecting Relevant Capabilities.
- Feminist Economics Robeyns, Ingrid
- Planning a Barrier Free Environment, Office of the Chief Commissioner for Persons with Disabilities, India

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I
Subject: Planning Techniques
Total Theory Period: 40
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503113 (16)
Total Tutorial Period: 12

Course Objective:

The objective of the course Planning Techniques is to introduce techniques used for planning at various stages from preliminary to advanced. As this is a subject from integrated course the techniques broadly used by all courses of specialization have been considered while designing this course. At the end of the course student should be able to use the techniques in respective studio works. Appropriate Software applications in CAD and GIS would also be taught as part of this course.

Course Contents:

Unit – I

Basic Terminology; Classification of Cities; City Region; Spheres of Influence, Urban Rural Fringe; Internal Structure of Urban Areas; Density Patterns; Land Use Classification and Coding. Base map Preparation: Representation of Spatial Data; Choice of Appropriate Scales: Graphical, Linear and Areal Scales; Contents of Base Maps at Various Scales; Notations - Basic Disciplines of Maps

Unit – II

Techniques of Conducting Surveys for Land Use, Building Use, Density, Structural Condition of Buildings, Heights of Building, Land Utilization and Physical Features of Land; Techniques for Conducting Regional Surveys; Regional Delineation Techniques: Factor Analysis, Cluster Analysis; Row Analysis; Case Studies in Regional Delineation
Formulation of Spatial Standards for Residential, Industrial, Commercial and Recreational Areas; Space Standards for Facility Areas, Utilities and Networks; Population, Distance Criteria; Performance Standards; Case Studies: Residential and Non-Residential Density Patterns and Analysis

Unit – III

Computer Applications for Data Collection and Analysis: Tools of Analyzing Different Types of Data; Use of Excel Software for Analyzing Data; Applications of Features of Excel- Basic and Selected Advanced Features;CAD Applications for Base Map preparation: Recapitulation of CAD tools- drawing, editing, modifying, layer management etc.; Scaling Drawings and Images; Plotting and Printing

Unit – IV

Socio-Economic Surveys: Data Requirements for Urban and Regional Planning; Sources of Primary and Secondary Data; Questionnaire Design, Measurement Scale and their Application; Sampling Techniques; Types of Socio-Economic Surveys. Setting of Goals and Objectives; Methodologies for Preparation of Urban Regional Development Plans, Master Plans, Structure Plan and Strategy Plan Techniques; Plan Implementation Techniques; Public Participation and Plan Implementation; Techniques of Urban Renewal and Central Area Re-Development; Contents of a Master Plan, Regional Plan, Etc.

Unit – V

Introduction to Geo informatics

Raster Data Capture: Types of Platforms: Space Bourne - Resource Satellite, Swath, Sensing Capabilities; Air Bourne – Aerial Photography; Ground Bourne – Digital Survey; Multi-Return Concept - Spectral Signature. Raster Data Processing and Analysis: Image Interpretation – Qualitative and Quantitative Elements; Resolutions – Spatial, Temporal, Spectral, Radiometric; Geo-Rectification – Coordinate System, Datums, Geo-Referencing and Map Projections; Geometric Distortions, Image Enhancement, Transformation, Segmentation; Data Creation: Thematic Model, Vector Data Features, Map Preparation – Digitization; Non-Spatial Data – Database Creation; Integration of Spatial and Non-Spatial Data; Data Query. Data Analysis: Buffers, Overlay, Proximity, Network Analysis; 3D Terrain Modelling–Triangulated Irregular Network.Data Presentation: Layout Preparation – Grids, Legend, Symbology; Printing – Sheet Size, Scale.

Reference Readings:

- Urbanisation and Urban Systems in India, Ramchandran R. Oxford University Press
- Cities Urbanisation and Urban Systems, Sidddhartha K. and Mukherjee S., Kisalaya Publications
- Regional Planning, Glasson J., Open University Press
- Economic and Social Geography Made Simple, Knowles R. and Wareing J., Rupa and Company
- Concepts and Techniques of Geographic Information Systems, Lo C.P. and Yeung A.K.W., PHI Learning Private Limited
- Planning Techniques for AITP, Reader on Institute of Town Planners India
- UDPFI Guidelines Volume 1, Ministry of Urban Affairs and Employment Govt. of India, New Delhi
- Remote Sensing and Image Interpretation, Thomas M. Lillesand et all, John Wiley and Sons Ltd.
- Remote Sensing and GIS, Basdudeb Bhatta, Oxford University Press
- Spatial Analysis, Mark R. T. Dale, Marie-Josée Fortin, Cambridge University Press

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan - 1
Subject: Demography & Quantitative Methods
Total Theory Period: 40
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503114 (16)
Total Tutorial Period: 12

Course Objective:

The course consists of two parts of Demography and Statistics, dealing with each independently and as well as connecting the applications of statistics to demography.

Demography

The objective of the course on Demography is to provide the students with an understanding of basic concepts on demography. This course would make the students aware of the importance of population geography in economic development, the various theories that explain the growth of population in a country and demographic techniques applied. The course aims to help students identify appropriate sources of data, perform basic demographic analyses using various techniques and ensure their comparability across populations. The student will also be able to produce population projections and interpret the information gathered by the different demographic methods.

Quantitative Methods

The emphasis of the course on Statistics shall be on conceptual underpinnings of statistics with a focus on defining different statistical tools indispensable for urban planning. In view of the course according more emphasis on inferential statistics than descriptive statistics, the objective of the course will be to introduce the most useful and commonly employed statistical tools and discuss the conditions under which use of those tools is appropriate. The course has been so designed as to train the students interpret the results of an analysis to provide insight into the answer to the problem at hand. Use of appropriate statistical analysis software's is also included in the course.

Course Contents:

Demography

Unit – I

Distribution and Density of Population - Measures of Population Distribution and Concentration; Factors Affecting Population Distribution and Density; World Population Distribution; Density Distribution in India. Population Change - Fertility and Its Measures; Mortality and Its Measures; Mobility; Factors Affecting Population Change; Determinants of Fertility and Mortality; Demographic Transition Theory; Some Population Theories (Overview only)

Unit – II

Migration - Types of Migration; Determinants of Migration; Migration Models. Population Composition - Age and Sex Composition and Its Determinants; Age Pyramids; Working Force and Its Determinants; Composition of Work Force and Occupational Composition. Population Projections – Assumptions, Methods, Techniques.

Quantitative Methods

Unit – III

Measures of Central Tendency and Dispersion - Arithmetic Mean; Weighted Mean; Geometric and Harmonic Mean; Median and Mode; Variance and Standard Deviation

Time Series and Forecasting - Trend Analysis - Cyclical Variation, Seasonal Variation, Irregular Variation; Various Methods in Time Series Analysis – Moving Average, Ratio to Trend, Link Relative and Residual

Unit – IV

Factor Analysis - Principal Component Analysis
Probability Distribution and Sampling Distribution - Use of Expected Value in Decision Making; Binomial, Poisson and Normal Distribution (only application); Determination of Sample Size and Types of Sampling; Sampling Distribution (concept only); Design of Experiments (concept only). Correlation and Regression - Two Variable versus Multiple Linear Regression; Simple and Multiple Correlation; Estimation of Parameters – The Method of Ordinary Least Squares; Hypothesis Testing, Goodness of Fit

Unit –V

Use of Software for Analyzing Data; Applications of Features of Excel for statistical analysis; Introduction to other Statistical Analysis Software.

