Saurashtra University, Rajkot
Faculty of Architecture

Course : MASTER OF PLANNING
SPECIALIZATION : URBAN & REGIONAL PLANNING (URP)

Semester – I

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Semester – II

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**TOTAL** 30 1800 1200 3000

CCT = CORE COURSE    SO = SKILL ORIENTED COURSE    ICT = INTERDISCIPLINARY COURSE    ECT = ELECTIVE COURSE

DP = DISSERTATION / PROJECT WORK.

Faculty of Architecture – M. Plan.   Page 2 of 44
### Subject: History & theory of planning

**Intent**

To understand the dynamics of past & present ‘Human civilization & settlements’ through various theories & approaches.

- **History of ‘Human civilization & settlements’**
  - Study of ‘Evolution of settlement’ to understand the ‘Process of city formation’.
  - Analysis of distinct factors – origin, influence, livelihood, culture, growth, organization; physical form, space & scale.
  - Settlement as an ‘Expression of culture & civilization’
  - ‘History of Planning’ in Indian context, Concept of Town/City, city as spatial entity, living body, political statement, landmark; notion of axis, orientation, elements & systems
  - Various phases & factors of city growth & development.
  - Contribution of individuals in city planning.

- **Theories & approaches**
  - Definition & objectives of ‘Planning’, concepts & approaches of planning, governing factors – vision, strategy, goal, objectives, scope & limitation.
  - ‘Planning & development’ theory - concentric zone theory, sector theory, multiple nuclei theory, Land-use & land-value theory and other latest theories.
  - Various concepts - Garden city concept, green belt concept, city as an organism concept, other emerging concepts like global city, inclusive city, safe city, city of the future, shadow city, divided city.
  - Various models & approaches - advocacy & pluralism in planning, systems approach to planning, rationalistic & incremental approaches, mixed scanning & middle range planning, equity planning, political economy model

**Contact Hours:** 48  
**Total Marks:** 300

### Methodology

- Case & reference studies
- Literature & reference review
- Lectures – presentation & inputs from experts
- Presentation & review of students’ work
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**Subject : Socio-economic basis for planning**

**Part-I : Basics of sociology for planners**

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<th>Intent</th>
<th>To understand the principles – theories &amp; applications of sociology as a basis of planning</th>
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- **Fundamentals of sociology**
  - Study of nature, concepts & approaches of sociology; inter-relation of ‘Man & Nature’ and ‘Man & Society’
  - Analysis of critical aspects of society in Indian context; society, culture & tradition in the context of urban & rural settlements
  - Social factors like caste, age, gender, health, education, livelihood, shelter, safety, rights, equality & justice

- **Community & settlement**
  - Social concerns - slums & squatters communities; social, cultural & physical transformation of rural & urban area.
  - Consequences & impacts on social life, safety, security & their planning implications, social structure & spatial planning
  - Role of socio-cultural aspects on growth patterns of communities, neighbourhood & cities.
  - Social planning, policy & community participation; marginalized section of society, concepts of inclusive planning & gender planning.

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### Subject: Socio-economic basis for planning

#### Part-II: Basics of economics for planners

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<th>To understand the principles – theories &amp; applications of economics as a basis of planning</th>
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</table>

| Content | • **Fundamentals of economics**<br>  o Study of nature, scope & concepts of economics; elements of micro & macro economics  o Concepts of cost, price & value; demand & supply, elasticity & consumer markets, revenue & expenditure  o Economics of scale & scale of economies, economic & social costs, production & factor market  o Varied market structures & price determination; market failures, cost-benefit analysis. | |
|---------|---------------------------------------------------------------------------------------------|
|         | • **Development Economics in Indian context**<br>  o Determinants of national income, inflation, consumption, investment, unemployment, capital budgeting, risk & uncertainty, public-sector pricing, long-term investment planning.  o Experiences & lessons learned in Indian context, economic growth & development, quality of life & ‘Human-development Index’, poverty & income distribution, employment & livelihood.  o Economic principles in land-use planning & implications on land; policies & strategies in economic planning, balanced v/s unbalanced growth, public sector dominance, changing economic policies. | |

| Methodology | • Literature & reference review  • Lectures – presentation & inputs from experts  • Presentation & review of students’ work |
Subject: Planning techniques

Contact Hours: 48
Total Marks: 300

Part-I: Quantitative research methods for planning

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<th>To understand the basics of quantitative research methods &amp; techniques to analyze &amp; infer the data for planning</th>
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</table>
| Content | - Introduction & overview of QRM (Quantitative research methods)
- Simple Descriptive Statistics
- Probability and Sampling
- Population Projection
- Measures of Association
- Hypothesis Testing
- Data source, collection & presentation
- Correlation and Regression
- Multiple Regression and Correlation
- Time Series Analysis
- Index Numbers
- Linear Programming
- Input-Output Analysis |
| Methodology | - Literature & reference review
- Lectures – presentation & inputs from experts
- Presentation & review of students’ work |
## Subject: Planning techniques

### Part-II: Remote sensing & GIS for planning

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<th>Intent</th>
<th>To understand the basics of remote sensing &amp; GIS techniques &amp; applications to analyze &amp; infer the data for planning.</th>
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</table>
| Content | - **Remote sensing**  
  o Introduction & need of remote sensing, aerial & satellite remote sensing  
  o Principles of aerial remote sensing, Aerial photo-interpretation, photogrammetry, stereovision, measurement of heights / depths by relief displacement and parallax displacement.  
  o Principles of satellite remote sensing & spatial, spectral, temporal resolutions.  
  o Applications in planning, population estimation, identification of squatter / unauthorized areas, sources of pollution, etc., spatial resolution related to level of Planning  
  - **GIS (Geographical Information System)**  
    o Introduction & need of GIS, coordinate system & geo-coding, vector data structure & algorithms, raster data structure & algorithms  
    o Data bases for GIS – concepts, error modeling & data uncertainty, decision making through GIS, constructing spatial data infrastructure & spatial information system  
    o National Urban Information system. |
| Methodology | - Workshop & lab-work  
- Literature & reference review  
- Lectures – presentation & inputs from experts  
- Presentation & review of students’ work |
Subject: Basics of housing - environmental planning & infrastructure planning

Contact Hours: 48
Total Marks: 300

Intent
To get an overview of allied fields – housing, environmental planning & infrastructure planning and to understand their scope, role & relevance.

Content

- **Introduction to housing**
  - Concepts, definitions & components of housing, role of housing in socio-economic development of a nation.
  - Housing in relation to non-residential components of settlement, theories & approaches to housing.
  - Housing processes & sequence of development, housing need, assessment, demand & supply for both, formal & non-formal housing.

- **Introduction to environmental planning**
  - Ecology & flow-chain-web of energy, water, food, vegetation, material.
  - Ecology & relevance to development, resources & human settlements, global & national concerns for natural environment – its causes & consequences, environmental programme in Indian context.

- **Introduction to infrastructure planning**
  - Planning & developmental issues and infrastructure systems; land, water & energy.

Methodology
- Case & reference studies
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work
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**Subject : Studio – 1 : Area-planning**

Contact Hours: 240
Total Marks: 1500

**Intent**
To understand the characteristics of both, rural & urban area in order to develop the ‘Proposal’ of existing urban-area through the process of ‘Physical planning’.

