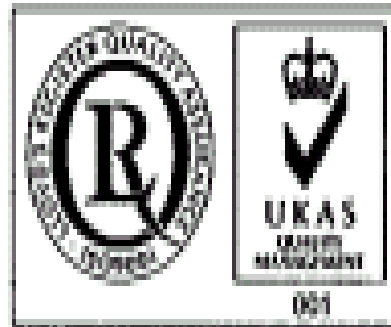
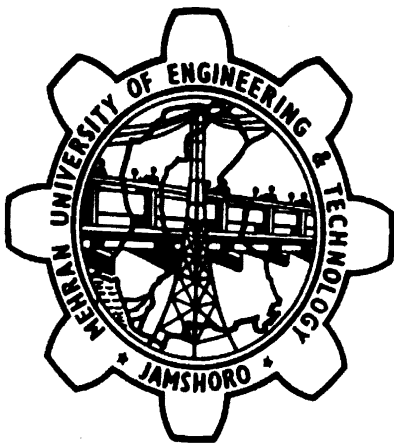


**SYLLABUS FOR BACHELOR OF
CITY AND REGIONAL PLANNING
SEMESTER SYSTEM
EFFECTIVE FROM 13 BATCH**



**Department of City & Regional Planning
MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY,
JAMSHORO, SINDH
PAKISTAN**

PREFACE

Curriculum of the subject is said to be throbbing pulse of a nation. By looking at the curriculum of a subject, one can judge the state of intellectual development and the state of progress of a nation. The world has turned into a global village, new ideas and information are pouring in a constant stream. It is therefore, imperative to up-date our curricula by introducing the recent developments in the relevant fields of knowledge.

The syllabus for Bachelor's degree in City & Regional Planning (CRP) was first prepared in 1992 when the department of City & Regional Planning (CRP) was established in Mehran University of Engineering and Technology (MUET) Jamshoro. In pursuance of the directives of National Curriculum Revision Committee (NCRC) of Higher Education Commission (HEC) and the recommendations of Pakistan Council of Architects and Town Planners (PCATP), the Board of Studies recommended changes in the entire syllabus to the Academic Council of the University through the Board of Faculty of Architecture and Civil Engineering for approval. The amended syllabus was approved by the Academic Council in its 86th Meeting held on 17th December 2015 vide Resolution 86.5(a). The new up-dated syllabus is effective from 13-Batch and onwards.

The main features of revised syllabus are:

1. Most of the new courses have been introduced keeping in mind the present trends and requirements of CRP.
2. Some of the courses have been up-dated. The contents of the courses have been arranged logically and explained in detail in order to make it easy to be followed by the students and teachers.

The undersigned would like to express gratitude to all the faculty members of the department for their valuable suggestions and inputs in revising this syllabus.

Dr. Imtiaz Ahmed Chandio
Chairman
Department of CRP

Department of City & Regional Planning

First Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	CRP111	Introduction to Planning	03	01
	AR125	Technical Drawing	02	02
	MTH110	Calculus & Statistical Methods	03	00
	IS111/SS 104	Islamic Studies / Ethics	02	00
	PS106	Pakistan Studies	02	00
	AR154	Model Making	00	02
Total			12	05

Second Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	CRP121	Socio-economic Aspects of Planning	03	00
	AR126	Architectural Design for Planners	02	02
	CE110	Surveying-I	03	01
	MTH114	Planning Data Analysis	03	00
	ENG101	Functional English	03	00
Total			14	03

Third Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	CRP211	History of Urban Planning	03	00
	CRP212	Transportation Engineering	03	01
	CRP213	Construction Technology	03	01
	CE 201	Surveying-II	03	01
	ENG201	Communication Skills	02	00
Total			14	03

Fourth Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	CRP221	Planning Law	03	00
	CRP222	Housing	03	00
	CRP223	Transportation Planning	03	01
	CRP224	Mapping & Remote Sensing	03	01
	AR225	Computer Aided Design	02	01
Total			14	03

Fifth Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	CRP311	Urban Renewal	02	01
	CRP312	Planning Techniques	03	00
	CRP313	Site Planning and Urban Design	03	01
	EE314	Environmental Engineering	03	01
	CS331	Information & Database Management	02	01
Total			13	04

Sixth Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	CRP 321	Research Methods	03	00
	CRP322	Planning of New Towns	03	01
	CRP323	Rural Planning	02	01
	EE 315	Environmental Planning & Management	03	01
	CRP325	Introduction to Geographical Information System	02	01
Total			13	04

Seventh Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	CRP411	Master Planning-I	02	01
	CRP412	Landuse & Building Control	02	01
	CRP413	Project Planning and Management	03	01
	CRP414	District & Regional Planning	03	01
	CRP415	Community Development	02	01
	CRP499	Thesis / Project *	00	00
Total			12	05

Eight Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	CRP421	Master Planning-II	03	02
	CRP422	Estate Management	03	00
	CRP423	Finance Planning & Management	03	00
	CRP424	Planning Practice	02	00
	CRP499	Thesis / Project	00	06
Total			11	08

*** Requires literature survey and preliminary work during this semester. It will not be mentioned in 7th semester timetable.**

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject: **INTRODUCTION TO PLANNING**

Discipline	:	City & Regional Planning	
Semester	:	1 st	
Effective	:	13 CRP Batch and onwards	
Pre-requisite	:	Nil	Co-requisite: History of Urban Planning
Assessment	:	Theory:	20% Sessional Work, 20% Mid Semester and 60% Final Examination.
		Practical:	40% Sessional Work and 60% Final Semester Examination
Credit Hours	:	Theory:	3 Practical: 1
Marks	:	Theory:	100 Practical: 50
Contact Hours	:	Minimum:	42 Minimum: 42

Aim : To understand the nature, steps and process of planning.

Objectives : After completing this course student should be able to:

1. understand various types and levels of planning;
2. understand various steps and stages of planning;

Contents : **Theory**
 Introduction to planning, definitions and terms, aims of physical planning, principles of planning, levels of planning, elements of planning, planning and its relationship with other professions, new trends in planning, functions of professional planners, geographical, topographical, and climatic conditions in relation to planning, planning theories of , Geddes, Howards, Le-Corbusier, Frank Lloyd Wright, Lewis Mumford, Doxiadis, etc.

Practical
 Study of planned and unplanned communities.

Recommended Books:

1. Bhatti, A.K. "Town Planning for the Third World" Feroze Sons, Lahore (latest edition)
2. Greed H. Clara "Introducing Town Planning", Longman, London (latest edition)
3. Bruton, Michael. J. "The Spirit and Purpose of Planning", the Built Environment, Hutchinson of London, (latest edition).

Approval:	Board of Studies	Resolution No. 18.2	Dated: December 7, 2012
	Board of Faculty	Resolution No. Nil	Dated: Nil
	Academic Council	Resolution No. 80.16	Dated: December 13, 2012

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : TECHNICAL DRAWING

Discipline : City & Regional Planning

Semester : 1st

Effective : 13 CRP Batch and onwards

Pre-requisite : Nil

Co-requisite: Architectural Design for Planners

Assessment : Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Examination.
 Practical: 40% Sessional Work and 60% Final Semester Examination

Credit Hours : Theory: 2 Practical: 2

Marks : Theory: 50 Practical: 100

Contact Hours : Minimum: 28 Minimum: 84

Aim : To introduce and develop the knowledge of primary elements of drawing.

Objectives : After completing this course student should be able to:
 1. employ various drawing techniques for architectural and planning assignments;
 2. understand and prepare drawings indicating different components and integral parts of some object;

Contents : **Theory**
 Introduction to graphic design, drawing materials, scales, solid geometry, surface development, projections in relation to buildings of basic shapes, a study of plans, elevations and sections of buildings, free-hand sketching, study of light and shade, basic concepts of line plans.

Practical

Isometric, axonometric, oblique projections, perspectives and bird's eye view.