Reference Readings:

Demography

- Demography, Peter R. Cox, Cambridge University Press
- Studies in Demography, S.C. Srivastava et all, Anmol Publishers
- Introduction to Applied Demography: Data Sources and Estimation Technique, William J Seraw, Sage Publishers
- Patterns of Migration in the National Capital Region, National Institute of Urban Affairs (NIUA), New Delhi
- India's Population Problems, S.N. Agarwal, Tata McGraw Hill Co., Bombay
- Principles of Demography, D.J. Bogue, John Wiley, New York
- Population Policy in India, P.K. Choubey, Kanishka Publications, New Delhi
- An Econometric Study of a Metropolis, S.C. Gulati, Sage, New Delhi
- Fundamentals of Demography, P.K. Majumdar, Rawat Publishers
- Methods and Models in Demography, Colin Newell, Guilford Publications

Quantitative Methods

- Statistics for Management, Richard I. Levin et all, Pearson
- Econometrics Damodar Gujarati Tata Mc Graw Hill
- Quantitative Methods: Theory and Applications, J.K. Sharma, Macmillan
- Quantitative Methods for Business, Management and Finance, Swiff, Palgrave
- Statistics, Larry J. Stephens, Tata McGraw Hill
- Quantitative Techniques in Geography – An Introduction, Robert Hammond et all, Oxford University Press
- Applied Statistics, P.K. Majumdar, Rawat Publications
- The R Book, M.I. Crawley, John wiley and Sons
- Data Analysis and Statistics for Geography, Environmental Science, and Engineering, Acevedo M.F CRC Press

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I
Subject: **Geoinformatics in Planning**.
Total Theory Period: 40
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503115 (16)
Total Tutorial Period: 12

Course Objective:

The objective of this course is to equip students with advanced concepts of Geoinformatics with special emphasis on applications in Urban and Regional Planning.

Course Contents:

Unit – I

Overview: Principles and Applications of Remote Sensing (RS); Geographic Information Systems (GIS) and Photogrammetry; Organisational Aspects for Planning; Systems, Nature, Hierarchy, Value and Type of Required Spatial Data; Raster and Vector Data Structures; Spatial Data Models; Geo-Database; Analysing Tools and Software; Global Navigation Satellite Systems; Electromagnetic Spectrum, Band Combination, Reflectance; Image Interpretation and Analysis

Unit – II

Information Systems - Information Needs, Scales and Levels; Pre-Conditions for Using Planning Information Systems; Representing, Modelling and Impact Analysis of the Data; Structure Models; Query Measurement and Transformations; Summary Statistics and Inference; Terrain Modelling

Unit – III

Data Creation and Checking - Base Maps and Thematic Maps; Mapping and Spatial Analysis; Linking of Attribute Data, Spatial Data Aggregation; Spatial Information, Database Creation; Geo-Coding and Data Accuracy, Topology Creation

Unit – IV

Topography and Landforms; Digital Change Detection; Suitability Analysis; Landuse / Land cover Analysis; Use of GIS Data Focusing on Urban and Regional Planning

Unit – V

In Selected Packages of Image Processing and GIS; Dynamic GIS; Integration of GIS and Digital Image Processing; Integration of GIS and GPS; Web Enabled GIS Applications

Reference Readings:

- Advanced Surveying: Total Station, GIS and Remote Sensing, Satheesh Gopi, Pearson
- Applied Remote Sensing in Urban Planning, Governance and Sustainability, Netzband,Springer, India
- Environmental Modelling with GIS and Remote Sensing, Andrew Skidmore et al, CRC Press
- Geographic Information Systems and Science, PA Longley et al, John Wiley and Sons Ltd. GIS, Spatial Analysis, and Modelling, David J Maguire et al, ESRI Press
- Landuse Change Detection using GIS, Remote Sensing and Spatial Matrices, Mesfin TBekalo et al, Lap Lambert Academic Publications
- Lans Sustainability Evaluation using GIS and Remote Sensing Technology, Mezenzia Mengist, Vdm Verlag
- Remote Sensing and GIS Integration: Theories, Methods and Applications, Qihao Weng, McGraw Hill Professional
- Remote Sensing and GIS, Basdudeb Bhatta, Oxford University Press
- Remote Sensing and Image Interpretation, Thomas M Lillesand et al, John Wiley and Sons Ltd.

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I Branch: Architecture
Subject: **Elective - 1** (Ecology and Resource Development) Code: 503131(16)
Total Theory Period: 40 Total Tutorial Period: 12
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Course Objective:

This course deals with the importance of ecological concepts and models that have been useful in the management and development of the recourses. Conservation of ecology, environment and its issues and human ecology are areas of research and studies that have been contributing with tools that are useful to defect the local use of natural resources impact of advance planning methods, urbanization and industrialization on nature. This course will create ecological awerness in contextof planning

Course Content:

Unit – I

Introduction to Ecology – Concepts and Theories, Major ecosystems of the Evolution of Ecology, Man and ecosphere. Components of nature and some basic concepts,process of ecology, flow of material, water, energy, invasion, succession, prediction, regulatory forces, adaptation, tropic levels, food chains, food web, ecological pyramids, Urban Ecology -Evolution and Significance, Environmental impact assessment –Methods and appraisal. **Ecosystem and their relevance to environment**, resource and human settlements. Modifications in natural environment, causes and consequences. Impact of advance agriculture–methods, urbanization and industrialization on nature.

Unit – II

Urban development and environment. Environmental Pollution, types, sources, remedies. Urban ecosystem approach, evolution and significance. Introduction to qualitative ecology. Ecological approach of planning at different levels-Principles and procedures. Identification of ecological parameters for planning at different levels, site planning, settlement planning, regional planning. Data needs, formats for data collection.

Unit – III

Types of analysis required to evolve ecological parameters. Limits to growth , Carrying capacity, suitability analysis Ecological awareness in India, traditional indigenous methods, contemporary trends. Endangerments and resources, definition and classification according to different criteria and use, renewable and non-renewable etc.

Unit – IV

Space bound and flow resources, preparation and analysis of resource inventories and resource matrices. Fitness of resources, examples of transfer from one resource to another in history in different parts of world. Development utilization and conservation of resources, resource planning, integrated resource planning approach.

Unit – V

Resource regions, their problems and potentials. Resource management, traditional and contemporary approaches. Resource development in India, some selected areas (energy, water, manpower. etc.).Resource management in view of Climate change.

Reference Readings

- Ecology and Resource Management by Kenneth E. F. Watt
- Urban Pattern by Arthur Gallion
- The city los angelsand urban theory by Allenj scot
- City shaped urban pattern meaning through history by Spirokostof

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I Branch: Architecture
Subject: **Elective - 1** (Environmental Planning) Code: 503132 (16)
Total Theory Period: 40 Total Tutorial Period: 12
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Objectives

The course is structured to introduce the student into the concepts of environmental planning and issues related to it. This will enhance the ability of the student to develop an environmental approach to planning.

Content

Unit – I

Introduction to Environmental planning, aims, objectives and Implementation.

Unit – II

Introduction to State and National policies. Environment planning theories and their applications, Iss0.ues related to Environment and ecology like, de - forestation, soil erosion, water logging and soil salinization. Scarcity of natural

Unit – III

resources and exploitation of them for development, Planning for optimizing the use of natural resources, methods used like water harvesting, waste land management and minimizing use of fossil fuel etc.

Unit – IV

Environmental aspects with respect to tribal and rural areas. Problems of air and water pollution, industrial pollution and solid waste management in urban areas. Frame work, statement prediction and assessment of impacts of air, water, noise, cultural and socio-economic environment.

Unit – V

Methods of impact analysis, public participation,Environmental impact assessment and statements.Environmental protection international and national agencies and legislation, Environmental policies for various geographical regions. Environment Impact Assessment. Climate change and settlement planning.

Reference Readings

- NEPA and Environmental Planning: tools, Techniques and approaches by Charles HEccleston

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I
Subject: **Elective - 1** (Landscape Planning)
Total Theory Period: 40
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503133 (16)
Total Tutorial Period: 12

Unit – I

The practice of landscape planning, the landscape planner and the various agencies, landscape design and planning procedures, implementation and professional liabilities.

Unit – II

Data analysis and inferences: Topography, geology, hydrology, vegetation, ecology, neighbourhood and culture visual, aesthetics.

Unit – III

Development controls, government planning, zoning, legal constraints, environmental impact assessment and culture visual, aesthetics.

Unit – IV

Landform, land drainage and equipments, decisive factors, landform planning and procedures, slope protections.