**Content**
- **Analytical & demographic methods & techniques**
  - Survey techniques – data-base & base-map preparation, physical surveys, socio-economic surveys, land-use classification or coding, and expected outputs.
  - Demographic methods - population forecasts & projections, urban – rural ratio, urban – rural concentration; population groups, social area & strategic choice approach.
- **Rural-area study**
  - Study of selected rural-area to understand distinct characteristics of rural life, people, activities & occupation, life-style, culture & values, concerns & issues.
  - Analysis of existing situation, concerns & issues and formulation of suitable ‘Strategy’ for holistic development of area.
- **Urban-area study**
  - Study of selected urban-area to understand distinct characteristics of urban life – people, activities & occupation, life-style, culture & values, concerns & issues.
  - Analysis of existing situation, concerns & issues and formulation of suitable ‘Strategy’ for holistic development of area.
  - Developing ‘Strategic Proposal’ through the process of ‘Physical planning’.

**Methodology**
- On & off-site studies
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work
Elective – 1 PLANNING FOR TOURISM

Contact Hours: 48
Total Marks: 300

Intent
To develop an insight into selected subject from the ancillary fields and to understand its scope, role & relevance to planning.

Content
- **Introduction to Tourism**
  Definitions, scope, nature, classification and dimension of subject as an industry, tourism in developed and developing world.
- **Tourism Sector - Impacts**
  Relationship between Tourism and Urban Development, Tourism multiplier and forecasting methods: capacity building and carrying capacity planning for tourism projects, tourism and cultural and social change: Socio-cultural problems, environmental degradation.
- **Planning for Tourism**
  Nature and scope of a tourism plan- key issues and stages, data requirements, surveys, role of key players in tourism policy and planning, sustainable tourism development planning; community planning and tourism; implementation and management, role of travel and tourism promoting agencies, monitoring the tourism development; Tourism marketing - concept, techniques and strategies.
- **Policies and Programmes**
  Tourism policies at various levels.

(Note: subscription to any elective would be based on faculty availability)

Methodology
- Seminar - presentation & inputs from experts
- Workshop & lab-work
- Case & field studies
- Literature & reference review
- Group discussions
- Presentation & review of students’ work
Elective – 1  ADVANCE GIS & SPATIAL PLANNING

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<td>To develop an insight into selected subject from the ancillary fields and to understand its scope, role &amp; relevance to planning.</td>
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<td><strong>Introduction to Advance GIS &amp; spatial planning</strong></td>
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<tr>
<td>Definitions, scope, nature, classification and dimension of subject as a tool &amp; concept, its importance, impact &amp; relevance for planning in general and for spatial planning in particular.</td>
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<tr>
<td><strong>Geo-Visualization Tool for spatial data analysis:</strong></td>
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<td>Learn to use query based analysis, application of various software i.e. ArcView, ArcGIS, Symbology to be developed, using data from various maps, sources &amp; nature, getting Geo-visualization as expected outcome</td>
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<td><strong>Case/place/phenomena base Geo-modelling &amp; planning:</strong></td>
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<td>A. Urban flood mapping &amp; planning</td>
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<td>B. Civic infrastructure spot mapping &amp; planning</td>
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<td>C. Urban transportation mapping &amp; planning</td>
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<td>D. Urban Morphology</td>
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### Master in Planning

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### Subject: Urban planning & development

**Contact Hours:** 48  
**Total Marks:** 300

### Intent

To understand the planning & development in urban context through various theories & approaches borrowed from allied disciplines & specialization

### Content

- Definition, scope, content & need for urban planning  
- Theories in planning in urban context  
- Urban growth & system of cities, growth of cities scale, complexity & its impact on national development.  
- Cities as engines of growth, cities as ecosystems, resources in cities.  
- City – region linkages; city, fringe & the periphery - physical & functional linkages, peri-urban development.  
- Urban environment – concepts & concerns of urban sustainability, issues related to diversity & unintended growth, economic, social & environmental sustainability, quality of life, inclusivity & equity, climate change.  
- Urban infrastructure – transit oriented development, urban transport, participatory planning, inclusive planning, advocacy planning.  
- Settlement planning.  
- Urban development – concepts, approaches, strategies & tools, policies & programmes at various levels, impact of policies & programmes on metro & mega cities.  
- Understanding & emphasis on land-use planning & zoning

### Methodology

- Literature & reference review  
- Lectures – presentation & inputs from experts  
- Group discussions  
- Presentation & review of students’ work
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**Subject: Settlement conservation & planning**

**Contact Hours: 48**  
**Total Marks: 300**

**Intent**  
To understand the concept of conservation & settlement conservation and to equip an individual for its sensible integration in & with planning

**Content**

- Concept, definition, scope, components & relevance of subject in planning
- Conservation of natural environment (land, water, flora-fauna, etc.) & manmade environment
- Settlement in historical context, key-factors of settlement formation – regional, environmental, economical & political, tradition & culture as determinant of settlement
- Heritage as a motivating force in conservation, planning & development
- Approach for settlement conservation – regeneration, rehabilitation, renewal, preservation, revitalization, restoration & reconstruction
- Built-heritage - determinants of built-heritage, integration of historic monuments, areas, systems & resources in planning & development process.
- Conservation strategies & policies, regulatory measures, community participation
- Preparation of conservation and heritage management plans

**Methodology**

- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work
Master in Planning  

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<td>3 Hrs.</td>
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**Subject: Planning policies & legislation**

Contact Hours: 48  
Total Marks: 300

**Intent**

To understand the law & legal framework pertaining to planning & development in Indian context

**Content**

- Definition, scope, role & relevance of planning policies & legislation
- Law & legislation – concept, meaning, ordinance, bill/act regulations, byelaws
- Significance of law & relation with planning, statutory backing for planning scheme, planning legislation as a means of community development & upgradation
- Indian constitution - legal tool for planning & development, legislature competence of state & central government for planning legislation
- National environmental policy act – evolution, objectives, contents & planning implications.
- Land acquisition act, ULC (Urban Land Ceiling) Act, TPS (Town Planning Schemes), GTP&UD (Gujarat Town Planning & Urban Development) act, etc.; evolution, objectives, contents, procedures for preparation & implementation of legal plans – DP & TPS, concept of vision plans
- Land development – control, objectives, legal tools, critical evaluation of zoning, sub-division regulations, building regulations & byelaws, development code, zoning law & law relating to peripheral control
- Constitutional amendment act no.- 73rd & 74th and Planning at grassroots level

**Methodology**

- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work

Faculty of Architecture – M. Plan.
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<td>3 Hrs.</td>
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**Subject : Inclusive planning**

Contact Hours: 48
Total Marks: 300

**Intent**
To develop an insight into inclusion of under-privileged section of society into the planning process through planning

**Content**
- Concept, definition, scope, components & relevance of inclusive planning in India
- Stakeholders – profile & needs, access to shelter, services & livelihoods
- Urban-Poor, informal sector, gender, children, elderly, disabled, displaced people, etc.
- Slums - dimensions, causative factors, determinants, location characteristics of settlements
- Informal sector - growth, characteristics, functions, economic contributions, linkages with formal sector, impact on planning & development
- Participatory planning process & policies - programmes & legislation methods, role of stakeholders, acts, plans, policies and programmes at various levels
- Planning interventions - Inclusive zoning, development & building regulations, slum Improvement.
- Regulatory & facilities polices for access of poor to infrastructure, land and labor markets, informal settlements & their integration into mainstream planning, standards & their applicability to poor

**Methodology**
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
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**Subject: Studio – 2: Urban-planning**

**Contact Hours:** 240
**Total Marks:** 1500

**Intent**

To understand the city or urban-region and to prepare ‘Integrated urban development plan’ of selected area.