Recommended Books:

1. Ernest, R. Weidhaas, "Architectural Drafting and Design", Mc-Grow Hill, New York. (latest edition)
2. John, Folls and Dave Mammes, "Architectural Deigning and Drafting", Mc-Grow Hill, New York, (latest edition)
3. Chan, John S. M., "Architecture in Color Drawings", Mc-Grow Hill, New York, (latest edition)

Approval:	Board of Studies	Resolution No. 18.2	Dated: December 7, 2012
	Board of Faculty	Resolution No. Nil	Dated: Nil
	Academic Council	Resolution No. 80.16	Dated: December 13, 2013

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF BASIC SCIENCES AND RELATED STUDIES

Title of Subject:	<u>CALCULUS AND STATISTICAL METHODS</u>		
Discipline	:	City & Regional Planning	
Semester	:	1 st	
Effective	:	13 CRP Batch and onwards	
Pre-requisite	:	-	
Assessment	:	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination.	
Credit Hours	:	Theory:	3
Marks	:	Theory:	100
Contact Hours	:	Minimum:	42

Aim	:	To give further idea about calculus and its applications in the Planning field along with the knowledge about statistics.
.Objectives:		After completing this course student should be able to: <ol style="list-style-type: none"> 1. Know the derivative as a rate measure, slope of straight line etc and integration as the area under curve; 2. Solve the application problems related to their field; 3. Know the vector algebra and vector calculus. 4. Different statistical methods to obtain the measures the central values of the data and their interpretation. 5. Probability and its rules.
Contents:		<p>Introduction to functions: Mathematical and physical meaning, graphs and types of function.</p> <p>Introduction to limits: Theorems of limits and their applications to functions. Right hand and left hand limits. Continuous and discontinuous functions, and their applications.</p> <p>Derivatives: Introduction to derivatives. Geometrical and physical meaning of derivatives. Partial derivatives and their geometric significance. Application problems (rate of change, marginal analysis).</p> <p>Higher Derivatives: Leibnitz theorem, Rolle's theorem, Mean value theorem. Taylors and Maclaurins series.</p> <p>Evaluation of limits using L' Hospital's rule: Indeterminate forms $(0/0), (\infty/\infty), (0 \times \infty), (\infty - \infty), 1^\infty, \infty^0, 0^0$</p> <p>Application of Derivatives: Asymptotes, curvature and radius of curvature differentials with application.</p> <p>Application of partial Derivatives: Euler's theorem, total differentials, maxima and minima of function of two variables.</p> <p>Integral Calculus: Methods of integration by substitutions and by parts. Integration of rational and irrational algebraic functions. Definite integrals, improper integrals. Gamma and Beta functions, reduction formulae.</p> <p>Application of Integral Calculus: Cost function from marginal cost, rocket flights, area under curve.</p> <p>Introduction to statistics: Nature and importance of statistics, descriptive and inferential statistics; population and samples.</p> <p>Data organization: Frequency distribution and its graphical representation.</p> <p>Descriptive measures: Measures of central tendency and dispersions.</p> <p>Probability: Introduction to probability, counting techniques, additive and multiplicative rules, conditional probability; Bayes' theorem.</p>

Recommended Books:

1. Dr. M Anwar Solangi; Statistical Methods and Estimations.
2. Benice, D.D., Brief Calculus and its applications.
3. Raymond, A.B., Applied Calculus
4. Yousuf, S.M., Calculus and analytical Geomentry, Ilmi Kitab Khan, Lahore.
5. Ronald Walpol, Introductory Statistics
6. Sher Muhammad Choudhry, Statistics Vol. I & II

Approval:	Board of Studies: 02/2012	Resolution No. 02;	Dated: December 5, 2012
	Board of Faculty:	Resolution No. Nil	Dated: Nil
	Academic Council:	Resolution No. 80.21	Dated: December 13, 2012

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF BASIC SCIENCES AND RELATED STUDIES

Title of Subject	:	<u>ISLAMIC STUDIES</u>
Discipline	:	City & Regional Planning
Semester	:	1 st
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	-
Assessment	:	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination.
Credit Hours	:	Theory: 2
Marks	:	Theory: 50
Contact Hours	:	Minimum: 28

Aim: To provide proper knowledge based on Quran & Hadith..

Objectives: After completing this course student should be able to:

1. Effectively maintained his/her identity in a multicultural world.
2. Find solutions to his/her problems from own cultural practices, rather than be influenced by external ideologies.
3. Know why Muslims fail to equip themselves with essential survival tools needed in the world today.

Contents : **Quran and Uloom ul Quran**

- Surah Al-Hujurat
- Surah Al-Furqan
- {These both surahs cover all topics related to the ethical values of Islamic society including Taqwa, Simplicity, Lawful earning, Social Justice, Rights of Parents, elders, neighbours, Fear of Allah and Truthfulness.}
- Excellence of Holy Quran (Aijaz ul Quran)..
- History of collection and compilation of Holy Quran.

Basic Beliefs of Islam.

- Tauheed, its importance, effects on the life of believer, shirk and its types.
- Prophethood, its need and necessities, characteristics and Finality of prophethood.
- Concept on life hereafter.
- Jihad and its types.

Life history of Holy Prophet Muhammad

- Life history at Makkah (Before Propethood).
- Life history at Makkah (after Propethood).
- Life history at Madina (including Brotherhood, Charter of Madina, Victory of Makkah and Last Sermon of Holy Prophet Muhammad
- Importance of Hadith and Sunnah.
- Ten selected Ahadiths.

Fundamentals of Islam:

- Prayer, its importance, pre-conditions, obligations and effects.
- Zakat, its aims & objectives. Requirements, Legal recipients, Nisab and benefits..
- Fasting, its philosophy, requirements and benefits.
- Pilgrimage, requirements, types, obligations, procedure and benefits.

Islam and Science:

- Quran and Science.
- Importance of Science and technology in Islam.
- Historical contribution of Islam and Muslim in the development of science.
- Verses of Holy Quran those cover different fields of science e.g social management and natural science.

Recommended Books:

- * A.A. Umrani, Islam: The universal Religion, Naseem book dept.
- * A.Q. Natiq; Sirat-e-Mustaqeem, Urdu Bazaar, Karachi.
- * M. Shabudden; Quran Science and Muslims, Al Maktabah Al Ashrafiya, Lahore.

Approval:	Board of Studies: 02/2012	Resolution No. 2	Dated: December 05, 2012
	Board of Faculty:	Resolution No. Nil	Dated: Nil
	Academic Council:	Resolution No.80.21	Dated: December 13, 2012.

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF BASIC SCIENCES AND RELATED STUDIES

Title of Subject	:	<u>ETHICS</u>
Discipline	:	City & Regional Planning
Semester	:	1 st
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	Social Sciences
Assessment	:	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination.
Credit Hours	:	Theory: 2
Marks	:	Theory: 50
Contact Hours	:	Minimum: 28

Aim	:	To provide proper knowledge based on ethical and moral values of various famous religions.
Objectives	:	After completing this course student should be able to: <ol style="list-style-type: none"> 1. Create stable and healthy civilized atmosphere. 2. Develop uniformity of moral beliefs and behavior.
Contents	:	Definition of Ethics and its position in different famous religions. Islam: <ul style="list-style-type: none"> • Introduction • Role of Beliefs and Arkans of Islam in Character building. • Ethical values including Brotherhood, Equality, Liberty, Tolerance, Social Justice, Rights of Non-Muslim. • Ill effects of corruption and respect of law. Hinduism: <ul style="list-style-type: none"> • Introduction • Doctrines. • Religious books. • Concept of Re-Birth. • Celebration days • Cast systems, Trimurti and Ethical teachings. Budhism: <ul style="list-style-type: none"> • Introduction • Doctrines. • Eight Nobel Paths of Buddha. • Critical study on concept of Renunciation of material & worldly life. Christianity: <ul style="list-style-type: none"> • Introduction • Doctrines. • Religious Books. • Human Honor. • Self reforms, celebration days and Ethical teachings Judaism: <ul style="list-style-type: none"> • Introduction • Doctrines. • Religious Books. • Ethical Values. • Ten Commandments of Moses (A.S)

Recommended Books:

1. Dr. A. Rasheed; Comperative Study of Religions Tahir Sons, Karachi.
2. Adil Faraz; Ikhlaiyat Mazahib-e-Aalam ki Nazar main, Apna Idara, Lahore.
3. M. Hashim Channa; Mazahib-e-Aalam jo Taqabili Jaezo, Naseem Book Dept.

Approval:	Board of Studies: 02/2012	Resolution No. 2	Dated: December 05, 2012
	Board of Faculty:	Resolution No. Nil	Dated: Nil
	Academic Council:	Resolution No.80.2	Dated: December 13, 2012

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF BASIC SCIENCES AND RELATED STUDIES

Title of Subject	:	<u>PAKISTAN STUDIES</u>
Discipline	:	City & Regional Planning
Semester	:	1 st
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	-
Assessment	:	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination.
Credit Hours	:	Theory: 2
Marks	:	Theory: 50
Contact Hours	:	Minimum: 28

Aim: To provide proper knowledge about the Ideology of Pakistan and the modern world.

Objectives: The Course is designed to acquaint the students with the rationale of the creation of Pakistan. It deals in detail with the salient aspects of Pakistan Movement, Focusing on the main objectives of National life. The course move further to give broader perspective of the social, political, constitutional, economic and geographical aspect of Pakistan's endeavors to develop and progress in the contemporary world for this purpose the main strands of Pakistan's foreign policy are also included.