Unit – V

Urban water bodies, coastal works, planting concepts, reclamation of wastes, advance planning for wastes, reclamation of derelict/ waste water conservation, harvesting, forestry, urban forestry, historical sites and monuments

Reference Readings

- Site planning by Kevin lynch
- Landscape planning by John O Simonds

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I
Branch: Architecture
Subject: **Elective - 1** (Rural Planning and Development)
Code: 503134 (16)
Total Theory Period: 40
Total Tutorial Period: 12
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Objectives

The focus of this course is to understand and appreciate the importance of rural development in the national perspective and development, to expose the validity of the various programmes and problems faced in rural India, Rural Development as a pre –requisire for regional and national development and Quality of human life.

Content

Unit – I

Mutual dependence between urban and rural areas, between industries and agriculture, characteristics of symbiotic, development in India in this context. Levels of living of rural people – trends and development, difference in level of development between various regions within India and different socio – economic groups.

Unit – II

National planning and rural development, concept of planning for rural settlements. Regional development and urban rural partnership, related input and infrastructure development, agriculture development, allied activities and pattern of rural linkage, communication and marketing facilities, community development, instructions and delivery of social services.

Unit – III

Rural settlement, typology, structure, spatial significance in metro regions and interior areas. Planning principles for village and community norms. Rural reconstruction, basic need and rural sanitation, water supply, hygine and drainage, technology transfer and options. Area, District and Block level development planning and implementation, public participation in rural development process, role of voluntary organizations.

Unit – IV

Rural energy issues, renewable and alternative resources of energy, ecological and environment considerations in rural development and village planning.

Unit – V

Models and theories of rural planning , policies and practices at global level, provisions in national and state five year plans and city master plans etc. Action programme initiated at national and global level. Housing agencies and co-operative feasibility and implementation of existing policies and action programme Projections and forecasting

Reference Readings

- Rural planning and development by Thomas Adams
- Micro level rural planning: principal, methods and case study by RP Mishra

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I
Subject: **Elective - 1** (Urban Design)
Total Theory Period: 40
Total Marks in End Semester Exam: 75
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503135 (16)
Total Tutorial Period: 12

Objective

The objective of the course is to provide explanations of urban design terminologies. Definitions and methodologies for shaping and understanding of urban forms.

Content

Unit – I

Introduction to various philosophies, Concepts and Theories of Urban Design Contribution of different philosophers to the field of Urban Design Need for urban design. Meaning, scope and purpose of Urban design. The relationship between Urban Design and Urban Planning.

Unit – II

Methodological approaches to spatial analysis of the city with an opportunity to analyze, explore and innovate new methods and techniques for understanding our cities. Determinants and components of urban form. Morphological, Temporal, Social , Functional , Perceptual and Visual dimensions of urban design . Growth, scale and form of Indian cities

Unit – III

Principles of Urban design and criteria. Urban massing and Scale (intimate, urban and monumental, human scale and generic scale) and Spaces (hierarchy and nature, effect of light, sense of enclosure).

Unit – IV

Introduction to analytical techniques in urban design. Survey techniques in urban design (inventories and recording of findings, types of survey).Modern techniques and emerging approaches to urban design.

Unit – V

Road forms and townscape (serial and radial road forms, speed calming techniques, principles of streetscape, townscape and pedestrian design). Principles of Urban Conservation (legal, economic, organization and management issues). Principles of Urban Renewal (purpose, economic and planning issues). Urban design regulations and control, the comprehensive role of urban design in town planning process.

Reference Readings

- Urban Informal sector in Asia by ILO publications

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I
Subject: **Elective - 1** (**Housing**)
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503136(16)
Total Tutorial Period: 12

Objectives

To Equip Learners to develop suitable context specific policies, programmes and legislation sensitive to socio economic condition of a region, state or a city in accordance internationally accepted UN resolutions

Content

Unit – I

Housing as a basic need, housing as an integral part of urban & rural development, housing problem and statistics, programme based policies.

Unit – II

Qualitative and quantitative demands of housing, housing estimates.

Unit – III

Housing survey techniques and standards, sources of data and information etc. Housing cooperative and financing agencies.

Unit – IV

Objectives and general principles of cooperatives, self-help housing, financing agencies and their functions etc.

Unit – V

Introduction to methods and approaches to housing design. Study analysis and design of housing schemes. Redevelopment of slums and squatters settlements

Reference Readings

- Housing and Urbanism Charles Correa.
- Shelter in India Revi, Aromar, (Har.Anand Publication with Vikas Publishing House Pvt. Ltd.)
- Housing & Habitat in Developing Countries Rao B. Bhaswkara (Newman Group of Publishers)
- Housing in India, Problems, Policies & Perspectives Jayaram N. & Sandhu R.S. (B.R. Publishing Corporation.)
- Public – Private Responsibilities in Urban Housing Umashankar P. & Misra K.Girish (Reliance Publishing House & Lipa).
- Housing Growth in India Bakshi & Sinha
- Housing Policy and Practice Peter Malpans and Alan Murie
- New Households, New Housing Karan Franck, Sherry Ahrentzen
- Re-humanizing Housing Needet Teymur, Thomas Markus
- New Communities for Urban Squatters Charles L. Choguill
- Housing in India, Cheru, Nilam Frances
- National Housing Policy 1992, Ministry of Urban Deve. Govt. of India
- Govt. of India Handbook of Housing Statistics, National Building Organization
- Urban Housing in Third World Countries Payne, Geoffrey K.
- How the other half builds. Rybarynski, W. (McGill University).

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I
Subject: **Elective - 1** (**Sustainable Planning**)
Total Marks in End Semester Exam: 80
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503137 (16)
Total Tutorial Period: 12

Course Objective:

The objective of this course is to familiarize students with the concept of sustainable development and develop skills to understand emerging aspects of sustainable planning practices. The course is aimed at making the students aware of different planning and management practices adopted worldwide for minimizing the adverse impacts of human actions on environment and society, as also understand strategies that seek to proactively manage these issues.

Course Contents:
The course shall include the following topics:

Unit – I

Overview of Sustainable Development Concept - Definitions, Concepts and Parameters in Sustainable Development with Particular Reference to Brundtland Commission and Agenda 21; Eco-City Approach; United Nations Framework Convention on Climate Change; Conference of Parties: Kyoto Protocol, Intergovernmental Panel on Climate Change, National Communication Process, Indian Network of Climate Change Assessment, Global Environment Facility, Clean Development Mechanism

Unit – II

Application of Ecological Principles in Sustainability; Carrying Capacity Based Planning: Concept, Parameters and Indicator Measures, Models and Case Studies in Urban and Regional Development. Settlement Planning: Urban Environmental Management and Planning; Human Activities and Energy in Cities; Contribution to GHGs; Sectoral Contributions; Urban Environmental Simulators. Land Capability and Suitability Analysis in Locating and Planning for Urban Land Uses

Unit – III

Basics of Climate Change: Greenhouse Gases, Anthropogenic Causes, Carbon Cycle, Global Warming; Inventory of GHGs; Urban Heat Islands; Climatic Change and Human History, Economy, Energy and Environment. Impacts of Climate Change: Climate as Forcing Variable, Locational Attributes Sensitivity and Vulnerability of Different Sectors, Extreme Events and their Effects

Unit – IV

Environmental Impact and Strategic Environmental Assessment for Urban Areas (through Case Studies); Ecological Footprint Analysis of Cities; Sustainable Lifestyle Assessment and Behavioral Modifications at Household Levels. Concept of 3-Rs: "Recycle-Reuse and Recovery"; Concepts of Industrial Symbiosis and Ecology; Case Study of Waste Recycling: Its Cost Effectiveness and Options; Examples of Best Practices

Unit – V

Compact City Concept - Implications of Urban Form, Density, Land Use Pattern and Transportation System in Land and Energy Conservation; Use of Non-Conventional Energy Sources in Urban Development. Urban Interference in Hydrological Cycle with Particular Reference to Water Pollution, Water Resources, Drainage and Natural Ecosystems; Urban Water Treatment, Recycling and Harvesting . Pollution Control Measures for Industrial Wastes, Hazardous Wastes, Biomedical Wastes, Domestic Waste Water, Air Pollutants and Noise. Cleaner Production Concepts and Practice through Case

Study of a Functional Industrial Estate

Reference Readings:

- Eco-City Planning: Policies, Practice and Design, Tai-Chee Wong and Belinda Yuen,Springer
- Green Cities, Growing Cities, Just Cities? Scott Campbell, Urban Planning and the Contradictions of Sustainable Development, Journal of The American Planning Association
- Cities and Climate Change, OECD Publishing OECD (2010)
- The Economics of Low Carbon Cities: A Mini-Stern Review for the Leeds City Region, Andy Gouldson et all., The Centre for Low Carbon Futures Partnership, University of Hull, University Of Leeds
- AITP Reader on Ecology & Resource Development, AITP
- AITP Reading Material on Environmental Planning and Design, Prof A. K. Maitra , SPA Delhi
- Best Practices Environment, The Economist, Intelligence University Press
- CPCB Guidelines for Bio-Technologies for Treatment of Wastes and Cleaner Technologies - Issue and Options
- Environmental Management, Kulkarni V. and Ramachandra T. V., TERI Press, New Delhi
- Evaluating Sustainable Development in the Built Environment, Brandon P.S., WILEY-BLACKWELL Pub., UK
- Exploring Possibilities of Achieving Sustainability in Solid Waste Management, Ramachandra T.V. and Saira Varghese K., Indian Journal of Environmental Health, 45 (4):255-264, 2003
- Global Green Standards: ISO 14000 and Sustainable Development, International Institute for Sustainable Development
- Introduction to Environmental Management, Mary K. Theodore and Louis Theodore
- Population Growth and Environmental Degradation in India, Dr. D.A. Nagdeve
- The Sustainable Urban Development Reader, Second Edition, edited by Stephen M Wheeler & Timothy Beatley, Routledge

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I | Branch: Architecture
Subject: **Elective - 1** (**Planning Studio – 1**) | Code: 503121 (16)
Total Marks in End Semester Exam: 125

Course Objective:

Planning Studio aims to introduce theoretical and applied understanding of various aspects of Urban Planning. Assignments / Exercises are for familiarization of practical applications of norms and bye-laws .Understanding city and land-use character. Application of various techniques and theories at settlement level and developmental perspective of city planning.

A student is expected to understand the intricacies and interface between various variables of the site such as soil conditions, topography, environmental dimensions, location, spatial standards , leading to its application for a site planning exercise. The area appreciation exercise is to enable the students to understand and contextualize of the location of the area in relation to the city, zone and area in which the particular place is situated. This is done in relation to the socio-economic, spatial and cultural characteristics of that city, zone, location, etc. The main purpose is to make the students appreciate the locational attributes of land parcels for future development in a city.

Appraisal and development of small and medium towns - to develop an approach/ framework for understanding the dynamics of various components of the city and how and what level interventions can be made .A group of students are expected to study a town in terms its present problems and issues and project a futuristic vision in terms of scenario building.

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- I
Branch: Architecture
Subject: **Geoinformatics in Planning lab**
Code: 503122 (16)
Total Theory Period: 40
Total Marks in End Semester Exam: 50

Objective:

To train the candidate in building GIS models for urban and regional planning applications with hands on experience of spatial data, attribute data input and experiment with GIS analysis

Course Content:

- Classification of spatial and non-spatial data application of spatial data in urban and regional plans objectives and functions of GIS models in urban and regional planning
- Defining the objectives of GIS planning problems – Identification of required spatial data layers – coding schemes – digitization of spatial data – editing spatial data usable for the given planning problem.
- Role of attribute data in defining geographic features – adding attribute data file – topology generation – Joining attribute data to its geographic features.
- Performing overlay functions – manipulating attribute data – GIS modeling – map and report generation – case problems on regional analysis, impact assessment study, project formulation and land suitability analysis.
- Need for model – Land suitability analysis – Urban land use modeling – Change demand modeling – Transition potential modeling and land allocationmodeling.

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of Teaching and Examination

M. Plan (Urban Planning)

II[nd] Semester

S. N.	Board of Study	Subject Code	Subject Name	Period Per Week			Scheme of Examination Theory/Practical			Total Marks	Credit L+(T+P)/2
				L	T	P	ESE	CT	TA		
1	Architecture	503211(16)	City and Metropolitan Planning	3	1	-	80	20	20	120	4
2	Architecture	503212(16)	Planning Practices and Legislation	3	1	-	80	20	20	120	4
3	Architecture	503213(16)	Infrastructure Planning	3	1	-	80	20	20	120	4
4	Architecture	503214(16)	Urban Management and Governance	3	1	-	80	20	20	120	4
5	Architecture	503215(16)	Project Formulation and Management	2	1	-	80	20	20	120	3
6	**Elective-II**			3	1	-	80	20	20	120	4
7	Architecture	503221(16)	Planning Project-II	-	-	13	200	-	80	280	7
Total				**17**	**06**	**13**	**680**	**120**	**200**	**1000**	**30**

L-Lecture, **T**- Tutorial, **P**- Practical, **ESE**- End Semester Examination, **CT**- Class Test, **TA**- Teacher'sAssessment

Table- I (Elective -II)			
S. N.	**Board of Study**	**Sub Code**	**Subject Name**
1	Architecture	503231(16)	Planning for Disaster Prone Areas
2	Architecture	503232(16)	Land Economics and Real Estate
3	Architecture	503233(16)	Public Policy Analysis
4	Architecture	503234(16)	Planning & Development of Special Areas
5	Architecture	503235(16)	Quantitative Methods and Systems Analysis

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of Teaching and Examination

M. Plan (Urban Planning)

II[nd] Semester

S. N.	Board of Study	Subject Code	Subject Name	Period Per Week			Scheme of Examination Theory/Practical			Total Marks	Credit L+(T+P)/2
				L	T	P	ESE	CT	TA		
1	Architecture	503211(16)	City and Metropolitan Planning	3	1	-	80	20	20	120	4
2	Architecture	503212(16)	Planning Practices and Legislation	3	1	-	80	20	20	120	4
3	Architecture	503213(16)	Infrastructure Planning	3	1	-	80	20	20	120	4
4	Architecture	503214(16)	Urban Management and Governance	3	1	-	80	20	20	120	4
5	Architecture	503215(16)	Project Formulation and Management	2	1	-	80	20	20	120	3
6	**Elective-II**			3	1	-	80	20	20	120	4
7	Architecture	503221(16)	Planning Project-II	-	-	13	200	-	80	280	7
Total				**17**	**06**	**13**	**680**	**120**	**200**	**1000**	**30**

L-Lecture, **T**- Tutorial, **P**- Practical, **ESE**- End Semester Examination, **CT**- Class Test, **TA**- Teacher'sAssessment

Table- I (Elective -II)			
S. N.	**Board of Study**	**Sub Code**	**Subject Name**
1	Architecture	503231(16)	Planning for Disaster Prone Areas
2	Architecture	503232(16)	Land Economics and Real Estate
3	Architecture	503233(16)	Public Policy Analysis
4	Architecture	503234(16)	Planning & Development of Special Areas
5	Architecture	503235(16)	Quantitative Methods and Systems Analysis

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II | Branch: Architecture
Subject: City and Metropolitan Planning | Code: 503211(16)
Total Theory Period: 40 | Total Tutorial Period: 12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Course Objective

This course gives the opportunity to understand the socio – cultural process that drive the city. The student is focused to the issues of urban planning

Course Content

Unit - I

Growth of cities and System of Cities, scale, complexity and its impact on national development, cities as engines of growth, cities as ecosystems, resources in cities. Inner city –issues and problems, approach to development.

Unit - II

Theories, concepts, approaches, strategies and tools, Policies and programmes at various levels, impact on metro and mega city development City – Region Linkages City, fringe and the periphery - physical and functional linkages, peri-urban development.

Unit – III

Theories of city and metropolitan planning Metro and Mega Cities: Problems and Issues Growth trends and processes, characteristics, problems, concepts and concerns of urban sustainability, issues related to diversity and unintended growth, economic, social and environmental sustainability, quality of life, inclusivity and equity

Unit – IV

Climate change, transit oriented development, participatory planning. Inner city – issues and problems, approach to development.