**Content**

- **Base-line study & analysis of selected area**
  - Survey techniques – data-base & base-map preparation, physical surveys, socio-economic surveys, land-use classification or coding, and expected outputs.
  - Demographic methods - population forecasts & projections, urban – rural ratio, urban – rural concentration; population groups, social area & strategic choice approach.
  - Planning process & types (long term, short-term, perspective, developmental, normative, sectorial & spatial).

- **Identification of concerns & issues of existing condition**
  - Identification of concerns & issues, setting of goals, objectives, alternatives, evaluation, choice/decision making, implementation, monitoring, redefinition of goals & objectives.
  - Integration of various concerns & issues - ecological conservation with the principles of planning, limitations of development theories, implementation & funding mechanisms for planning, urban decay & dilapidation, urban renewal in context and central/core area-development.

- **Preparation of ‘Integrated urban development plan’**
  - Formulating of suitable & alternative ‘Strategy’ for holistic development of area.
  - Developing an ‘Integrated urban development plan’ as ‘Strategic Proposal’ for the selected area.

**Methodology**

- On & off-site studies
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work
### Elective – 2 NATURAL RESOURCE PLANNING & MANAGEMENT

**Contact Hours:** 48  
**Total Marks:** 300

**Intent**
To develop an insight into selected subject from the field of allied specialization and to understand its scope, role & relevance to planning.

**Content**
- **Introduction to Natural Resource Planning & Management**  
  Definitions, scope, nature, classification and dimension of subject as a concept & concern. Its type, sources, importance, impact & relevance in planning.
- **Concepts of Cast - Price & Value**  
- **Concept of Market**  
- **Property Rights: Nature, ownership, Commons & Open Access, Tenures**
- **Conflicts & Resolution, Concerns with NR, need - scarcity & management**
- **Valuation: Techniques, Applications, Issues**
- **NR Management: Options, pros and cons of each of options, Case Studies**
- **NR policy & Management issues in India, Historical Perspective**
- **Issues of productivity, Equity & Sustainability, Practical Application to NR issues**

(Note: subscription to any elective would be based on faculty availability)

**Methodology**
- Seminar - presentation & inputs from experts
- Workshop & lab-work
- Case & field studies
- Literature & reference review
- Group discussions
- Presentation & review of students' work
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**Elective – 2 LAND ECONOMICS & REAL-ESTATE**

**Contact Hours:** 48  
**Total Marks:** 300

**Intent**  
To develop an insight into selected subject from the field of allied specialization and to understand its scope, role & relevance to planning.

**Content**

- **Introduction to Land Economics & Real-estate**  
  History of development in real estate property & land development process in India & its trend. Prospect of real estate business and nature of services in India.

- **Land record and information systems**  
  Survey & mapping – Record & book keeping – Methods of revenue land survey of settlement as part of the settlement record – Registration Act & Procedures

- **Land tenure-ship**  
  Various legal & informal land tenure-ship, Marketability of property in each status, Different Acts & Its rules applied, Slums & squatters, nature of tenure exists in slums, Conditions & factors under which land become available for shelter.

- **Land Price & Appreciations**  
  Factors that governs Land Price appreciation from rural agriculture land to urban residential plot – Process of calculation land development cost Items considered for estimating cost to find out appreciation value of the parcel of plot.

- **Real Estate Development Services & Real estate market**  
  Developer, Consultancy and Management Maintenance services– Present form in the field of Consultancy, Market & situation analysis – Conducting market survey, content of survey – items that should be addressed in the market survey.

- **Market survey & Demand assessment**  
  Market survey for real estate business for prospect & for specific projects, Assessing residential property demand. Method of estimating & forecasting demand for residential property under different category and various segments.

- **Financial feasibility assessment**  
  Financial feasibility analysis of real estate business and the project level feasibility analysis.  
  (Note: subscription to any elective would be based on faculty availability)
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**Subject: Research methods & thesis appraisal**

Contact Hours: 48
Total Marks: 300

**Intent**
To understand the principles & theories of & for any research of specific domain and its application to develop a conceptual frame-work for thesis appraisal

**Content**
- Definition, scope & relevance of subject
- Research – nature & functions, traditional & potential areas, the three stages of research, structural frame-work of research
- Research methods & methodology, data – nature, sources, collection, stages, analysis, references & referencing, etc.
- Research area as a thesis topic – identification, relevance, feasibility, aim & objectives, scope & limitations, literature & reference review
- Structure of report, writing & representation skills & techniques, report formation

**Methodology**
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work
Subject: Regional planning & development

Contact Hours: 48
Total Marks: 300

Intent
To understand the planning & development in regional context through various theories & approaches borrowed from allied disciplines & specialization

Content
- Definition, scope, content & need for regional planning
- Theories in planning in regional context
- Regional imbalances, inequalities, causes, impacts & conflicts in India
- Regional planning policies & its relevance
- Concepts of spatial organization & region in India, regionalization, types, purpose & methods; delineation of regions
- Economic & regional growth processes & approaches
- Concept of growth centres, growth pole, service centre in India, zoning-atlas & spatial, environmental planning initiative in India
- Settlement, settlement-pattern, structure & distribution
- Introduction to regional, economic, industrial & location theories
- Industrialization & industrial development in India
- Agriculture in India - agricultural development, planning & policies, infrastructure & role of public – private sector
- Urbanization & urban systems in India, spatial variation - reasons, factors & implications for planning
- Human development indices in India - growth, distribution, migration, causes, flows, impacts, regional disparity
- Regional infrastructure development & planning in India
- Backward-area development in India - identification & development policies & approaches; basis of decentralized & multi-level planning
- Institutional framework for regional planning in India, authorities, integration, resources & issues

Methodology
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work
Subject: Planning - Governance & Government

Contact Hours: 48
Total Marks: 300

Intent
To develop an insight into the structure of government & functionaries an its relevance to planning

Content
- Concept, definition, scope, components & relevance of subject in planning
- The constitution of India, historical perspective, comparison with other constitutions, main features
- Federal structure of the constitution, the three lists, centre-state relations, the three arms of government, executive at the centre & the states
- How government works, organization of government, staff & line functions, public policy formulation, the bureaucracy, legislation & and administrative law
- District administration in India, role of the collector, land-use laws, the Bombay land revenue code, rules & regulations governing non-agricultural use of land
- Planning in India, political & economic dimensions, planning process, the planning commission - role & functions, planning at the centre & at the state level
- Five year plans & 10th five-year plan of Government of India & Government of Gujarat

Methodology
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
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**Subject : Project & development finance**

Contact Hours: 48  
Total Marks: 300

**Intent**  
To understand the fundamentals of project & development finance and to equip an individual with project appraisal techniques

**Content**

- Concept, definition, scope, components & relevance of subject in planning  
- Overview of development finance approaches, concepts, components, process, credit rating  
- State finance - finance commissions, functions, relationship between central, state & urban local government  
- Municipal finance - sources of revenues, various funds, structure of finances, fiscal problems & issues of financial management, 74th constitution amendment act for municipal finance, expenditure pattern, bilateral & multi-lateral lending intuitions, mobilizing resources for project  
- Investment planning & financing mechanism link with spatial plans, process, components, investment needs, budgeting, financial investments in infrastructure & services.  
- Financing of development, infrastructure & services – mechanisms & instruments, subsidy reduction, cost recovery, public-private partnerships, financial appraisal, investment appraisal; financial risk – sources, measures & perspectives on risk, sensitivity analysis.  
- Project Appraisal Techniques through case studies & approaches by different Agencies for varied indicators – technical, financial, economic, social, environmental, etc.