Contents: Evolution of Muslim society in the sub-continent, Role of Hazrat Mujadid Alf-Sani and Shah Waliullah, War of Independence 1857 its main causes, Two Nation Theory and Ideology of Pakistan in the light of the sayings of Allama Iqbal and Quaid-e-Azam Muhammad Ali Jinnah, Aligarh Movement and its achievements, Role of religious and educational institutions in promoting process of education among the Muslims, Formation of Indian National Congress 1885 and its role, Establishment of All India Muslim League 1906 and its achievements, Khilafat Movement, its background and causes of its failure, Allahabad Address 1930 and its importance in creation of Pakistan, Elections of 1937 and role of congress Ministries, Lahore Resolution 1940, its effects on the Muslim of South Asia, Elections of 1946 and transfer of power, The problems faced by Pakistan at her Emergence, Objectives Resolution 1949, Main features of the constitutions 1956, 1962 and 1973 and their Islamic Provisions, The causes of separation of East Pakistan, Foreign Policy of Pakistan and its determinants, Importance of Pak. Relations with USA and China, Pakistan's role in regional and International Organization. UNO, World Bank, IMF, OIC, SAARC and ECO, Pakistan's Relations with neighbouring countries, War against terrorism and its impact on Pakistan, Human rights in Pakistan and causes of their violation, Natural sources of Pakistan.

Recommended Books:

- * IH Qureshi; A Short History of Pakistan
- * Rafiullah Shehab; History of Pakistan
- * G. Allana; Our Freedom Fighters.
- * K.K. Aziz The making of Pakistan.
- * Choudhry Muhammad Ali; The Emergence of Pakistan
- * K. Arif; Pakistan's Foreign Policy.
- * Khawaja Amjad Saeed; Economy of Pakistan
- * Safdar Mahmood; International Affairs
- * Khalid bin Saeed; The Political System of Pakistan
- * Muhammad Azam; International relations and practice.

Approval:	Board of Studies: 02/2012	Resolution No. 2	Dated: December 05, 2012
	Board of Faculty:		
	Academic Council:	Resolution No.80.21	Dated: December 13, 2012.

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF ARCHITECTURE

Title of Subject	:	<u>MODEL MAKING</u>		
Discipline	:	City & Regional Planning		
Semester	:	1st		
Effective	:	13 CRP Batch and onwards		
Pre-requisite	:	Nil		
Assessment	:	Theory: Nil		
		Practical:	40% Sessional Work, and	60% Final Semester Examination.
Credit Hours	:	Theory:	00	Practical: 2
Marks	:	Theory:	00	Practical: 100
Contact Hours	:	Minimum:	00	Minimum: 84

Contents :

Study of the tools, their use and care in model making.
Study of the model making materials; Clay, adobe, card sheets, plastics, wood, card boards, cork sheets, glass, fiber glass, Clay and adhesives.

Practical:

Making simple forms exploring different materials and their processes.

Recommended Books:

1. Koepke, Marguerite L., Model Graphics.
2. Complete Do It Yourself Manual, Reader's Digest.
3. Bovlin, Marjorio Elliot, Design Through Discovery.
4. METU Design Manual.
5. Form, Space and Order

Approval:	Board of Studies	Resolution No. 40.01	Dated: December 11, 2012
	Board of Faculty:	Resolution No. Nil	Dated: Nil
	Academic Council:	Resolution No.80.15	Dated December 13, 2012.

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **SOCIO-ECONOMIC ASPECTS OF PLANNING**

Discipline : City & Regional Planning
Semester : 2nd
Effective : 13 CRP Batch and onwards
Pre-requisite : Introduction to Planning **Co-requisite:** District & Regional Planning and Urban Renewal
Assessment : Theory: 20% Sessional Work , 20% Mid Semester and 60% Final Semester Examination
Credit Hours : Theory: 3
Marks : Theory: 100
Contact Hours : Minimum: 42

Aim : To understand and develop the knowledge of social and economic aspects of the planning process.

Objectives : After completing this course student should be able to:

1. prepare realistic and viable plans;
2. understand importance of socio-economic aspects of planning of rural and urban areas;

Contents : **Theory**
Social groups, nature, social and cultural values, Social control, prejudices and taboos, collective behavior, social stratification, urban society, behavior and personality, formal and informal association, social processes and social change, demographic pattern; components of change in population viz; transformation and natural increase. Characteristics and effects of growth trend on housing utilities, and community facilities, significance of family. House-hold and social institutions in urban planning, household income, dependency ratio and employment pattern, basic concepts of economics, types and functions of economic systems. Semesters used in economics viz: Demand and Supply, equality and equity, economic resources of Pakistan and micro credit and income generation programs, etc. Economic development theories, role of economics in planning & development,

Recommended Books:

1. Bhatti, A. K., "Town Planning for the Third World", Feroze Sons, Lahore, (Latest Edition).
2. Bruton, M. J. (ed), "The Spirit and Purpose of Planning", The Built Environment. Hutchison of London, (Latest Edition).
3. Chaudhri, M. Iqbal, "Social Theory: Research and Problems", Aziz Publishers, London, (Latest Edition).

Approval:	Board of Studies	Resolution No. 19.2	Dated: 03.06.2013
	Board of Faculty	Resolution No. 14.4	Dated: 26.07.2013
	Academic Council	Resolution No. 81.32	Dated: 31.07.2013

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **ARCHITECTURAL DESIGN FOR PLANNERS**

Discipline	:	City & Regional Planning
Semester	:	2nd
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	Basic Drawing Co-requisite: Building Construction Technology
Assessment	:	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination.
		Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours	:	Theory: 2 Practical: 2
Marks	:	Theory: 50 Practical: 100
Contact Hours	:	Minimum: 28 Minimum: 84

Aim : To develop the knowledge of architectural design for application in planning.

Objectives : After completing this course student should be able to:

1. understand and prepare complete architectural design of a house;
2. comprehend a comprehensive architectural design of large complex and houses in a housing scheme;

Contents : **Theory**
 Design parameters, aesthetics in design, building shape and function, building orientation and control of climatic conditions, design methods; design of houses, mosques and public buildings, design standards and space requirements, planning and design of housing schemes, layout patterns, housing and their suitability for various climatic regions.

Practical
 Design of flats and houses for plot of various sizes, design of commercial and institutional buildings, housing layout patterns, neighborhood planning.

Recommended Books:

1. Bills, Herbert F. and Welter A. Schmitt, "Architectural Drafting", McGraw Hill Company, New York, (latest edition) .
2. Kicklighter, Collis E., "KIC Architecture: Residential Drawing & Design", Goodheart, Illinois, (latest edition)
3. Helper Donald E., "Architecture Drafting and Design", McGraw Hill Company, New York, (latest edition).

Approval:	Board of Studies:	Resolution No. 19.2	Dated: 03. 06. 2013
	Board of Faculty:	Resolution No. 14.4	Dated: 26. 07. 2013
	Academic Council:	Resolution No. 81.32	Dated: 31. 07. 2013

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CIVIL ENGINEERING

Title of Subject : **SURVEYING - I**

Discipline : City & Regional Planning
Semester : 2nd
Effective : 13 CRP Batch and onwards
Pre-requisite : - **Co-requisite: Surveying-II**
Assessment : Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Examination.
 Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours : Theory: 3 Practical: 1
Marks : Theory: 100 Practical: 50
Contact Hours : Minimum: 42 Minimum: 42

Aim : Give adequate knowledge of Surveying equipment, methods and their application in the field of engineering.

Objectives :

1. To fix the position of (N and E) and Elevations (RL) of any point on the ground.
2. To draw the L – Section and X – Section for computing the area and volume of earth work.

Contents :

Introduction
 Introduction to Surveying, classification of surveys. Measurements and Units, measurements. Stages of survey operations Scales

Measurement of distance
 General, Various methods of measuring distance. Instruments for measuring distance and marking stations. Ranging out survey lines, Errors in chaining Correction for linear measurements. Chaining on sloping ground.

Travers surveys
 Traverse, types of traverse, compass traversing. Bearing and disgnation of bearings, Local attraction, magnetic declination

Leveling
 Definition, principles, classification of leveling. Types of levels and their temporary and permanent adjustments. Booking and reduction of levels. Profile and cross-seccion leveling. Mistakes in leveling. Contouring.

Plane table surveying
 General principles, methods of plane table surveying.

Survey drafting and computation
 General, Plans and maps, Plotting contours, profiles, cross-sections. Area and volume cмпutations; Computation of areas by using mid-ordinate rule, average ordinate rule, trapezoidal and Simpson rule. End-area method. Computation of areas by means of planimeter, Computation of areas by co-ordinates. Simple basic programs or excel program to Auto Computer Aided Design computation.

Application of surveying software.

Recommended Books:

1. Surveying R.Agore, Khanna Publisher.
2. Surveying Vol: (I + II), B.C punmia, standard book house; Dehli-6
3. Surveying Practice, Jerry. A. Nothanson and Philip Kissam, Mc-Graw Hill.

Approval:	Board of Studies:	26 th Meeting	Dated: 11 th Dec. 2012
	Board of Faculty:	Resolution No. 14.4	Dated: 26. 07. 2013
	Academic Council:	Resolution No. 81.33	Dated: July 31, 2013

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF BASIC SCIENCES AND RELATED STUDIES

Title of Subject : **PLANNING DATA ANALYSIS**

Discipline : City & Regional Planning
Semester : 2nd
Effective : 13 CRP Batch and onwards
Pre-requisite : - **Co-requisite:** -
Assessment : Theory: 20% Sessional Work , 20% Mid Semester and 60% Final Semester Examination
Credit Hours : Theory: 3
Marks : Theory: 100
Contact Hours : Minimum: 42

Aim : Introduce the concept descriptive and inferential statistics and probability.