Unit – V

Urban Development Policies and Programmes Concepts, approaches, strategies and tools; Policies and programmes at various levels, impact on metro and mega city development.

REFERENCE BOOKS ,

- Regional planning for urban spaces by AD Walk
- Urban and Regional planning by Birch E, Glasson
- ITPI reader

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II
Branch: Architecture
Subject: **Planning Practices and legislation**
Code: 503212(16)
Total Theory Period: 40
Total Tutorial Period: 12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Course Objective

To make the students aware and understand the relevance of constitution and legislation in relation to spatial planning. The course also facilitates students to experience implications of the existing legislations relating to planning and its importance and shortcomings. The student is exposed to problems and proposals of town planning in terms of professional practice.

Course Content

Unit - I

Concepts of law, Sources of law (i.e. custom, legislation and precedent) meaning of terms of law, legislation, ordinance, bill, act, regulations and bye laws. benefits of statutory backing for schemes Indian constitution, concept and contents.

Unit - II

Concepts of arbitration, Betterment Levy, Development Charges and Public participation in statuary planning process, Provisions regarding property right, Legislative competence of State and Central Government to enact town-planning legislation.

Unit – III

Significance of land development control – objectives and legal tools, building regulations and byelaws. Development Code, Professional fees as per ITPI , CPWD and other agencies

Unit – IV

Evolution of planning legislation, An overview of legal tools connected with urban development, Town and Country Planning Act, Urban Planning and Development Authorities, Act --objectives, contents, procedures for preparation, approvals and implementation of different plans. Introduction to law relating to slum clearance, housing, landscape and traffic. Legislation relating to urban conservation and restoration, historical monuments, archaeological sites etc.

Unit – V

National Rehabilitation and Resettlement Policy (2007) - Social Impact mitigation; National Environmental Policy (2006) – Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP)**.** Land Acquisition Act 1994 – Basic concepts, procedures for compulsory acquisition of property and determination of compensation. Urban Land (Ceiling and Regulation) Act 1976 – objectives, contents and planning implications. Real Estate Bill 2016 etc.

Reference Books:

- Town and Country Planning Act (any State Act)
- Model Municipal Act, Ministry of Urban Development, Government of India
- Nagar Raj Act (any State Act)
- Environment Protection Act (Central Act)
- Mining and Forestry Act (Central Act)
- Building Byelaws (any State Act)
- Apartment Ownership Act (any State Act)
- Development Authority Act (any State Act)
- Water Bodies Conservation Act (any State Act)

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II
Branch: Architecture
Subject: **Infrastructure Planning**
Code: 503213(16)
Total Theory Period: 40
Total Tutorial Period: 12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Course Objective:

The course would include one part on the design principles of transport planning and another on services and utility networks and facilities.

Utility Networks Planning

The focus of the Utilities Planning course is on principles of design of utilities and services in urban and regional context and familiarising with Indian standards of design. Thecourse will focus on acquainting students to latest technological innovations in utility services.

Transportation Planning

The objective of Transportation Planning is to provide basic information on transportation issues. Students will be familiarized with (i) geometric design of road networks and (ii) traffic characteristics. Techniques of data collection and analysis would be taught as part of this course.

Course Contents:

Utility Networks Planning

Unit – I

Role of Physical Planner in Planning of Utilities and Services Networks; Objectives of Utilities and Services Planning and Its Implications for Public Health and Environmental Protection; Familiarizing to CPHEEO Manual and Guidance

Unit – II

Water Supply Systems and networks- Surface and Ground Water Sources, Quality and Quantity Requirements, Collection and Conveyance of Water; Water Requirement for Various Land Uses; Factors Affecting Water Demand; Calculation of Per Capita Requirement; Water Distribution Systems; Case Study Discussion on Innovative Methods and Successful Urban Water Supply System; Significance and Methods and Advantages of Water Harvesting System . Storm Water Drainage Networks- Layout and Design of Storm Water System; General Considerations, Inlets, Self-Cleansing Velocity, Non-Scouring Velocity, Physical Layout, Design Principles, Data Requirement; Principles of Design of Storm Water Drainage System

Unit – III

Sanitation and Sewer System - Sewage Disposal Methods and their Advantages and Disadvantages; calculations of Quantity of Sewage; Principles of design of Sanitary Sewer System Network; Case Study of Innovative Approaches of Sewage Disposal in Urban Area; Low Cost Appropriate Technologies for Sanitation; Characteristics of Waste Water, Industrial Pollutants and their Effects. Solid Waste Management - Elements of Solid Waste Management, Classification and Characteristics of Solid Wastes; On Site Collection, Storage, Transportation and Disposal of Solid Wastes; Processing and Treatment of Solid Wastes; Land Filling and Cost Aspects of Different Methods of Solid Waste Management; Solid Waste Management Issues in Indian Cities

Unit – IV

Power Supply – Sources of Electricity; Transmission, Distribution and Supply; Sustainable Energy Planning; Telecommunications – Introduction to Planning and Programming Approaches for Telecommunication Infrastructure and Network Systems; Environmental, Social and Economic Impacts of Telecommunication Infrastructure Fire Fighting Services - Planning for Fire Protection Services and Space Standards; Locational Criteria, Implications on Land Use and Density

Unit – V

Transportation Planning

- Overview of Transportation Systems, Modes, Design and Operating Characteristics
- Classification of Roads, Road Networks and Hierarchy; Road Geometries and Road Components; Design and Preparation of Layout for Road Intersections, Rotaries and Signalized Intersections
- Traffic Volume, Origin Destination, Spot Speed, Speed and Delay
- Traffic and Transportation Surveys- Study Area Definitions, Surveys and their Types, Sampling of Travel Methods, Survey Techniques
- Parking and Pedestrian Issues
- Basis of Regional Network of Roads; Characteristics of National, State and District Highways; By-Pass Design Factors of Highways through Towns
- Introduction to basics concepts of Trip Generation, Distribution and Assignment
- Traffic Management- Existing Organizational and Legal Framework; Traffic and Environmental Management Techniques; Review of the Existing Traffic Management Schemes in Case Cities

Reference Books:

Utility Networks Planning

1. Environmental Engineering, Howard S. Peavy, Tata Mc Grawhill
2. Regulation and the Management of Public Utilities, C. S. Morgan, Gale
3. Water Supply Engineering, S. K. Garg, Khanna Publishers
4. Manual on Sewerage and Sewage Treatment, CPHEEO
5. Urban Planning Manual, AIILGS Reader
6. Solid Waste Management, Krishana Gopi Sanoop P, Sasikumar K, Phi Learning
7. Solid Waste Management, Dewan, Sudarshan, Discovery Publishing House
8. Telecommunication Management Networks (TMN) Implementation, Amani Omer, Lambert Academic Publishers 6.
9. Firefighting: Management and Techniques, Overton Frank, Inkata
10. Water Supply Engineering: Environmental Engineering – I, Arun Kumar Jain, Ashok Kumar Jain, B. C. Punmia, Laxmi Publications

Transportation Planning

1. Traffic Engineering and Transport Planning, L.R. Kadiyali, Khanna Publications
2. Transportation Engineering and Planning, Author: C. S Papacostas, P. D Prevedouros,Publisher: PHI Learning
3. Principles of Urban Transport Systems Planning, B.G. Hutchinson, McGraw Hill
4. Urban Transport: Planning and Management, A K Jain, APH Publishing

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II
Branch: Architecture
Subject: **Urban Management And Governance**
Code: 503214(16)
Total Theory Period: 40
Total Tutorial Period:12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Course Objectives:

The primary purpose of this course is to apprise the students of the local governance framework at sub provincial level and resource mapping of local governments with special emphasis on municipal governments in our country. The course intends to acquaint the students with the governance structure and fiscal and financial background of the local governments and tools and techniques to strengthen them. The course would include Constitutional Provision for Local Finance, Municipal Finance, Innovations in Local Resource mobilization and Local Government fiscal regime.