**Methodology**

- Literature & reference review  
- Lectures – presentation & inputs from experts  
- Group discussions  
- Presentation & review of students’ work
Subject : Studio – 3 : Regional-planning

Contact Hours: 240
Total Marks: 1500

Intent
To understand the region and to prepare ‘Comprehensive regional development plan’ of selected region.

Content

- **Base-line study & analysis of selected region**
  - Survey techniques – data-base & base-map preparation, physical surveys, socio-economic surveys, land-use classification or coding, and expected outputs.
  - Demographic methods - population forecasts & projections, urban – rural ratio, urban – rural concentration; population groups, social area & strategic choice approach.
  - Planning process & types (long term, short-term, perspective, developmental, normative, sectorial & spatial).

- **Identification of concerns & issues of existing condition**
  - Identification of concerns & issues, setting of goals, objectives, alternatives, evaluation, choice/decision making, implementation, monitoring, redefinition of goals & objectives.
  - Integration of various concerns & issues - ecological conservation with the principles of planning, limitations of development theories, implementation & funding mechanisms for planning, urban decay & dilapidation, urban renewal in context and central/core area-development.

- **Preparation of ‘Comprehensive regional development plan’**
  - Formulating of suitable & alternative ‘Strategy’ for holistic development of region.
  - Developing a ‘Comprehensive regional development plan’ as ‘Strategic Proposal’ for the selected region.

Methodology
- On & off-site studies
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work
Elective – 3  ENVIRONMENTAL IMPACT ASSESSMENT

<table>
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<th>Intent</th>
<th>To develop an insight into selected subject from the field of allied specialization and to understand its scope, role &amp; relevance to planning.</th>
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</table>
| Content | **Introduction to Environmental Impact Assessment (EIA)**  
Definitions, scope, nature, classification and dimension of subject as concept, its importance, impact & relevance for planning  
**Concept & Objectives of EIA**  
Origin & evolution of EIA, Constitutional & Policy Regulations in India, Institutional arrangement, aim to provide base for application of EIA in environmental protection. To explore scientific approaches to resolve environmental problems  
**Planning and Management of Impact Studies**  
Conceptual Approach, Proposal, Study Formulation, Responsibilities assignment, Overview of steps and procedures  
**EIA Regulation in India**  
EIA Notification 2004, Regulatory manual and guidelines, Impact Identification, Baseline Studies for EIA, Environmental Settings, Screening and Scoping  
**EIA Methods and Techniques**  
Introduction to various EIA Methods, Categories of EIA Methodologies, Check List Methods, Quantitative Checklists, Network Methods, etc.  
**Concept of Significant Impacts, Alternative Evaluation**  
Determination of EI Importance, Determination of Weightages, Measurement of Impacts, Impact Prediction and Evaluation, Impact Mitigation, Comparison of Alternatives, Documentation and Monitoring, Development of Value Functions  
**Environment Impact Analysis for elements - Air, Water, Land, Noise, Energy**  
Assessment of Impact on various elements & their Systems, Environmental Settings & Description of Project, Meteorology and Quality Status, Case Studies  
**Cultural Resources, Visual and Biological Impact Analysis**  
Assessment of Impact on Biological Environment, Information of Cultural Resources, Biological Environment Concepts & Terms, Flora & Fauna Impact Assessments, Case Studies  
**Socio Economic Impact Analysis**  
Assessment of Socio-economic Impact, approaches & steps in assessment, Environmental settings description, Analysis of Public Services & Facilities, Impacts of Economic Profile of Community, Case Study  
**People’s Participation in EIA and Evaluation Criteria for EIA / EMP Reports**  
People’s Participation in EIA, Objectives & Techniques, EIA Reports content & evaluation criteria, EIA Evaluation Procedures  
**New Development and Summing-up**  
Special Projects: Urban Infrastructure Projects/Townships/SEZ, Effectiveness of EIA & Future Trends in EIA, Strategic Environmental Assessment (SEA) & Scope of EIA |
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Elective – 3  **HOUSING DESIGN & TECHNOLOGY**

Contact Hours: 48  
Total Marks: 300

**Intent**  
To develop an insight into selected subject from the field of allied specialization and to understand its scope, role & relevance to planning.

**Content**
- **Introduction to Housing Design & Technology**  
Definitions, scope, nature, classification and dimension of subject as concept, its importance, impact & relevance for planning. Historical perspective of housing typologies, design approaches, & housing technology.
- **Code for humane habitat and Project formulation**  
Issues in habitat planning & design, aim & objective, Performance criteria, quality v/s quantity, scales - decision areas & design principles at varied settlement.
- **Evolution of Housing.**  
History of Housing in varied contexts - oriental, transit, rural, temporary, permanent, & urban, etc., evolution of Housing & history of modern housing typology.
- **Design guidelines**  
Design guidelines of neighborhood, streets, work places, public & open spaces. House form variations using the guidelines, open spaces - hierarchy, magnitude, ratio, & utilization. Socio-cultural, contextual, environmental, & economical preferences, various housing typologies, sites & services project, slum up-gradation & re-development projects, principles of landscape design.
- **Participatory design process**  
Participatory design process, concept of planner builder, users’ involvement in planning, design & construction, Merits over conventional housing development, case studies i.e. Company or Township housing, Group housing, High-density housing, special housing (disaster-resistant, migrant, reallocation, etc.), GDCR & its impact on building typology, character & built-form, Design Issues in Private-Public Partnership Projects  
(Note: subscription to any elective would be based on faculty availability)

**Methodology**
- Seminar - presentation & inputs from experts
- Workshop & lab-work
- Case & field studies
- Literature & reference review
- Group discussions  
Presentation & review of students’ work
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**Subject:** Professional practice & management for planner

Contact Hours: 48
Total Marks: 300

**Intent**
To understand the wide horizon of planning profession and to equip them for efficient management of professional practice

**Content**
- Management of professional practice
- Techno-legal, ethical & financial aspects of profession
- IT (Information Technology) & PM (Project Management) applications
- Project planning & appraisal

**Methodology**
- Workshop & lab-work
- Case & reference studies
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work
### Subject: Studio – 4: Thesis

Contact Hours: 384  
Total Marks: 2400

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**Intent**

To develop a critical thinking attitude which enables an individual to undertake an independent & original research based on judicious inquiry & rationale frame-work and to integrate an individual’s planning, formulating, structuring & communication abilities to generate a thesis document.