Objectives : After completing this course student should be familiar with:

1. Different statistical methods to obtain the measure of central values of a data and their interpretation
2. Probability and its rules. Different probability distributions and their uses.
3. Estimations and hypothesis.

Contents : **Introduction:** Concept of random variable, discrete probability distribution. Case study. Continuous probability distribution, Probability density function, joint probability distribution. Mean and variance of a random variable. Binomial distribution, Mean and variance of binomial distribution. Poisson distribution, Mean and variance of Poisson distribution. Normal distribution, Standard normal distribution, inverse use of table for area under the normal curve; application.

Curve fitting by least squares method: Goodness of fit, fitting a straight, parabola and higher degree curves.

Simple regression and correlation: Regression analysis by least squares method, testing the significance of the slope, simple correlation analysis, coefficient of correlation and coefficient of determination, testing the significance of r; Rank correlation.

Sampling distribution: Sampling distribution of means with replacement and without replacement; central limit theorem.

Tests of hypothesis: Testing a statistical hypothesis, Type I & II errors, one and two tailed tests, test concerning means and variances, testing the difference between two means, Goodness of fit test; test of independence.

Estimation of parameters: Confidence interval of one population mean, estimation of a population mean; estimating the difference between two population means. The Chi-square distribution, estimating a population standard deviation. The F. Distribution; estimating the ratio of two variances.

Recommended Books:

- * M. Anwar Solangi: Statistical Methods and Estimations
- * Ronald Walpole: Introductory Statistics
- * Sher Muhammad Choudhry: Introduction to Statistics Vol. I & II
- * Iqbal Bhatti: Elements of Statistics
- * Douglas C. Montgomery: Applied Statistics and Probability for Engineering.

Approval:	Board of Studies: 02/2012	Resolution No. 02	Dated: 05.12.2012
	Board of Faculty:	Resolution No. 14.4	Dated: 26. 07. 2013
	Academic Council:	Resolution No. 80.21	Dated: December 13, 2012

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
ENGLISH LANGUAGE DEVELOPMENT CENTER

Title of Subject : **FUNCTIONAL ENGLISH**

Discipline : City & Regional Planning
Semester : 2nd
Effective : 13 CRP Batch and onwards
Pre-requisite : English Language Proficiency of inSemesterediate **Co-requisite:**
Assessment : Theory: 20% Sessional Work , 20% Mid Semester and 60% Final Semester Examination
Credit Hours : Theory: 3
Marks : Theory: 100
Contact Hours : Minimum: 42

Aim : Enable students to use four skills of language with confidence and use different components of grammar.

Objectives :

1. To comprehend authentic text.
2. Composing different types of sentences
3. Listen and comprehend lectures and collect information
4. Identify and improve pronunciation with the help of sounds, individual and combination of diphthongs, stress patterns and intonation.

Contents :

Reading:

Interactive Reading, apply the skills of surveying skimming, scanning and detailed reading and identify topic sentence.

Writing:

Audience Related Writing, composition of sentences, Paragraph, short descriptive writing, précis and letter and application, identify contextual clues with the help of cohesive devices.

Listening:

Collect gist and important points from a listening text or any other oral source viz, Lecture, speech or conversation

Grammar:

Mechanics of English Language, Punctuation, vocabulary, conversion of words, tenses and sentence structure.

Recommended Material/ Books:

1. Dawn newspaper, Reader Digest, New Scientist and other interesting materials selected by teacher.
2. A.J, Thomson and A. V. Martinet and Practical English Grammar
3. Sarwar Zakia, (Edt.) English Study Skills A Spelt Publication Karachi
4. R.R. Jordon, Collins Study skills in English, William Collins Sons & Co. Glasgow. Great Britain.
5. Jones Rhodri, A New English Course (An Approach to GCSE English Language for individual Study or Class use.
6. K. James at al, Listening Comprehension and Note-Taking Course (Collins Study Skills in English)
7. Selected Text from Dawn, Readers Digest, New Scientist and other relevant material of teacher's Choice.

Approval:	Board of Studies:	Resolution No.	01	Dated:	07.12.2012
	Board of Faculty:	Resolution No.	14.4	Dated:	26. 07. 2013
	Academic Council:	Resolution No.	80.22	Dated:	December 13, 2012

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **HISTORY OF URBAN PLANNING**

Discipline : City & Regional Planning
Semester : 3rd
Effective : 13 CRP Batch and onwards
Pre-requisite : Introduction to Planning **Co-requisite:** Planning Law
Assessment : Theory: 20% Sessional Work , 20% Mid Semester and 60% Final Examination
Credit Hours : Theory: 3
Marks : Theory: 100
Contact Hours : Minimum: 42

Aim : To understand and develop the knowledge of planning through history of planning.

Objectives : After completing this course student should be able to:

1. understand various civilization and growth of communities in different times of history;
2. understand various planning and, development approaches of urban and rural areas in different times;

Contents : Theory
History of civilization and growth of communities, development of pre-historic towns of Egypt, Mesopotamia and Indus Valley. Early Greek and Roman towns and their location, layout setting of public buildings, markets, recreation and religious centers, Medieval planning; the influence of the church and castle, the walled city, market towns and growth of guild system. Renaissance planning; the grand palace, the square, the industrial revolution, its effects on growth of town planning from the 17th to 20th centuries; Town planning during pre-Mughal and Mughal period in India and Pakistan. British Planning practices in India and Pakistan.

Recommended Books

1. Draskis-Smith, D. W., "Urbanization in the Developing World", Croom Helm, Ltd., Buckingham, (Latest Edition).
2. Cantonese, Anthony J. and Snyder, James, C., "Introduction to Urban Planning", McGraw Hill Book Company, New York, (Latest Edition).
3. Gallon, Arthur B., "The Urban Pattern", D. Van Nostrand Company, Inc., London, (Latest Edition).

Approval:	Board of Studies:	Resolution No. 20.2	Dated: 17.01.2014
	Board of Faculty:	Resolution No. _____	Dated: _____
	Academic Council:	Resolution No. 83.5. v	Dated: 30.06.2014

MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **TRANSPORTATION ENGINEERING**

Discipline : City & Regional Planning
Semester : 3rd
Effective : 13 CRP Batch and onwards
Pre-requisite : Introduction to Planning **Co-requisite:** Transportation Planning
Assessment : Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Examination
: Practical: 40% Sessional Work, and 60% Practical Work.
Credit Hours : Theory: 3 Practical: 1
Marks : Theory: 100 Practical: 50
Contact Hours : Minimum: 42 Minimum: 42

Aim : To develop the knowledge of communication network.

Objectives : After completing this course student should be able to:

1. understand various layout patterns along with pros & cons of each pattern;
2. prepare, plan, design and implement communication network project;

Contents : **Theory**
Classification of roads, Reconnaissance survey for new roads, elements of road curves, super elevation, transition curves, cross-falls, extra width of carriageways, sight distances on vertical and horizontal curves, gradients, bridge heights and clearances for road and rail crossing, gradient on bridge approaches and road alignment, road junctions, design data; speed, right of way, width.

Railways: introduction to railroad, types of rail tracks and gauges, joints and crossings, yards and stations, right of ways, introduction to design of railway track; super elevation, design components, foundation.

Airports: principal features; landing strip, runways, taxiways, apron, hangers, over-run strip, approach zone, turning zone, type of air traffic, speed, and capacity, design standards and orientation, site requirements: operational, meteorological, physical and others,

Waterways: classification of harbors, ship features and port planning, harbor layout, port facilities, coastal protection, inland waterways.

Practical

Traffic volume and turning tendency surveys, traffic flow diagrams for intersection, sketch plan of a railway station and airport.

Recommended Books:

1. Jason.C.Y.U, "Transportation Engineering, Introduction to planning, Design and operations", Elsevier North Holland, Inc, New York, (Latest Edition).
2. Vuchic, Vukan.R, "Urban Public Transportation System and Technology", Prentice, Inc, Englewood Cliffs, New Jersey, (Latest Edition).
3. Bhatti.A.K, "Town planning for third world", Feroze Sons Ltd Lahore,(Latest Edition).

Approval:	Board of Studies:	Resolution No. 20.2	Dated: 17-01-2014
	Board of Faculty:	Resolution No. _____	Dated: _____
	Academic Council:	Resolution No. 83.5. v	Dated: 30.06.2014

Title of Subject : CONSTRUCTION TECHNOLOGY

Discipline	:	City & Regional Planning	
Semester	:	3 rd	
Effective	:	13 CRP Batch and onwards	
Pre-requisite	:	Architectural Design For Planners	Co-requisite: Housing
Assessment	:	Theory: 20% Sessional Work 20% Mid Semester and 60% Final Examination	
Credit Hours	:	Theory: 3	Practical: 1
Marks	:	Theory: 100	Practical: 50
Contact Hours	:	Minimum: 42	Minimum: 42

Objectives : After completing this course student should be able to:

1. Use different Materials in Construction;
2. Prepare Plan Dand implement Construction Project.

Introduction to plumbing, electricity and gas points, insulation, fire protection.