Course Content:

Unit I

Democracy and Decentralization: Evolution of Local Self government: Democracy in governance: Shift from Representative Democracy to Participatory Democracy; Decentralisation of Governance; Evolution of local self Government – Principles of Subsidiarity, Complementarity and Equity; Local Governance Framework

Unit II

Local Governance: Institutional Framework: Reinstatement of Panchayati Raj Institutions and Urban Governance Institutions: Constitutional Sanction; Salient Features of 73rd and 74th Constitutional Amendment Act, 1992; Constitution, Powers and Functions of Municipal Governments and PRIs (Village Panchayat and Zila Parishad) .Innovations in Local Governance: Indicators of Good Governance: Formulation of Governance Index; Citizens' Charter; Citizens' Participation in Urban Governance: Institutional and Legal Framework; Ward/Wards Committee; Nagar Raj Act: Constitution, Powers and Functions of Area Sabhas; e municipal Governance; Performance Evaluation of Local Governments: Introduction of Report Card System; Service Level Benchmarking; Globalisation and Its Impact on Urban Settlements; Corporatization and Regulatory Regime for Urban Services. Local Governance Reforms: Administrative Reforms in Local Governance: Better Human Resource Management; Expenditure Planning, Rightsizing and Outsourcing; Introduction of VRS; Performance Auditing of Municipal Staff structural Reform in Local Governance: Organisational Restructuring of Local Governments.

Unit III

Task Based Municipal Cadre; Capacity Building of Local Government Institutions; Inter municipality and Municipality – CBO/NGO Partnership; Simplification of Procedures Parastatal Agencies: Role of Improvement Trusts, Development Authorities, SEZs and Special Purpose Vehicles in Urban Management; Interagency Cooperation Behavioural Orientation for Governance: Team Building and Leadership; Conflict Management; Change Management, Stress Management

Unit IV

Constitutional Provision for Local Finance: Principle of Fiscal Federalism – Inter Governmental Fiscal Transfer; Constitution, Powers and Functions of Central Finance Commission (CFC) and State Finance Commission (SFC); Analysis of Current CFC and SFC (any one State) Report; Consolidated Fund (Central and State); Centrally Sponsored Schemes

related to Urban/Rural Physical Planning and related sectors. municipal Finance: Plan and Non Plan Financing (Planning Commission and Finance Commission); Categorisation of Municipal Sources of Revenue: Internal Vs. External Revenue, Capital Vs. Revenue Receipt; Municipal Finance Assessment Framework; Municipal Finance: Paradigm Shift; Reforms in Municipal Finance: Unit Area Method in Property Tax Calculation, Rationalisation of User Charges; Ring fencing; Streamlining Municipal Tax Administration

Unit V

Innovations in Local Resource Mobilisation:Monetary Exaction (Betterment Levy, Impact Fee, External Development Charges, Vacant Land Development Tax); Land Exactions (TDR, Town Planning Scheme, Accommodation Reservation, Monetisation of Underutilised Public Assets); Special Assessment Districts; Valorisation Charges; External Finance: Debt Financing, PPP, Role of Financial Intermediaries, Municipal Bond, Pooled Finance Local Government Fiscal Regime: Local Government Budget: Normal Budget, Performance Budget, Gender Budget (concept only); Salient Features of Fiscal Responsibility and Budget Management Act, 2003; Fiscal Devolution vis a vis Fiscal Dependency of Local Bodies; Fiscal Indicators – Revenue Dependency Ratio (RDR), Fiscal Autonomy Ratio (FAR), Expenditure Decentralisation Ration (EDR); Municipal Accounting and Auditing (overview only)

Reference Readings:

- Constitution of India, D.D. Basu, S. Chand and Sons, New Delhi
- Democracy, Development and Decentralisation – Continuing Debates, Taylor and Francis India

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II
Subject: **Project formulation and Management**
Total Theory Period: 40
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503215(16)
Total Tutorial Period: 12

Objective

Guide students through the process of formulation and evolution of public and private sectors programs in urban planning

Course Content

Unit -I

The concept of projects with focus on physical urban projects, Importance of project formulation, appraisal and management; life cycle of project.

Unit -II

Planning techniques; Bar charts, Networks; CPM and PERT, resource leveling and allocation, time-cost trade off aspects.

Unit III

Project formulation: definition, objectives; Stages of project formulation and their significance; Methodology for project identification and formulation.

Unit IV

Estimation, Costing, Project Cash-flow forecasting and analysis. Feasibility studies and DPRs. Risk and Uncertainty. Project Appraisal: Financial, economic, social, environmental, technological appraisal criteria. Funding and appraising agencies;

Unit V

Project execution and implementation: Contracts and other methods of execution, Stages of implementation, Project monitoring. Project evaluation: meaning, objectives, scope, stages, approach and steps.

Reference Readings

- Project formulation by Prasnna Chandra

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II
Branch: Architecture
Subject: **Elective – II (Planning for Disaster prone areas)**
Code: 503231(16)
Total Theory Period: 40
Total Tutorial Period 12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Objectives

To generate interest in student to understand the courses and consequences of disasters and its importance in planning and managing cities and towns towards mitigation and rehabilitation.

Course Content

Unit - I

Natural Disasters, Meaning, factors and significance. Characteristic, causes and effects of natural hazards viz. Drought, earthquake, flood and other hazards, ,Disaster profile of India- regional and seasonal

Unit – II

Disaster Preparedness and Response, Scope and objectives of disaster mitigation Preparedness and response, Prerequisite for preparedness planning, action plans and procedure, models and checklists.

Unit – III

Disaster response planning, roles and responsibilities of various agencies Emergency operation support and management Planning for Disaster Prone Areas, Planning requisites for disaster prone areas and preventive measures, Vulnerability analysis

Unit – IV

Land use planning and regulations: Temporary settlements and communications Development planning tasks at the pre-disaster and post- disaster stages .Disaster and housing, Shelter typology for different hazardous situations. Housing design and planning for pre and post disaster. Traditional methods of planning and construction Modification of unsafe housing and disaster resistant structures Emergency Camps and Shelter, Emergency camps, Vulnerability and low cost dwellings.

Unit – V

Temporary and emergency shelter design at post disaster stage, Shelter components, materials, structures and erection Infrastructure and Management: Food, health care and infrastructure requirements Movement, transport and communication, Emergency networks, communications and management, Settlement management policy for disaster prone areas, Training and education requirement.

Reference Readings

- Planning for Disaster by Willium G. Ramroth

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II Branch: Architecture
Subject: **Elective – II (Land Economics and Real Estate)** Code: 503232(16)
Total Theory Period: 40 Total Tutorial Period 12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Course Objective:

One of the prime concerns of urban development is the issue of land availability. In addition to government policies on land, market forces guide and force development on different patterns based solely on the equilibrium of demand, supply and pricing. In India, since the liberalisation of the economy and housing being provided by the private sector, the dynamics of the housing industry have changed significantly.This course introduces students to the concept of land markets and development of cities with private developers with the interests of profit, as key players in the development process.

Course Contents:

Unit – I

Economic Concepts of Land; Objectives and Scope of Land Economics; Land Use and Land Values: Market Dynamics and Impact on Land Use Pattern; Land Use Restrictions Affecting Land Availability. Development of Land and Real Property Process - Cost of Development, Source of Finance. Economic Aspects of Land Policies at Various Levels of Decision Making; Private Ownership and Social Control of Land

Unit – II

Definition of Real Estate - Physical, Financial and Social Perspectives; Comparison of Real Estate to Other Investment Avenues; Real, Local, National and Global Factors Affecting Real Estate; Real Estate as Facilitator of Development. Concepts of Real Estate Analysis - Mapping Supply to Understand Markets; Demand Factors Affecting Real Estate Development, Demand-Supply Gap Analysis

Unit – III

Methods of Technical and Financial Feasibility Analysis for Different Product and Project Types, Valuation of Land and Property; Methods of Valuation: Comparison Method, Residual Method, Discounted Cash Flow Method

Unit – IV

Transaction and Renting of Real Estate: Lease Deeds/ Sale Deeds, Sale Documents, Registration; Mortgage and Pledging. Real Estate Dynamics in India: Profiling of Metropolitan Cities, Tier I, Tier II And Tier III Cities; Changing Cycles of Real Estate Development