**Content**

- Development of thesis proposal - aim & objectives, research questions, hypothesis, scope & limitations, literature review & reference
- Working methodology, analytical frame-work, structuring of research document, time-schedule & stages
- Data collection, analysis, inferences & conclusions to comprehend in research work
- Structure of report, writing & representation skills & techniques, report formation, depth & worth of documentation & document

**Methodology**

- On & off-site studies
- Literature & reference review
- Lectures – presentation & inputs from experts
- Group discussions
- Presentation & review of students’ work
Name of Course | Semester | Core / Elective / Allied / practical/ project | Course / Paper Code | Credit | Internal Marks | External Marks | Practical / viva Exam | External Exam Time Durations
---|---|---|---|---|---|---|---|---
Master in Planning | IV | ECT | 16100202040301 | 3 | 180 | 120 | Viva | 1 Day

**Subject: Elective – 4 DISASTER MITIGATION & MANAGEMENT**

Contact Hours: 48
Total Marks: 300

**Intent**
To develop an insight into selected subject from the ancillary fields and to understand its scope, role & relevance to planning

**Content**
- **Introduction to Disaster Mitigation & Management**
  Definitions, scope, nature, classification and dimension of subject as concept & concern, its importance, impact & relevance for planning.
- **Objectives**
  A. To understand the nature & importance of disaster management by providing broad exposure to elements of disaster management
  B. To understand community based approaches to disaster management covering mitigation, preparedness, response, rehabilitation and reconstruction
  C. To understand various tools for hazard & vulnerability assessment at various level, structural mitigative measures, infrastructure & critical facilities, types of technological hazards, association, risk & assessment and control measures
  D. To understand theory & practice of community based disaster management
- **Session wise content**
  A. Introduction to the concept of disaster management & mitigation
  B. Trend in urban development & challenges to stake-holders in risk reduction
  C. Natural disaster : Nature, causes, impact
  D. Hazard and vulnerability assessment, concepts, tools and techniques
  E. Pre-disaster mitigation & life-protection and critical facilities against hazards
  F. Concepts & overview of technological hazards at the various levels
  G. Major accident hazards at special places - industries, ports, storages
  H. Safety management system: Strategies for implementation
  I. Emergency planning, preparedness and response at Urban level
  J. Principles & methods of community based approaches in disaster response
  K. Community based disaster management practice & capacity building
  L. Education & training on ‘Mitigation & Emergency Planning’

(Note: subscription to any elective would be based on faculty availability)

**Methodology**
- Seminar - presentation & inputs from experts
- Workshop & lab-work
- Case & field studies
- Literature & reference review
- Group discussions
- Presentation & review of students’ work
<table>
<thead>
<tr>
<th>Name of Course</th>
<th>Semester</th>
<th>Core / Elective/ Allied/ practical/project</th>
<th>Course /Paper Code</th>
<th>Credit</th>
<th>Internal Marks</th>
<th>External Marks</th>
<th>Practical / viva Exam Marks</th>
<th>External Exam Time Durations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master in Planning</td>
<td>IV</td>
<td>ECT</td>
<td>16100202040302</td>
<td>3</td>
<td>180</td>
<td>120</td>
<td>Viva</td>
<td>1 Day</td>
</tr>
</tbody>
</table>

**Subject : Elective – 4 ENERGY, CLIMATE CHANGE & PLANNING**

<table>
<thead>
<tr>
<th>Intent</th>
<th>Contact Hours: 48 Total Marks: 300</th>
</tr>
</thead>
<tbody>
<tr>
<td>To develop an insight into selected subject from the ancillary fields and to understand its scope, role &amp; relevance to planning</td>
<td></td>
</tr>
</tbody>
</table>

| Content | |
|---------| |
| • **Introduction to Energy, Climate change & Planning** Definitions, scope, nature, classification and dimension of subject as concept & concern, its importance, impact & relevance for planning. Interface, inter-relation of Urban planning & development with Energy & Climate change | |
| • **Energy Generation and Consumption** Energy supply & demand, energy consumption in urban area, determinants of energy demand, phenomenon of climate change, factors influencing climate change, impacts of climate change | |
| • **Energy Planning and Management** Concept of Energy planning & management, concerns of mitigation and adaptation to climate change, energy efficient development, Compact urban form, transit oriented development. mechanisms & measures for mitigating & adapting to climate change at various levels | |
| • **Plans, Policies and Strategies** Plans, Policies and Strategies pertaining to energy planning, conservation, climate change mitigation and adaptation | |
| (Note: subscription to any elective would be based on faculty availability) | |

| Methodology | |
|-------------| |
| • Seminar - presentation & inputs from experts | |
| • Workshop & lab-work | |
| • Case & field studies | |
| • Literature & reference review | |
| • Group discussions | |
| • Presentation & review of students’ work | |

Faculty of Architecture – M. Plan.  Page 31 of 44
### Subject: Practical training

**Contact Hours:** 4 weeks

| Intent | To understand the wide horizon of planning profession and acquaint an individual to dynamics of profession.  
(To conduct/undertake during Summer-break between 1st & 2nd year) |
|---|---|
| Content | • Management of professional practice  
• Techno-legal, ethical & financial aspects of profession  
• IT (Information Technology) & PM (Project Management) applications  
• Project planning & appraisal |
| Methodology | • Practical training in/with research &/or consulting firms/experts  
• On & off-site studies  
• Group discussions  
• Presentation & review of students’ training work |
| Scheme of Examination | Internal Assessment 60% of Total – 180  
External Assessment 40% of Total – 120 |
a. ORDINANCES

O. M.PLAN. – 1 :
1. A candidate is eligible to apply for admission in first (1st) year of Two (2) year Regular - Fulltime Degree course of Planning, subject to he/she has...
   a. Bachelor’s degree (or equivalent) in Architecture / Planning / Engineering or Technology (Civil or equivalent) with minimum aggregate 50% marks (or equivalent grade) for general category and minimum aggregate 45% marks (or equivalent grade) for reserved category (as per the State Govt.’s norm) from recognized institute or University OR
   b. Master’s degree (or equivalent) in Economics / Geography / Sociology with minimum aggregate 50% marks (or equivalent grade) for general category and minimum aggregate 45% marks (or equivalent grade) for reserved category (as per the State Govt.’s norm) from recognized institute or University.

2. He/she needs to appear in and clears the ‘Admission procedure’ which includes (but not limited to inclusion of any/all) Application as per the prescribed format, followed by Aptitude test &/or Focus Group Discussions &/or Interview. The weightage of ‘Qualifying Degree’ and ‘Constitutes of Admission procedure’ shall be equal i.e. 50% in the matter of admission.

3. The Admission procedure shall be monitored & governed by the ‘Admission Committee’ consisting following members:
   a. Chairman of the Institute or Representative of Management
   b. Principal of the Institute
   c. Head of the Department
   d. Representative of Vice-Chancellor or University
   e. Dean of the Faculty
   f. External subject-experts (at least Two (02))
   The ‘Quorum for Admission Committee’ must have minimum Four (04) members having at least Two (02) external subject-experts.

4. The Intake for admission in first (1st) year shall be as per the AICTE norms and the admission shall be as per the State Govt.’s norms.

5. The above mentioned details i.e. ‘Academic qualification’, ‘Intake’, ‘Reservation in each Category/Quota’ are subjected to change/amend as and when revised by the respective competent authority, time to time.