Drawing of various building components and setting out for construction.
Testing of Building materials.

1. Surendra, Singh, "Engineering Materials", Prince Book Depot, Lahore, (Latest Edition).
2. Arora, N.L and Gupta B. R., "Building Construction", Malik Book Depot, Lahore, (Latest Edition).
3. Barritt, C. M. H., "advance Building construction Vi. I & II, Longman, Essex, Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CIVIL ENGINEERING

Title of Subject : **SURVEYING-II**

Discipline : City & Regional Planning
Semester : 3RD
Effective : 13 CRP Batch and onwards
Pre-requisite : Surveying-I **Co-requisite:** Mapping & Remote Sensing
Assessment : Theory: 20% Sessional Work 20% Mid Semester and 60% Final Semester Examination
Credit Hours : Theory: 3 Practical: 1
Marks : Theory: 100 Practical: 50
Contact Hours : Minimum: 42 Minimum: 42

Aim : Enhance the knowledge of equipments, methods and their application in the field of engineering.

Objectives :

1. To make Horizontal and Vertical control of area
2. To fix the alignment and layout of Roads, Railways and Water-ways.
3. To know about Photogrammetry and Topographic maps
4. To setting out Engineering works.

Contents :

Theodolite traversing
General, types and use of Theodolite. Adjustment of transit theodolite Measurement of bearing; horizontal and vertical angles. Traversing with theodolite. Principles and methods of theodolite traversing. Traverse computations. Closing error and its adjustment. Omitted measurement computations. Use of computer programs for traverse and area computations.

Tachometric Surveying
General, system of tachometry. Principles and field procedures of tachometry. Use of tachometry for traversing.

Triangulation
Classification of triangulation. Operations in triangulation. Intervisibility of station points, selection of stations. Satellite stations, base line measurement and correction.

Curves
Introduction to curves, types of curves. Simple circular curves, compound curves, transition curves, vertical curves, reverse curves. Computation and setting out by different methods.

Field astronomy
Introduction of geographical and astronomical Semesters, Determination of true meridian, latitude and longitude and time from astronomical observation

Hydrographic surveying Photogrammetry
Photographic surveying. Principles of aerial and terrestrial Photogrammetry Aerial surveying.

Trigonometrical leveling Tunnel Surveying
Surveying operations involved in tunnels.

Setting out works
Setting out the buildings, culverts, bridges

Introduction to G.P.S., GIS and Remote Sensing

Recommended Books:

1. Introduction to Surveying, James M. Anderson and Edward M. Mikhail, International student edition McGraw Hill Book Company.
2. Surveying Vol. (II + III), Dr. B. C. Punmla, standard book, Delhi-6.
3. Surveying, R. Agore. khanna publisher, India..

Approval:	Board of Studies:	Resolution No.27.3	Dated: 14 th June 2013
	Board of Faculty:	Resolution No. _____	Dated: _____
	Academic Council:	Resolution No.81.33	Dated: July 31, 2013

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **COMMUNICATION SKILLS & REPORT WRITING**

Discipline : City & Regional Planning
Semester : 3rd
Effective : 13 CRP Batch and onwards
Pre-requisite : Functional English **Co-requisite:** Project
Assessment : Theory: 20% Sessional Work , 20% Mid Semester and 60% Final Examination
Credit Hours : Theory: 2
Marks : Theory: 50
Contact Hours : Minimum: 28

Aim : To improve the communication and report writing skills.

Objectives : After completing this course student should be able to:
 1. prepare a report on planning topic;
 2. express their opinion and give arguments to support their ideas;

Contents : **Theory**
 Introduction to communication: process and importance of communication, effective communication, characteristics of communication, principles of communication, report writing: introduction and significance of report writing, feasibility report and incident report, writing a proposal, qualities of good report on town planning topic, organization and format of a planning report: main parts, quotation, pagination, use of headings, bibliography, etc.

Recommended Books

1. Debska-Ainta, 'Upgrade Your English', Oxford University Press, Oxford, London, (Latest Edition).
2. Martinet, A. V. and Thomson A. J. "A Practical English Grammar", Oxford University Press. Oxford London. (Latest Edition)
3. C.M and Johnson D. "English for Academic Purposes Series, General Engineering" , Cassel Publishers Ltd. London (Latest Edition).
4. Swan. M., "Basic English Usage, ELBS/OUP., (Latest Edition).
5. Swan. M., "Practical English Usage, ELBS/OUP., (Latest Edition).
6. Bates, M. and Dudley-Evans, T. "Nucleus: General Science", (Latest Edition).
7. "Oxford Advanced Learner's Dictionary" , (Latest Edition).

Approval:	Board of Studies:	Resolution No. 20.2	Dated: 17-01-2014
	Board of Faculty:	Resolution No. _____	Dated: _____
	Academic Council:	Resolution No. 83.5. v	Dated: 30.06.2014

Title of Subject : **PLANNING LAW**

Discipline : City & Regional Planning

Semester : 4th

Effective : 13 CRP Batch and onwards

Pre-requisite : Introduction to Planning **Co-requisite:** Landuse & Building Control

Assessment : Theory: 20% Sessional Work 20% Mid Semester and 60% Final Semester Examination

Credit Hours : Theory: 3

Marks : Theory: 100

Contact Hours : Minimum: 42

Aim : To understand the legal basis of the change brought about through planning for the benefits of the society.

Objectives : After completing this course student should be able to:

1. understand the development control and it's legal functions;
2. understand the importance of health, safety and welfare of individual and the society;
3. enable the individual to understand the content and rationale of various laws enacted to achieve this end;

Contents : **Theory**
Outline of planning legislation and its evaluation in U.K and U.S.A; factors which have promoted the enactment of such legislation; legislative basis for planning and implementation of plans; relationship of central and local governments; concept, definition, and objectives of zoning and land subdivision regulations; legislation relating to city and regional planning in Pakistan including various acts, orders, ordinances and bylaws concerning master planning, area development schemes, land acquisition, housing & building control, transport, public health and environmental protection.

Recommended Books:

1. Telling, A. E., "Planning Law and Practice", Butter North & Co., London, (Latest Edition).
2. "The Sindh Local Government Ordinance, 2002 & the Sindh Councils (Appeal) Rules", Hamid Ali & Zaka Ali, The Ideal, Karachi, Publishers.
3. Telling, A. E., "Planning Law and Procedure", Butter North & Co., London, (Latest Edition).

Approval:	Board of Studies:	Resolution No. 21.3	Dated: 14.03.2014
	Board of Faculty:	Resolution No. _____	Dated: _____
	Academic Council:	Resolution No. 83.8	Dated: 30.06.2014

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **HOUSING**

Discipline : City & Regional Planning
Semester : 4th
Effective : 13 CRP Batch and onwards
Pre-requisite : Introduction to Planning **Co-requisite:** Construction Technology/ Estate Management
Assessment : Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination
Credit Hours : Theory: 3
Marks : Theory: 100
Contact Hours : Minimum: 42

Aim : To understand the role and importance of housing in the City & Regional Planning.

Objectives : After completing this course student should be able to:

1. understand the reasons of housing problems;
2. prepare housing policies in relation to housing supply & demand;

Contents : **Theory**

Housing problems in developing countries with special emphasis on Pakistan, housing supply and demand; qualitative and quantitative aspects; slums and squatter settlements improvement programmes such as Orangi Pilot Project; low income housing; incremental development schemes, such as Khuda Ki Basti; housing standards and densities, evaluation of housing shortage and need for the future; planning and design of housing schemes, layout patterns, housing types and their suitability for various climatic regions.

Recommended Books:

1. Aldrich, Brian C, and Sandhu Ranvinder.S, “Housing the Urban Poor, Policy and Practice in Developing Countries”, Zed Books Ltd., London, (Latest Edition).
2. Datta, Kavita and Gareth, A.Jones, “Housing and Finance in Developing Countries”, Routledge, London, (Latest Edition).
3. De Chiara, Joseph, Panero, Julius and Zlnik, Martin, ‘Housing and Residential Development’, McGraw-Hill Inc, New York, (Latest Edition).

Approval:	Board of Studies:	Resolution No. 21.3	Dated: 14.03.2014
	Board of Faculty:	Resolution No. _____	Dated: _____
	Academic Council:	Resolution No. 83.8	Dated: 30.06.2014

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **TRANSPORTATION PLANNING**

Discipline : City & Regional Planning

Semester : 4th

Effective : 13 CRP Batch and onwards

Pre-requisite : Transportation Engineering

Co-requisite : Master Planning

Assessment : Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination
Practical: 40% Sessional Work and 60% Final Semester Examination

Credit Hours : Theory: 3 Practical: 1

Marks : Theory: 100 Practical: 50

Contact Hours : Minimum: 42 Minimum: 42

Aim : To develop the knowledge of planning and designing of communication network.