Unit – V

Emerging Areas of Real Estate Development: Diversification to Logistic Hubs, Industrial Parks, Hospitality Sector, Health and Education Sector by Private Players; Introduction to Financial Models**.** Divided cities- the concept of affordability and housing as against shelter as a basic requirement; towards inclusive cities

Reference Readings:

- Urban Economics, Arthur O'Sullivan, Mcgraw-Hill
- Urban Economics and Real Estate Markets, Denise DiPasquale and William C. Wheaton, Prentice hall
- Urban Land Market and Land Price Change: A Study in the Third World Context, Amitabh Kundu, Ashgate Publishing Company.
- Economics, Real Estate and the Supply of Land, Alan Evans, Wiley and Blackwell Analyzing Land Readjustment: Economics, Law and Collective Action, Hong, Yu-Hung and Barrie Needham, Lincoln Institute of Land Policy
- Urban Land Economics, Jack Harvey, Palgrave MacMillan

- Urban Land Economics and Public Policy, Paul N. Balchin, Gregory H. Bull and Jeffrey L. Kieve, Palgrave MacMillan
- Real Estate Finance: Theory & Practice, Terrence M. Clauretie and G. Stacy Sirmans, Cangage Learning
- Urban Land Policy and Public-Private Partnership for Real Estate and Infrastructure Projects, A. K. Jain, Readworthy
- The Modern Economics of Housing : A Guide to Theory and Policy for Finance and Real Estate .

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II
Branch: Architecture
Subject: **Elective – II (Public Policy Analysis)**
Code: 503233(16)
Total Theory Period: 40
Total Tutorial Period 12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Course Objective

This course intends to provide an in-depth study of the various approaches for policy formulation, implementation and evaluation. It addresses issues in policy analysis, and explains the forces that influence the functioning of executive, legislature, judiciary, civil society, NGOs and administration. It will also cover a critical analysis of policies that are directly connected with inclusive sustainable urban development.

Course Contents

Unit – I

Policy Analysis: Nature, Scope, Significance and Contextual Perspectives; Policy Making Approaches and Models: Power Approaches to Policy-Making, Institutional Approaches to Policy Analysis, Strategic Planning Approach for Improving Public Policy, Rational Approach and Simon's Rationality Model; Decision-Making Process and Techniques

Unit – II

Policy Monitoring: Approaches and Techniques; Policy Evaluation: Techniques and Approaches; Policy Evaluation: Role, Process and Criteria; Policy Performance: Evaluating Impact

Unit – III

Policy-Making Techniques: Structure of Power and Public Policy-Making Process; Power and Role of Non-Officials in Policy-Making; Policy-Making Power within the Executive; Intergovernmental Relations and Public Policy Issues

Unit – IV

Public Policy Implementation: Approaches and Models; Inter-Organizational Relations and Public Policy Implementation; Public Policy Delivery Agencies and Implementers; Public Policy Implementation: Gaps and Problems

Unit – IV

International Agencies and Globalization of Policy Agendas, Critical Analysis of Making, Implementation and Monitoring of following Policies:- National Urban Sanitation Policy, National Urban Housing & Habitat Policy 2007 National Policy for Urban Street Vendors-2009, National Environmental Policy 2006 National Urban Transport Policy 2006, National Water Policy 2002 and 2012 (draft) Policy on Energy

Reference Readings:

- Urban Policy in Practice, Tim Blackman, Publisher: Routledge
- Public Policy: Art and Craft of Policy Analysis, R. K. Sapru, PHI Learning Pvt. Ltd- New Delhi
- Public Policy Analysis, William N. Dunn, Pearson Education
- Public Policy, Analysis and Design, VK Agnihothri, Concept Publishing
- Approaching Public Policy Analysis: An Introduction to Policy and Programme Research, Kent E. Portney, Prentice Hall- Gale
- http://urbanindia.nic.in/policies/TransportPolicy.pdf
- http://envfor.nic.in/nep/nep2006.html
- http://urbanindia.nic.in/programme/uwss/NUSP.pdf
- http://mhupa.gov.in/w_new/sug_npusv.pdf

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II | Branch: Architecture
Subject: **Elective – II (Planning & development of Special Areas)** | Code: 503234(16)
Total Theory Period: 40 | Total Tutorial Period: 12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Course Objectives:

Introduce the students to various Special Areas with their specific planning needs and priorities and the implication on development in these areas.

Course Contents:

Unit – I

Need for Special area planning, types of special areas and their defining characteristics.

Unit – II

Evolution of special planning areas under distinct geo-physical structure, location, extreme backwardness etc. Planning commission approaches for identification of special areas.

Unit – III

Legislations and norms for Special Area Development in the Indian context. Planning for Special Areas under consideration would include Formal and Functional Regions (Hill Areas, Coastal Areas, Desert Areas, Extremist Affected Area, Special Economic Zones, Port City, Aerotropolis, Medi-City, Knowledge City etc.).

Unit – IV

Capital investment and funding methods, public private partnerships in development process.

Unit – V

Governance and Management aspects.Case Studies of various typologies of Special Area Development Plans in Indian and international context.

Reference Readings:

- Development of Hill Areas, Dobha G.L, Concept Publishing
- Environmental Problems of Coastal Areas in India, Sharma Vinod, Bookwell
- Integrated Development of Hill Districts in India : Issues and Approaches, Gupta, R.C., SPACE
- Special Economic Zones In India, P. K. Manoj, Serials Publications
- Aerotropolis:The Way We?ll Live Next, John Kasarda, Allen Lane
- Environmental act in india, Ruma Chatterjee, Oxford University Press
- CRZ Regulations, 2011, MoEF

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II
Branch: Architecture
Subject: **Quantitative Methods and Systems Analysis**
Code: 503235(16)
Total Theory Period: 40
Total Tutorial Period: 12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Course Objective:

The purpose of this course is to study the basic tools for quantitative methods for decision making at an introductory level. The emphasis of the course shall be on solution methods and strategies. The students will be exposed to a wide variety of applications and problems that can be addressed using quantitative methods and techniques. Analytic techniques and computer packages will be used to solve problems.

Course Content:

Unit – I

Overview of Analytical Methods; Introduction to methods and appropriate applications

Unit – II

Cluster Analysis; Principal Component and K- means; Analytical Hierarchy Process; Decision Trees; Multi criteria Analysis; Introduction to Operations Research (OR); Basic Mathematical and Statistical Concepts

Unit – III

Linear Programming (LP): LP Definition, Applications, Solution Methods, Simplex Method, Duality and Post Optimality Analysis; LP and Allocation of Resources. Maximization and Minimization Problems: Graphical LP Minimization Solution; Introduction to Simplex Method: Definition, Formulating the Simplex Model; Sensitivity Analysis: Changes in Objective Function, Changes in RHS

Unit – IV

Network Analyses: Minimum Path Algorithms, Vogel's Approximation Method, Link Flows and Inter-Zonal Flows. Queuing Models: Deterministic Queuing Model, Probabilistic Queuing Model, Single Server FIFO Systems, Multi Server FIFO Systems

Unit – V

Simulation Systems Concepts: Types of Systems, System Modeling, Nature and Process of Simulation, Monte Carlo Simulation, Computer Applications for Simulation Models, Use of Softwares for Simulation Processes

Reference Readings:

- Principles of Operations Research, Harvey M Wagner, Prentice-Hall
- Operations Research – Principles and Application, G Srivastava, PHI Prentice-Hall
- Operations Research, Hamdy A Taha, MacMillan

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan- II
Subject: **Planning Project-II**
Total Theory Period: 40
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Branch: Architecture
Code: 503221(16)
Total Tutorial Period: 12

Objective

The exercise pertains to medium towns / large cities / New towns for preparation of development plan. Initial study involves understanding of the exercise through theories, case studies, awareness of relevant norms and standards through extensive literature search.
Students are required to prepare a comprehensive list of required data and identify probable sources before making a field visit to the case study town/city.
Students are encouraged to translate learning from the core and elective subjects using knowledge of legal framework and practices for plan preparation and implementation. They are expected to analyze the data collected and give proposals and recommendations for planned development of the city. The submission of the exercise has to be submitted in the form of maps, illustrations and report.
Additionally, scope of the work may include sustainable development plans for sector specific themes such as tourism, conservation, re-densification, industrial corridor, SEZs etc.