O. M. Plan. – 2 :
The duration of M.Plan. Degree Programme is of Two (2) Academic years, which need to be completed within Four (4) Academic years from the date of his/her first admission in the course. A candidate who fails to complete the course in given time-period, require to take readmission as a fresh candidate.
O. M. Plan. - 3 :
Masters of Planning is Two years (four semesters) Regular - Fulltime Degree Programme and therefore admitted candidate can not consider the same as Part-time or cannot join any other course of study without prior permission of the University.

O. M. PLAN. – 4 :
The medium of study – instruction & examination shall be English.

O. M. PLAN. – 5 :
A candidate has to appear in all Four (4) semester exams conducted by the Saurashtra University. The student need to pay Exam fees for all semesters as prescribed by the Saurashtra University, time to time.

O. M. PLAN. – 6 :
The Principal/H.O.D. (Head of Department) shall have to take appropriate measure for Ragging & Gender problems arising in the University Department. In case of occurrence of any such incident, the violator shall be dealt with very seriously and appropriate stringent action be taken by the H.O.D. by observing principle of natural justice. The H.O.D. may appoint a committee to inquire in to the matter which will also observe the principle of natural justice. The committee will submit its report to the H.O.D. who will forward the, same with his comment there upon to the University Registrar, for taking further necessary action in the matter.

O. M. PLAN. – 7 :
If a candidate fails to obtain minimum marks for passing in particular course in ‘Term End Examination’ taken by the University, he/she have to re-appear for re-examination whenever it scheduled by the University.

O. M. PLAN. – 8 :
The candidate once admitted for the any/all semester, is required to enroll himself with the University in beginning of the semester or in time-limit given by the University.

O. M. PLAN. – 9 :
Where it is specifically provided in the syllabus of the course, the concern Institute may arrange educational tour/study tour. It will be compulsion on part of student to join the same and on completion of tour he/she will be required to submit a report to the Institute. Time spent for the purpose will be considered for computation of term keeping requirement. The Institute may arrange the tour by considering the nature/scope & other provision of the syllabus.
O. M.PLAN. – 10:

Followings are the ‘Eligibility criteria’ a candidate requires to fulfill, in terms of attendance & behavior; to be ‘Eligible’ in ‘External’ or ‘End-of-term’ exam for any subject, in any term.

1. As per the norms of Saurashtra University, a candidate has to attend minimum 80% of total lecture or practical periods conducted in each subject, in each semester in order to be eligible for final internal or external assessment/exam. If a candidate has deficit of maximum 10% (from 70% till 80%) due to medical-cause, the Principal/H.O.D. may condone the deficit on the basis of valid supportive evidences.

2. If a candidate remains absent for more than six (6) weeks without a valid reason in a semester, such absence shall be deemed as a discontinuation of study & he/she may seek fresh registration for same semester in next academic year.

3. A candidate who fails in attendance is required to repeat the subject & need to reappear as a fresh student for attendance & assessment in the next academic year.

4. A candidate has to demonstrate moral conduct & disciplined character during the term.

O. M.PLAN. – 11:

Followings are the ‘Passing criteria’ a candidate requires to fulfill, in terms of marks to ‘Pass’ any subject-head.

1. In case of subjects having only internal head, a candidate has to secure minimum 50% to pass the subject.

2. In subjects having internal & external head, a candidate is required to secure minimum 50% marks as aggregate to pass the subject. If a candidate secures less than 50% in the internal, still shall be allowed to appear for the external & has to achieve remaining/deficit marks in the external in order to secure minimum 50% as aggregate to pass the subject.

3. A candidate who fails to ‘Pass’ the subject, he/she is required to clear the failed head/s (head/s in which 50% in not achieved, i.e. internal or external or both). This can be better understood in table given below.

<table>
<thead>
<tr>
<th>Case</th>
<th>Grade/Marks achieved in head/s</th>
<th>Status of the subject</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internal</td>
<td>External</td>
</tr>
<tr>
<td>Case-1</td>
<td>≥50%</td>
<td>≥50%</td>
</tr>
<tr>
<td>Case-2</td>
<td>≥50%</td>
<td>&lt;50%</td>
</tr>
<tr>
<td>Case-3</td>
<td>&lt;50%</td>
<td>≥50%</td>
</tr>
<tr>
<td>Case-4</td>
<td>≥50%</td>
<td>&lt;50%</td>
</tr>
<tr>
<td>Case-5</td>
<td>&lt;50%</td>
<td>≥50%</td>
</tr>
<tr>
<td>Case-6</td>
<td>&lt;50%</td>
<td>&lt;50%</td>
</tr>
</tbody>
</table>
B. REGULATIONS

R. M.PLAN. – 1:
No candidate is allowed to reappear in any head &/or subject, which he/she has ‘Clear’ already. In subjects having both, internal & external head, if a candidate has ‘Pass’ either head but fails to ‘Clear’ the subject, is allowed to keep the respective ‘Pass’ head but required to ‘Clear’ the other remaining head in order to ‘Clear’ the subject.

R. M.PLAN. – 2:
A candidate who is eligible to appear but fails to appear or fails or passes the first (1st) semester examination shall be permitted to keep the term of second (2nd) semester, if he/she has maximum backlog of Ten (10) credits accumulated from first (1st) semester.

R. M.PLAN. – 3:
1. A candidate who is eligible to appear but fails to appear or fails or passes the first (1st) year examination shall be permitted to keep the term of third (3rd) semester, if he/she has maximum backlog of Ten (10) credits accumulated from first (1st) year.

2. A candidate who has exceeded credit backlog shall not be promoted to next semester & need to re-appear in specific/all previous semester/s to clear the said backlog in next attempt, offered in next academic year.

3. For permissible credit backlog, a candidate having ‘Internal’ head backlog needs to re-attend ‘Internal’, offered in next term; while, a candidate having ‘External’ head backlog needs to re-appear in ‘External’, offered in next term.

R. M.PLAN. – 4:
1. A candidate who is eligible to appear but fails to appear or fails or passes the third (3rd) semester examination shall be permitted to keep the term of four (4th) semester, if he/she has maximum backlog of sixteen (10) credits accumulated from first (1st), second (2nd) & third (3rd) semester.

2. A candidate who has exceeded credit backlog shall not be allowed to go to the next semester & needs to re-appear in specific/all previous semester/s to clear the said backlog in next attempt, offered in next academic year.

3. For permissible credit backlog, a candidate having ‘Internal’ head backlog needs to re-attend ‘Internal’, offered in next term; while, a candidate having ‘External’ head backlog needs to re-appear in ‘External’, offered in next term.

4. A ‘Practical training’ is ‘Non-credited, Compulsory and only Internal’ in nature. It shall have minimum duration of Four (04) weeks and a candidate needs to completed the ‘Practical training’ during his/her course tenure.
R. M.Plan. – 5:
If a candidate fails to clear all credit backlogs, he/she shall not be allowed to submit the thesis for evaluation.

R. M.Plan. – 6:
A candidate shall only be eligible to get award of M.Plan. Degree, if he/she passes the fourth (4th) semester completely.

R. M.Plan. – 7:
1. For ‘Studio-based subjects’ & ‘Electives’, the ‘External’ or ‘End-of-term exam’ may be in form of ‘Viva’ and/or ‘Jury’.

2. All ‘Electives’ are mandatory & internal only and their respective credits are considered in calculation for respective term’s credit-load, however if a candidate fails to ‘Pass’ any ‘Elective’, he/she is required to clear it in the next attempt, offered in the next term.