Objectives : After completing this course student should be able to:

1. employ various models and techniques to solve the transportation problems;
2. prepare plan, design and implement transportation projects;

Contents : **Theory**

Communication through road, water, air, and their influence upon national, regional and local development; urban circulation; landuse and traffic interaction; travel time; mass transit system; and inter modal system; traffic lanes and means of access; service roads and laybays; segregation of vehicular and pedestrian traffic; introduction to trip generation, trip distribution, modal split and traffic assignment models.

Practical

Assignments on improvement of roads and design of intersection in an urban area.
Traffic and parking surveys, Travel time and delay studies.

Recommended Books:

1. Bhatti, A. K., 'Town Planning for the Third World', Feroze Sons Ltd., Lahore, (Latest Edition).
2. Dickey John.W, 'Metropolitan Transportation Planning' Scripta Books Company, Washington D.C, (Latest Edition).
3. Vuchic, Vukan.R, 'Urban Public Transportation System and Technology', Prentice, Inc, Englewood Cliffs, New Jersey, (Latest edition).

Approval:	Board of Studies:	Resolution No. 21.3	Dated: 14.03.2014
	Board of Faculty:	Resolution No. _____	Dated: _____
	Academic Council:	Resolution No. 83.8	Dated: 30.06.2014

Title of Subject : **MAPPING & REMOTE SENSING**

Discipline : City & Regional Planning
Semester : 4th
Effective : 13 CRP Batch and onwards
Pre-requisite : Surveying- I & II **Co-requisite:** Site Planning & Urban Design
Assessment : Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination
 Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours : Theory: 3 Practical: 1
Marks : Theory: 100 Practical: 50
Contact Hours : Minimum: 42 Minimum: 42

Aim : To introduce and develop the knowledge of preparing map of a site.

Objectives : After completing this course student should be able to:
 1. prepare map of a site at any required scale;
 1. employ latest mapping techniques as a powerful tool for planning tasks;

Contents : **Theory**
 The field of cartography and planning, essentials of mapping, co-ordinate system, plane, spherical, rectangular; scales, representative fraction, graphic and area scale; scale of factor determination and change of map scale, map types, map symbols; specific maps, introduction to remote sensing: definition and history, physical basis: EM spectrum, energy interaction, spectral reflectance curves, image characteristics; introduction to aerial photography, sensor systems: space and airborne, MSS, TM, ETM, HRV, LISS, IKONOS-2, Quick bird-2, AVHRR and others; platforms: types and orbital characteristics; thermal infrared: characteristics, TIR band properties, TIR image interpretation, introduction to microwave: importance and applications; digital image processing: over view of computer based image processing.

Practical

Assignments on graphic scales, map compilation, map enlargement and reduction, study and interpretation of topographic sheets, single band image interpretation.

Recommended Books:

1. Robinson, H., "Elements of Cartography", John Wiley & Sons, New York, (Latest edition).
2. Lillesand, T. M. and Kiefer, R. W., "Remote Sensing and Image Interpretation", John Wiley & Sons, New York, (Latest Edition).
3. Danson, John A., "Teach Your Geography", Hodder & Stoughton, London, (Latest Edition).

Approval:	Board of Studies: Board of Faculty: Academic Council:	Resolution No. 21.3 Resolution No. _____ Resolution No. 83.8	Dated: 14.03.2014 Dated: _____ Dated: 30.06.2014
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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **COMPUTER AIDED DESIGN**

Discipline : City & Regional Planning

Semester : 4th

Effective : 13 CRP Batch and onwards

Pre-requisite : Nil **Co-requisite:** Information & Database Management

Assessment : Theory: 20% Sessional Work 20% Mid Semester and 60% Final Semester Examination

Practical: 40% Sessional Work and 60% Final Semester Examination

Credit Hours : Theory: 2 Practical: 1

Marks : Theory: 50 Practical: 50

Contact Hours : Minimum: 28 Minimum: 42

Aim : To develop the computer literacy by using CAD in the field of planning.

Objectives : After completing this course student should be able to:

1. use Computer Aided Design Package for preparing architectural and planning tasks;
2. employ various techniques provided in CAD for planning tasks;

Contents : **Theory**

Introduction to Computer Aided Design (CAD) for Planners;. Basic concepts of computer use in town planning; concepts of electronic drafting; using the AutoCAD interface; accessing AutoCAD commands; units, scale and limits; drawing tools; drawing different objects accurately; poly lines, fills and hatching;. editing and modifying drawings; dimensions and text in a drawing; viewing drawing; 3D modeling; shading and rendering; printing or plotting a drawing.

Practical

Drawing various types of objects and geometric shapes: Drawing of a house design and small housing layout. Drawing of three-dimensional objects

Recommended Books

1. David FERY, ``Auto CAD 2000 No Experience Required, SYBEX computer books, Inc, USA, (Latest Edition).
2. Ron House, Paul W. Richardson, Using Auto CAD 2000', A Division of Macmillan, John Brooks, Dylan Vane, USA, (Latest Edition).
3. ``Under Water Exploration Vessel'', Hawkers Ocean Technologies, USA, (Latest Edition).

Approval:	Board of Studies:	Resolution No. 21.3	Dated: 14.03.2014
	Board of Faculty:	Resolution No. _____	Dated: _____
	Academic Council:	Resolution No. 83.8	Dated: 30.06.2014

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	: <u>PLANNING TECHNIQUES</u>
Discipline	: City & Regional Planning
Semester	: 5 th
Effective	: 13 CRP Batch and onwards
Pre-requisite	: Planning Data Analysis Co-requisite: Planning of New Towns/Master Planning
Assessment	: Theory: 20% Sessional Work 20% Mid Semester and 60% Final Semester Examination
Credit Hours	: Theory: 3
Marks	: Theory: 100
Contact Hours	: Minimum: 42

Aim	:	To understand the nature and process of planning
Objectives	:	After completing this course student should be able to: <ol style="list-style-type: none">1. understand the process, sequence and various current conceptions of planning;2. equip the students with thorough understanding of techniques in every stage of the planning process;
Contents	:	Theory Introduction, function of land use planning: Land use patterns, activity of planning. Planning process: Comprehensive, Structure, Systems approach, & advocacy planning. Planning sequences: Goals, Objectives, Description, Plan generation, Alternatives, Evaluation, & implementation. Locational requirements & planning implications for various land use activities such as residential, commercial, industrial, & recreational activities. Population projections: Characteristics & factors affecting population projections. Growth models: Cohort, Gravity, Stochastic, & simulation models.

Recommended Books:

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1. Blair, Thomas L. (ed), "Urban Innovation Abroad: Problem Cities In Search of Solution", Plenum Press, New York, (Latest Edition).
 2. Taylor, John L., and Williams David G., "Urban Planning Practice in Developing Countries", Paragons Press, Oxford, London, (Latest Edition).
 3. Margret Roberts, "An Introduction to Town Planning Techniques", published by Hutchinson, London, (Latest Edition).

Approval:	Board of Studies:	Resolution No. 22.2	Dated: 22-08-2014
	Board of Faculty:	Resolution No. _____	Dated: _____
	Academic Council:	Resolution No. _____	Dated: _____

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **SITE PLANNING AND URBAN DESIGN**

Discipline : City & Regional Planning
Semester : 5th
Effective : 13 CRP Batch and onwards
Pre-requisite : **Socio-Economic aspects of Planning** **Co-requisite:** Community Development
Assessment : Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination
 Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours : Theory: 3 Practical: 1
Marks : Theory: 100 Practical: 50
Contact Hours : Minimum: 42 Minimum: 42

Aim : To develop the knowledge of preparing a plan of small site and a three dimensional plan of an urban or rural area.

Objectives : After completing this course student should be able to:

1. understand the difference between two dimensional plan and a three dimensional plan of a site;
2. employ planning and designing techniques for preparing a site plan;

Contents : **Theory**
 Introduction to site planning; definitions, nature and objectives, site surveys, analysis and synthesis, site description, characteristics and classification, site selection for residential, institutional, commercial, industrial and recreational area development, factors of site planning, natural, geophysical, climatic cultural, aesthetic, etc.
 Introduction to urban design: definition, urban design process, outstanding features of urban design from the old and modern concept; typical examples of planning and design of Islamic cities, impact of technological changes on design of cities, urban form and urban design in the context of town planning, the key parameters which effect the physical design, hypothetical expression of alternate urban form at metropolitan and community scale, the key parameters which effect the physical design, studies for urban design; visual surveys, basic elements and other facts of form such as land forms, climate, shape, size and density, pattern, grain and texture, open spaces, circulation and urban complexity, vistas, skylines and social aspects, principles of urban design; scale, urban enclosures and plazas, urban mass activity and circulation, urban design techniques, urban aesthetics, space, street furniture and landscape design.