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of Teaching and Examination
M. Plan (Urban Planning)
III[rd] Semester

S.N.	Board of Study	Subject Code	Subject Name	Periods Per Week			Scheme of Examination			Total Marks	Credit L+(T+P)/2
							Theory /Practical				
				L	T	P	ESE	CT	TA		
1	Architecture	503321(16)	Technical Writing	3	1	2	-	-	-	-	5
3	Architecture	503322(16)	Thesis Programming	8	-	19	-	-	-	-	18
4	Architecture	503323(16)	Training (Summer)	-	1	2	-		-	-	2
Total				**11**	**2**	**23**	-	-	-	-	**25**

L-Lecture, **T**- Tutorial, **P**- Practical, **ESE**- End Semester Examination, **CT**- Class Test, **TA**- Teacher's Assessment

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of Teaching and Examination
M. Plan (Urban Planning)
III[rd] Semester

S.N.	Board of Study	Subject Code	Subject Name	Periods Per Week			Scheme of Examination			Total Marks	Credit L+(T+P)/2
							Theory /Practical				
				L	T	P	ESE	CT	TA		
1	Architecture	503321(16)	Technical Writing	3	1	2	-	-	-	-	5
3	Architecture	503322(16)	Thesis Programming	8	-	19	-	-	-	-	18
4	Architecture	503323(16)	Training (Summer)	-	1	2	-		-	-	2
Total				**11**	**2**	**23**	-	-	-	-	**25**

L-Lecture, **T**- Tutorial, **P**- Practical, **ESE**- End Semester Examination, **CT**- Class Test, **TA**- Teacher's Assessment

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan - III
Branch: Architecture
Subject: Technical Writing
Code: 503321(16)
Total Theory Period: 40
Total Tutorial Period 12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Objective

Types and classification of reports: Types of reports. Difference between technical, scientific, legal and other types of communications. Specific characteristics of writing technical reports. Reporting communication: English comprehension and oral communication. Presentation techniques in digital and oral format for group discussion in seminars and meetings. Computer application: Data processing, word processing and presentation software. Spread sheets and databases. MS Office applications (Word, Excel, Access, Power point, etc.). Presentation and photo editing software such as Google sketch-up, Photoshop, Coral draw, etc. Format and elements of reports: Preface, acknowledgements, contents, indexing, key word indexing, introduction, body terminal section, appendices, references. Use of word processing software and templates for report writing. Special type of writing: Articles and manuals, planning and preparation of technical articles for publications, popular articles. Formal letters and specifications: Styles and formats for business and official letters, , requests for specifications and other types of business enquiries, replies to bidding for tenders and conduct of meetings, agendas and minutes of official records and meetings.

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan - III
Branch: Architecture
Subject: **Thesis programming**
Code: 503322(16)
Total Theory Period: 40
Total Tutorial Period:12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Objective:

To introduce students to literature review, research processes, techniques and colloquial arguments, so as to help them finalise a topic for their thesis in the subsequent semester. Two seminars would be conducted in the course of the semester to initiate the process of literature review related to their areas of interest culminating in selection of an appropriate thesis topic.

Contents:

- Identification of topic of interest having relevance to planning profession, integration and application of the learnt research processes to the pre-thesis work
- Book reviews and journal article compilation to establish the body of work existing in the selected area of work
- Collection of data and opinions by the stakeholders, decision makers, urban managers, advocates, technocrats, user groups, etc. on the topic selected.
- Based on the literature review and inputs from the colloquial arguments, the topics shall be finalized for thesis in the subsequent semester.
- Selection of study area, identification of extent and spread of intervention; collection of data for preparation of base map.
- Development of research thrust and work methodology. Identification of data sources.
- Data collection and analysis: sample determination, data tabulation (coding, de-coding, etc.), quantitative and qualitative data analysis. Appropriate and relevant data analysis methods would need to be studied by individual students based on thesis topic and research area.
- Finalisation of topic; formulation of problem statement, literature review, working hypothesis, research brief, research methodology, sample determination, data collection and analysis, report structuring.

The student will be required to make two seminar presentations and submit a report at the end of the semester which will qualify as the literature review and research methodology component of his/her thesis in the forthcoming semester.

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan - III
Branch: Architecture
Subject: **Professional Training (Summer)**
Code: 503323(16)
Total Theory Period: 40
Total Tutorial Period:12
Total Marks in End Semester Exam: 100
Minimum of class test to be conducted: 02

Objective

To introduce students to literature review, research processes, techniques and colloquial arguments, so as to help them finalise a topic for their thesis in the subsequent semester. Two seminars would be conducted in the course of the semester to initiate the process of literature review related to their areas of interest culminating in selection of an appropriate thesis topic.

Contents

- Identification of topic of interest having relevance to planning profession, integration and application of the learnt research processes to the pre-thesis work
- Book reviews and journal article compilation to establish the body of work existing in the selected area of work
- Collection of data and opinions by the stakeholders, decision makers, urban managers, advocates, technocrats, user groups, etc. on the topic selected.
- Based on the literature review and inputs from the colloquial arguments, the topics shall be finalised for thesis in the subsequent semester.
- Selection of study area, identification of extent and spread of intervention; collection of data for preparation of base map.
- Development of research thrust and work methodology. Identification of data sources.
- Data collection and analysis: sample determination, data tabulation (coding, de-coding, etc.), quantitative and qualitative data analysis. Appropriate and relevant data analysis methods would need to be studied by individual students based on thesis topic and research area.
- Finalisation of topic; formulation of problem statement, literature review, working hypothesis, research brief, research methodology, sample determination, data collection and analysis, report structuring.

The student will be required to make two seminar presentations and submit a report at the end of the semester which will qualify as the literature review and research methodology component of his/her thesis in the forthcoming semester.

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Scheme of Teaching and Examination
M. Plan (Urban Planning)
IVth Semester

S.N.	Board of Study	Subject Code	Subject Name	Periods Per Week			Scheme of Examination			Total Marks	Credit L+(T+P)/ 2
							Theory /Practical				
				L	T	P	ES E	CT	TA		
1	Architecture	503421(16)	Thesis Project	7	-	29	-	-	-	-	22
Total				**7**	**-**	**29**	**-**	**-**	**-**	**-**	**22**

L-Lecture, **T**- Tutorial, **P**- Practical, **ESE**- End Semester Examination, **CT**- Class Test, **TA**- Teacher's Assessment

Chhattisgarh Swami Vivekanand Technical University, Bhilai

Semester: M.Plan – IV | Branch: Architecture
Subject: Thesis project | Code: 503421(16)
Total Theory Period: 07 | Total Tutorial Period:12
Total Marks in End Semester Exam:
Minimum of class test to be conducted: 02

Objective

To develop independent critical thinking and design/research abilities and apply the knowledge gained, skills developed and professionalism inculcated over the last three semesters in an exercise of own interest and significant complexity.

Contents

- The thesis project is to be undertaken independently by each student on a topic of his/her choice related to urban and regional planning, selected and approved by the faculty during the previous semester as part of course requirements of the subject seminar
- As part of the studio requirements, the student is expected to go through a process of documentation, analyses and synthesis related to his/her specific topic and related area of work.
- Initial stages would include study of relevant case studies and literature relevant to the topic, on the basis of which the space program would be determined.
- Alternative designs arrived at through an iterative process of prioritization and elimination would be developed in the next stage.
- Final stages of work would include detailed design of the best option selected. Detailing would be largely dependent on the thrust and focus of the project selected and would vary from student to student.
- The student is required to work under the guidance of a supervisor allotted by the department and complete the requisite work in the course of the semester, ending in a viva-voce exam by a panel of examiners both external and internal.
- Progressive evaluation would be done by a panel of external and/or internal jurors during reviews held at intervals during the course of the semester.
- The student is required to defend his thesis through drawings, reports, study sheets, models and digital presentations and verbal communications in all the reviews and the final viva-voce.