R. M.Plan. – 8:
1. There shall be ‘Examination committee’ consisting of the following members:
   g. Dean of the Faculty
   h. Principal/H.O.D.
   i. Head of Examination
   j. Subject expert/s as ‘Invitees’ (if required)

2. The ‘Examination Committee’ shall:
   a. Ensure the compliance of prescribed ‘Ordinance & Regulations’
   b. Consider & award grace marks as per the provisions
   c. Form ‘Assessor panel’ for regular assessment, rechecking & reassessment.
   d. Rectify marks, if found revised in ‘Rechecking’ or ‘Reassessment’.

R. M.Plan. – 9:
1. A candidate who fails only in ‘External’ head of a subject which eventually leads to ‘Fail’ in the said subject, can apply for ‘Rechecking’ & ‘Reassessment’ for such external head.

2. A candidate can apply for ‘Rechecking’ for all such heads, but can apply for ‘Reassessment’ for any one (1) head out of all.
R. M. Plan. – 10:

It shall be the sole discretion of Examination Committee to award ‘Grace Marks’ and no appeal in this regard shall be entertained.

1. The grace marks shall be offered to ‘External’ head only and not to ‘Internal’ head.

2. Except ‘Professional training’ & ‘Thesis’, the grace marks is applicable to all other subjects having both, internal & external heads.

3. Following is the scheme for grace marks applicable to ‘External’ head:

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Marks of ‘External’ head of subject, in which ‘Grace marks’ are required</th>
<th>‘Maximum grace marks’ can be awarded as a marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Upto 100 marks</td>
<td>10 marks</td>
</tr>
<tr>
<td>2</td>
<td>Upto 200 marks</td>
<td>15 marks</td>
</tr>
<tr>
<td>3</td>
<td>Upto 600 marks</td>
<td>20 marks</td>
</tr>
<tr>
<td>4</td>
<td>More than 600 marks</td>
<td>25 marks</td>
</tr>
</tbody>
</table>

R. M. Plan. – 11:

11.1 CHOICE BASED CREDIT SYSTEM (CBCS) IN M. PLAN.

Definitions:

- “University" means the Saurashtra University.
- “Post Graduate Programme” means Master’s Degree Program in Planning.
- “Student” means student admitted to Post Graduate Programme in Planning under these Regulations.
- “Degree” means Post Graduate Degree in Planning.
- “Board of Studies” means PG Board of Studies of the University in the Planning/subject concerned.
- “Academic Council” means Academic Council of the University.
- “Departmental Academic Council (DAC)” means Council of the department consisting of its faculty who would consider and decide on the academic matters.
- “Fee” means the fee prescribed by the university for the Post Graduate Programme from time to time.
- “Credit” means the unit by which the course work is measured. In these Regulations, One Credit means one hour of Class room Teaching.
- “Semester” means an academic term constituting 26 weeks. Each semester shall have at least 16 Weeks of direct class room teaching excluding Tutorials, counseling & self - learning and Evaluation etc. Odd Semesters shall be from ‘Mid of June to Mid of December’ and even Semesters shall be from ‘Mid of December to Mid of June’. The Academic Year shall be of bi-semesters.
- “Grade Letter” means the alphabet indicating the performance of a student in a particular course. It is the transformation of the scaled marked secured by the student in a Course. Grade letters are O, A, B, C, D, E, and F.
- “Grade Point” means the numerical weightage allotted to each stratum of scaled marks corresponding to each “Grade letter”.
- “Credit Points” means the product of ‘credits assigned to the course’ and ‘the Grade Point secured for the same course by the student’.
“Semester Grade Point Average (SGPA)” measures the performance of a student in a given Semester. The SGPA is the ratio of the total credit points earned by the student in all the courses of a programme in the concerned semester and the ‘total number of credits assigned to the courses of the Programme in that Semester’.

“Cumulative Grade Point Average (CGPA)” means the cumulative Grade Point weighted average of SGPA computed on the basis of the following formula for the entire Programme.

11.2 Main features of the choice based credit system (CBCS) shall remain as the following.

11.2.1 All the PG Departments in the relevant Faculties of the University shall participate in this Choice Based Credit System (CBCS). A student has the choice of selecting courses offered by the same Department of the same faculty, depending on his/her interest, needs and long term goals as well as the feasibility in terms of the available expertise and infrastructure at the Faculty level.

11.2.2 Each PG Department shall and offer courses after the due consideration and approval of the Departmental Academic Council (DAC) with the approval of due & appropriate authority.

11.2.3 The composition of the DAC: the DAC shall consist of all the regular faculty of concerned Department and the Head of Department shall chair it. The Department having the faculty strength of less than three (including HOD) shall co-opt maximum up to two members of the rank of Professor of the same subject from other University with the permission of the Vice-chancellor. In the absence of the HOD, the DAC shall be chaired by the next senior faculty member of the concerned Department.

11.2.4 A student shall be evaluated through CCA (Comprehensive Continuous Assessment) and Semester End Examination. The distribution of marks between the CCA and the Semester and Examination shall be in the ratio of 60 : 40

11.2.5 Each course shall be assigned a specific number of credits.

11.2.6 The marks secured by a student shall be converted into Grade Points and Credit Points based on scale – normalized marks. The performance of a student in a Semester shall be expressed as Grade Points Average (GPA) and the combined performance of a student in all the four semester of the PG programme shall be expressed as cumulative Grade point Average (CGPA).

11.3 CBCS program structure

11.3.1 PG Programme in the CBCS shall be offered within the semester pattern.

11.3.2 The duration of an Academic year shall consist of two semesters, each of 26 weeks, having a minimum of 16 weeks for the actual classroom teaching.

11.4 Course Structure and the Credit contact of different courses.

The course will be of two academic year duration divided into four semesters and for specific purpose the span of the course will be of four academic Years.

As per the table given:
11.5.1 Type of subjects
There shall be following categories of courses in the M. Plan. Programme.

11.5.1 CC (Core subject, Common for all Specializations)
A subject which is common for all specializations and a Pre-requisite for a student to get the Degree in the concerned Programme.

11.5.2 CSU (Core subject for respective Specialization)
A subject which is core for respective specialization and a Pre-requisite for a student to get the Degree in the concerned Specialization.

11.5.3 CEAF (Choice based Elective from Allied Fields)
A subject offered as an Elective to choose from available options (based on available resources & faculty) from allied fields of studies in reference to concerned Specialization and a Pre-requisite for a student to get the Degree in the concerned Specialization.

11.5.4 CEAF (Choice based Elective from Allied Specialization)
A subject offered as an Elective to choose from available options (from Core subjects of other Specializations, based on available resources & faculty) from allied Specializations of studies in reference to concerned Specialization and a Pre-requisite for a student to get the Degree in the concerned Specialization.

R. M.Plan. – 12 :
The CBCS is student centric not only in the teaching-learning processes but also in their evaluation process. In CBCS, the evaluation process is divided into two parts. The first part consists of Comprehensive Continuous Assessment (CCA) and the second part consists of the Semester End Examination. The division of marks between the two shall be as per the clause 11.2.4. In the CBCS, the evaluation process shall follow the norm that the faculty, who teaches the course, Shall conduct the Comprehensive Continuous Assessment (CCA) and the Term end examination (TEE). The concerned faculty shall be accountable for transparency and reliability of the entire evaluation of the student in the concerned Course.