Practical

A typical site planning and design project (Involving site observation, analysis and graphic presentation of data, site preparation, site structure diagram, landscaping and development).

Recommended Books:

1. Kevin Lynch, "Site Planning", The MIT Press Cambridge, London, U.K, (Latest Edition).
2. Richard Unterman and Robbers Small, "Site Planning for Cluster Housing", Van Nostrend Reinhold Company", New York, (Latest Edition).
3. Hinton, Suzanne (ed.), "Urban Planning and Design for Road Public Transport", Confederation of British Road Passenger Transport, London, (Latest Edition).

Approval:	Board of Studies: Board of Faculty: Academic Council:	Resolution No. 22.2 Resolution No. _____ Resolution No. _____	Dated: 22-08-2014 Dated: _____ Dated: _____
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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	:	<u>ENVIRONMENTAL ENGINEERING</u>
Discipline	:	City & Regional Planning
Semester	:	5 th
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	Housing Co-requisite: Environmental Planning & Management
Assessment	:	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours	:	Theory: 3 Practical: 1
Marks	:	Theory: 100 Practical: 50
Contact Hours	:	Minimum: 42 Minimum: 42

Aims : To develop the knowledge of incorporating environmental engineering planning.

Objectives : After completing the course student should be able to
 1. Understand the impact of human upon environmental and vice versa.
 2. Understand water, air and noise pollutions.

Contents : **Theory**
 General introduction to environmental engineering. Water supply components, viz, collection from sources, transmission, treatment and distribution, water consumption. Planning guide for water consumption; water demand. Water quality, fire hydrants. Design of water supply lines and systems. Sewerage disposal; the components of sewerage system collection, treatment and disposal Design criteria, design investigation, Quantity of sewage. Average daily sanitary flow, General investigation, Design flow, Elementary hydraulics of sewers, Treatment plants, Location and site requirements, Sewer construction, Storm drainage, Basic data, Design criteria, Maximum and standard level interceptors and collectors, Maximum drainage zones, Run off of streets and urban areas. Basic infrastructure in relation to rural settlements, environmental quality; Refuse disposal: Refuse generations, Quantity, Composition, Collection, Transportation and disposal sites. Land fill areas. Air pollution and acoustic problems in urban areas.

Practical

Design of services such as water supply, sewerage, drainage etc. in a typical development scheme.

Recommended Books:

1. Kumar, Santosh, 'Water Supply Engineering', Khanna Publishing, (Latest Edition).
2. Kumar, Santosh, 'Waste Water Engineering', Khanna Publishing, (Latest Edition).
3. David, D., (Environmental Process), «george «allen & Unwin, London, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **INFORMATION & DATABASE MANAGEMENT**

Discipline : City & Regional Planning
Semester : 5th
Effective : 13 CRP Batch and onwards
Pre-requisite : Computer Aided Design/Planning Data Analysis **Co-requisite:** Introduction to GIS
Assessment : Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination
 Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours : Theory: 2 Practical: 1
Marks : Theory: 50 Practical: 50
Contact Hours : Minimum: 28 Minimum: 42

Aim : To increase the data base management techniques by educating various computer software packages provide help in the field of planning.

Objectives : After completing this course student should be able to:
 1. employ different software packages for the preparation of planning assignments;
 2. make planning decisions on the data processed by computer packages;

Contents : **Theory**
 Computer as a tool for planning data analysis. Basic database concepts; Entity Relationship modeling, Relational data model and algebra, Structured Query language; RDBMS; Database design, functional dependencies and normal forms; Transaction processing and optimization concepts; concurrency control and recovery techniques; Database recovery techniques; Database security and authorization.
 Introduction to Statistical Package for Social Sciences (SPSS), Questionnaire coding and data preparation for analysis on computer, Coding manual and coding sheets. Data entry into SPSS, Editing data values and controlling the display of data. Defining variables and selection of a procedure from the menus to calculate statistics. Re-coding of existing variables and computing of new variables. Assigning variable labels and value labels. Constructing simple frequency tables and cross-tables. Creating statistical diagrams and charts. Editing the results display in the output navigator.

Practical

Hands-on practice in using a database system to create files, tables, forms and queries; enter and manipulate data; and generate reports. Statistical analysis survey data using SPSS and preparation of tables, crossable and charts. Small Group Project implementing a database.

Recommended Books:

1. Sikander, P. K., etal, "Computer Use In Planning and Urban Management", Naosa Publishing House, New Delhi, 8 (Latest Edition).
2. Statistical Package for Social Sciences (SPSS) Manual (Latest Edition).
3. Connolly, R. and Begg. P., "Database Systems: a Practical approach to Design, Implementation and Management", Addison-Wesley Pub. Co, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	: <u>RESEARCH METHODS</u>
Discipline	: City & Regional Planning
Semester	: 6th
Effective	: 13 CRP Batch and onwards
Pre-requisite	: Planning Data Analysis Co-requisite: Master Planning/Project
Assessment	: Theory: 20% Sessional Work 20% Mid Semester and 60% Final Semester Examination
Credit Hours	: Theory: 3
Marks	: Theory: 100
Contact Hours	: Minimum: 42

Aim : To understand the knowledge of research methods and it's application in the field of planning.

Objectives : After completing this course student should be able to:

1. understand the process, basic elements and methodology of research;
2. conduct applied research for benefit of mankind;

Contents : **Theory**
Definition of research and its significance in planning. Introduction to research design. Research procedure. Characteristics of scientific research, literature review, data collection and analysis techniques. Research design: components of research design, types of research design: measurement: definition, nature and levels of measurement, research methodology: collection and analysis of data, types of observation, laboratory experimentation, and field experimentation, mail questionnaire, personal interview, questionnaire construction: content of question, types of question, question format, sequence of question, index construction and scaling methods, sampling and sample design, evaluation; generalization: theoretical framework and testing hypothesis, organization and format of planning report: reference, quotations, bibliography, paging, etc. Compilation of research report and presentation.

Recommended Books:

1. M, Iqbal Chaudary, 'Social Theory, Research Problems', Aziz book depot, Lahore, Pakistan, (Latest Edition).
 2. Karl.E.Weber, Indra.P.Tiwari 'An introduction, Research and Survey Format Design', Division of Human Settlements Development, Asian institute of Technology, Bangkok, Thailand, (Latest Edition).
 3. Chava Nachmias, David Nachmias, 'Research methods in the social Sciences', St Martin's Press Inc, 1988.
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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	:	<u>PLANNING OF NEW TOWNS</u>
Discipline	:	City & Regional Planning
Semester	:	6th
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	Planning Techniques Co-requisite: Master Planning-I & II
Assessment	:	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours	:	Theory: 3 Practical: 1
Marks	:	Theory: 100 Practical: 50
Contact Hours	:	Minimum: 42 Minimum: 42

Aims : To develop the knowledge of planning new towns.

Objectives : After completing the course student should be able to

1. understand and learn techniques to prepare plan and design of new urban areas;
2. understand the requirements of modern city and integrated approach for planning various components of city;

Contents : **Theory**

The need for integrated approach towards planning of various component parts of a city. Examples of modern cities: Brasilia, Canberra, Islamabad, Chandigarh and New Delhi. Process of planning and designing a new town. Space standards and requirements for various land use activities, densities, etc. Zoning plan; Planning and design for land use, Layout of roads and streets. Neighborhood planning; Layout plan of housing blocks and public facilities and services. Town center plan; planning of civic, administrative and commercial areas, planning for parking in the central business district. Industrial estate plan: layout and placement of various types of industries, related services and facilities. Town park; elements of design of a town park and landscape planning of a system of open spaces and parks.

Practical

Selection of a site for a new town. Preparation of a zoning plan and neighbourhood plan. Planning of a town centre, industrial estate and town park. Model making for various designs.

Recommended Books

1. Bacon, Edward N., ``Design of Cities``, Thames & Hudson, London, (Latest Edition).
2. Chapir, F. Stuart, ``Urban Land Use Planning``, University of Illinois Press, Chicago, (Latest Edition).
3. Bhatti.A.K, ``Town planning for third world``, Feroze Sons Ltd Lahore, (Latest Edition).

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Title of Subject	: <u>RURAL PLANNING</u>
Discipline	: City & Regional Planning
Semester	: 6th
Effective	: 13 CRP Batch and onwards
Pre-requisite	: Socio-Economic aspects of Planning
Assessment	: Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours	: Theory: 2 Practical: 1
Marks	: Theory: 50 Practical: 50
Contact Hours	: Minimum: 28 Minimum: 42

Objectives : After completing this course student should be able to:

1. consider opportunities and constraints at different levels during planning exercise;
2. prepare appropriate and viable rural plan;

Rural planning workshop involving identification of rural area problems and basic needs and preparation of district level projects. Evaluation of existing rural and district level projects.