12.1 The Framework for Comprehensive Continuous Assessment
Although Assessment and evaluation process in CBCS is in continuous mode, for the purpose of finally letting the candidate know his/her progress periodically, an assessment is divided into four discrete components for reposting the scores to the student as earned by him or her. The details for the same are given in the ‘Scheme of Teaching & Examination of each semester’.

12.2 Term-end Examination (TEE)
The ‘Term-end examination shall be conducted as per the University’s Exam schedule. The duration of the Semester End Examination shall be as per subject detail. A question paper for semester-end- examination shall not expect the student to reproduce the answer by memorizing the topics, but it shall rather examine the candidate’s creativity, comprehension, problem solving ability, interpretation and awareness capabilities.
12.3 Final awarding of the Internal Marks

The Head of the Department shall forward to the Controller of Examination the consolidated marks for Internals of all the students in CCA and SEE for final computation of the Grade and announcement of the result. The result of the evaluated component shall be communicated to the students within 15 day of the completion of each component.

Thesis project/report:

1. Thesis (offered in 4th Semester) shall be submitted in triplicate duly typed and bound in the standard approved size for dissertations by the Institute. This should be submitted for evaluation to the Department through Head before the commencement of the theory examinations.
2. The Evaluation of report & Viva-voce will be conducted by the Board of examiners consisting of at least two examiners appointed by the university.
3. The semester wise number of courses and internal, external and total examination marks structure are as under:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Semester</th>
<th>No. of Subjects</th>
<th>Total Internal Mark</th>
<th>Total External Marks</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I</td>
<td>06</td>
<td>1800</td>
<td>1200</td>
<td>3000</td>
</tr>
<tr>
<td>2</td>
<td>II</td>
<td>06</td>
<td>1800</td>
<td>1200</td>
<td>3000</td>
</tr>
<tr>
<td>3</td>
<td>III</td>
<td>06</td>
<td>1800</td>
<td>1200</td>
<td>3000</td>
</tr>
<tr>
<td>4</td>
<td>IV</td>
<td>03</td>
<td>1800</td>
<td>1200</td>
<td>3000</td>
</tr>
<tr>
<td>Total Marks in M. Plan. Programme</td>
<td>7200</td>
<td>4800</td>
<td>12000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R. M. Plan. – 13

13.0 Procedure for awarding the grade
13.1 The computation for the Semester Grade Point Average (SGPA) and Cumulative grade point average (CGPA) shall be as follows:
The raw marks scored by the student (CCA+SEE) shall be indicated as \( M \).

The ‘Grade Point’ and the Grade letter that shall be awarded to the student on the bases of the range in which \( M \) is found is given in the following table:
Different Weightage Scales:
(For awarding grades to Combined, Internal and Semester End Exam Scores)

<table>
<thead>
<tr>
<th>Different Scales</th>
<th>Grade</th>
<th>Grade Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined</td>
<td>90&lt;X&lt;=100</td>
<td>54&lt;X&lt;=60</td>
</tr>
<tr>
<td></td>
<td>80&lt;X&lt;=90</td>
<td>48&lt;X&lt;=54</td>
</tr>
<tr>
<td></td>
<td>70&lt;X&lt;=80</td>
<td>42&lt;X&lt;=48</td>
</tr>
<tr>
<td></td>
<td>60&lt;X&lt;=70</td>
<td>36&lt;X&lt;=42</td>
</tr>
<tr>
<td></td>
<td>50&lt;X&lt;=60</td>
<td>30&lt;X&lt;=36</td>
</tr>
<tr>
<td>Less than 50</td>
<td>Less than 30</td>
<td>Less than 20</td>
</tr>
</tbody>
</table>

Scale for awarding Grade based on SGPA & CGPA:

<table>
<thead>
<tr>
<th>Semester End SGPA</th>
<th>Programme End CGPA</th>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.0 &lt;SGPA&lt;=10</td>
<td>O</td>
<td>Outstanding</td>
</tr>
<tr>
<td>2</td>
<td>8.0&lt; CGPA&lt;=9.0</td>
<td>A</td>
<td>Upper Distinction</td>
</tr>
<tr>
<td>3</td>
<td>7.0&lt; CGPA&lt;=8.0</td>
<td>B</td>
<td>Distinction</td>
</tr>
<tr>
<td>4</td>
<td>6.0&lt; CGPA&lt;=7.0</td>
<td>C</td>
<td>First Class</td>
</tr>
<tr>
<td>5</td>
<td>5.0&lt; CGPA&lt;=6.0</td>
<td>D</td>
<td>Second Class</td>
</tr>
<tr>
<td>6</td>
<td>SGPA Less than 5.0</td>
<td>F</td>
<td>Failed</td>
</tr>
</tbody>
</table>

The Candidate who fails to obtain less than 50% raw marks in any individual subject shall have to clear the same in ensuing attempt and the marks of his/her previous attempt in which he/she have obtain more than 50% of marks will be carry forwarded for calculating his/her CGPA/SGPA & class.

The Semester Grade Point Average (SGPA) shall be based on aggregate marks of CCA and SEE.

If \( G \) is the grade point awarded to the candidate as described in the above table in a particular course and if \( Cr \) is the Credit Value for the course (for instance \( Cr=4 \)) than the Grade credit point (Gr Cr Pt) in that paper is given by

\[
\text{Grade Credit Points (Gr Cr Pt)} = \text{Credit of the course (Cr)} \times \text{Grade secured in that Course(G)}
\]

\[
\text{SGPA} = \frac{\text{Sum of all Grade Credit Points secured each course of the relevant semester by the student}}{\text{Sum of Credits assigned to all Course in this Semester}}
\]
Sum of Credits assigned to all Course in this Semester

\[ \text{CGPA} = \frac{\text{Sum of Credits assigned to all Course in this Semester}}{\text{Sum of Credits all Semester of the Programme}} \]

The CGPA shall be expressed to an accuracy of three decimal digit

The percentage equivalence shall be obtained by multiplying CGPA with 10.

R. M. Plan. – 14 :
In each Semester conducting Education tour for various subjects is part of curriculum. The nature, location & duration of such tour shall be as per the pedagogy of Institute.

R. M. Plan. – 15 :
In addition to the above Ordinances and Regulations, the provisions made by the regulating authority in form of Revisions &/or Amendments shall be treated as the part of these Ordinances & Regulations.
### Saurashtra University

#### MASTERS PROGRAMME IN PLANNING - M PLAN

**SCHEME OF TEACHING & EXAMINATION FOR MASTERS - 1 OF 4 SPECIALIZATIONS - EARTH & ENVIRONMENTAL PLANNING (EEP)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Nature of Subject</th>
<th>Credits</th>
<th>Contact hrs. per Credit</th>
<th>Contact hrs. per Week</th>
<th>Contact hrs. per Sem.</th>
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<th>Contact hrs.</th>
<th>Total Contact hrs.</th>
<th>Mandatory</th>
<th>Elective</th>
<th>Total</th>
<th>Pre Mid-</th>
<th>Total</th>
<th>Final</th>
<th>Type</th>
<th>Duration</th>
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**Total**

- 5 | 10 | 15 | 30 | 450 | 300 | 150 | 100 | 150 | 45 | 45 | 90 | 120 | 120 | Theory | 3 Hours |