1. Weber, Karl E., "Rural Development Planning in Pakistan", Asian institute of technology, Bangkok, (Latest Edition).
2. Ford, William, C., ``A Theoretical Approach to Rural Land Use Planning``, Briton, Arrousmith, (Latest Edition).
3. Whitby, M. C, Rural Resource Development``, Mathews, London, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject :	<u>ENVIRONMENTAL PLANNING & MANAGEMENT</u>		
Discipline :	City & Regional Planning		
Semester :	6th		
Effective :	13 CRP Batch and onwards		
Pre-requisite :	Environmental Engineering	Co-requisite: Project	
Assessment :	Theory:	20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination	
	Practical:	40% Sessional Work and 60% Final Semester Examination	
Credit Hours :	Theory: 3	Practical: 1	
Marks :	Theory: 100	Practical: 50	
Contact Hours :	Minimum: 42	Minimum: 42	

Aims	:	To develop the knowledge of incorporating environmental engineering and management in the field of planning.
Objectives	:	After completing the course student should be able to 1. Understand issues and basic concepts of environmental planning & management; 2. Understand water, air and noise pollution; 3. prepare a pollution free plan for the people;
Contents	:	<p>Theory Basic concepts of environmental issues and priorities at global and local level; Environmental problems at home, workplace & city centers; Sustainable Development: conceptual issues; Environmental Impact Assessment and Social Impact assessment, Environmental plans and policies; National Conservation Strategy; Ecology, pollution and hazards; Introduction to environmental management systems; Use of SRS and GIS in natural resource management and environmental planning.</p> <p>Practical Studies and analysis of environmental degradation in urban and rural communities. Preparation of environmental management programme for commercial, industrial and residential areas of the city or for the whole city.</p>

Recommended Books

1. Pandey, G. N. and Garney, G. C., ``Environmental Engineering``, Tata McGraw-Hill Publishing company Ltd., New Delhi, (Latest Edition).
2. Canter, ``Environmental Impact Assessment, McGraw Hill Inc., New York, (Latest Edition).
3. Mukherjee, Biswarup, ``Environmental Management: Basic & Applied Aspects of Management of Ecology and Environment System``, Vikas Publishing House Pvt. Ltd., (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject :	<u>INTRODUCTION TO GEOGRAPHICAL INFORMATION SYSTEM</u>		
Discipline :	City & Regional Planning		
Semester :	6th		
Effective :	13 CRP Batch and onwards		
Pre-requisite :	Computer Aided Design	Co-requisite: Project	
Assessment :	Theory:	20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination	
	Practical:	40% Sessional Work and 60% Final Semester Examination	
Credit Hours :	Theory: 2	Practical: 1	
Marks :	Theory: 50	Practical: 50	
Contact Hours :	Minimum: 28	Minimum: 42	

Aims	:	To understand GIS & its applications and their scope for problem identification and problem remedy.
Objectives	:	After completing the course student should be able to 1. understand and review of existing GIS applications for problems identification; 2. use of GIS applications for plan implementation and monitoring;
Contents	:	<p>Theory Introduction, definitions, key components, functional subsystem, raster data model, vector data model, attribute data model, data acquisition techniques, data resources, data capturing techniques and procedures, data transformation, visualization of spatial data, layers and projections, Map Design: symbols to portray points, lines and volumes, graphic variables, visual hierarchy, Spatial Analysis: overlay analysis, neighborhood functions, network and overlay analysis, buffering.</p> <p>Practical Introduction to GIS lab (hardware/ software), raster/ vector/ attribute data display, scanning, digitization, coordinate based point mapping, raster/ vector conversion, data layer integration and display of different projections.</p>

Recommended Books:

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1. Heywood, I., Cornelius, S. and Carver, S., "An Introduction to Geographic Information System", Addison Wesley Longman, New York, (Latest edition).
 2. Aronoff, S., "Geographic Information Systems: A Management Perspective", WDL Publications, Ottawa, (Latest Edition).
 3. Burrough, P., "Principles of Geographic Information Systems for Land Resources Management", Oxford University Press, Oxford, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	:	<u>MASTER PLANNING -I</u>
Discipline	:	City & Regional Planning
Semester	:	7 th
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	Planning Techniques Co-requisite: Master Planning-II
Assessment	:	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours	:	Theory: 2 Practical: 1
Marks	:	Theory: 50 Practical: 50
Contact Hours	:	Minimum: 28 Minimum: 42

Aims	:	To understand various levels of planning for preparing a comprehensive economic development plan
Objectives	:	After completing the course student should be able to 1. understand the development planning process; 2. prepare goals and objectives of comprehensive planning;
Contents	:	<p>Theory Development Planning Process: goals and objective of comprehensive planning, planning parameters and various approaches. Structure planning versus Master Planning approach. The new paradigm for comprehensive development planning urban and rural areas in Pakistan. Planning surveys and studies of component subjects as a basis for development of plans. Analysis of data collected to form information base for future planning proposals.</p> <p>Practical Planning surveys and studies of the selected city as a class/ group project. Special emphasis will be laid on team work capabilities development among the students.</p>

Recommended Books:

1. Ministry of Housing & Local Government, "Development Plans: A manual on Form & Content", HMSO, (Latest Edition).
2. Karachi Development Authority, "Karachi Master Plan", (Latest Edition).
3. Ractcliff, John, 'An Introduction to Town & Country Planning', Hutchinson Ltd., London, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject :	<u>LANDUSE & BUILDING CONTROL</u>		
Discipline :	City & Regional Planning		
Semester :	7 th		
Effective :	13 CRP Batch and onwards		
Pre-requisite :	Planning Law		Co-requisite: Master Planning I & II
Assessment :	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination		
	Practical: 40% Sessional Work and 60% Final Semester Examination		
Credit Hours :	Theory: 2	Practical: 1	
Marks :	Theory: 50	Practical: 50	
Contact Hours :	Minimum: 28	Minimum: 42	

Aims	:	To control the existing and guide the future development of the area.
Objectives	:	<p>After completing the course student should be able to</p> <ol style="list-style-type: none"> 1. understand various land use and building development control regulations as powerful tools for planning regulations; 2. issue development permit in the light of prevailing building and development control regulations;
Contents	:	<p>Theory</p> <p>Land use and Building control as a tool for implementation of Master Plan and other Local plans, Environmental conservation through building and development control. Site visits, serving of notices. Fines and compounding of violation. Analysis of building proposal: Conformity with the development plans, land use zoning, planning criteria, building bylaws, design guidelines, building line parking requirements, chamfer requirements, construction over cultivators etc. Completion certificates. Demarcation and removal of encroachments. Declaration and demolition of dangerous buildings. Action against illegal buildings, Litigation involved in building control. Commercialization policy and its effectiveness.</p> <p>Practical</p> <p>Survey of various buildings, markets and plazas regarding the provision of parking space, building lines/ set backs, etc. Identification of violation of planning standards and regulations. Evaluation of building and development control practices in the development authorities and municipal corporations.</p>

Recommended Books:

1. Ali, Hamid & Ali Zaka, "The Sindh Local Government Ordinance", Ideal Publishers, Karachi, (Latest Edition).
2. Rahman, Hafizur, "The Sindh Building Control Ordinance", Pioneer Book House, Karachi, (Latest Edition).
3. Telling, A. E., "Planning Law and Procedure", Butter North & Co., London, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject :	<u>PROJECT PLANNING & MANAGEMENT</u>		
Discipline :	City & Regional Planning		
Semester :	7 th		
Effective :	13 CRP Batch and onwards		
Pre-requisite :	Site Planning & Urban Design		Co-requisite: Project
Assessment :	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination		
	Practical: 40% Sessional Work and 60% Final Semester Examination		
Credit Hours :	Theory: 3	Practical: 1	
Marks :	Theory: 100	Practical: 50	
Contact Hours :	Minimum: 42	Minimum: 42	

Aims	:	To understand the importance of project as mean of implementation of development plan.
Objectives	:	After completing the course student should be able to 1. grasp fully the various stages involved in the project cycle and its legal, financial and administrative aspects; 2. pick up different techniques and process used during various stages of projects;
Contents	:	<p>Theory Process of project planning and implication in Pakistan. Relationship between policies, plans and projects in urban and regional development. Project identification and formulation. The PC_I and P_II Forms. Financial and economic appraisal and selection of projects. Legal backing for the plans and projects. Social acceptability of projects. Sanctioning authorities and approval of projects. The role of project execution authority. Scheduling of project components; the Critical Path Method (CPM). Monitoring and evaluation of projects; Planning Evaluation and Review Technique (PERT).</p> <p>Practical Preparation of a Pc-I and PC-II form for a development project. Evaluation of an existing project. Use of Prima Vera and MS Project Software.</p>

Recommended Books:

1. Cleland, David I, "Systems Analysis & Project Management", McGraw Hill Book Company, Singapore, (Latest Edition).
2. Kerzner, Harold, "Project Management& Systems Approach Planning, Scheduling & Controlling", Van Nortrand Reinhold, New York, (Latest Edition).
3. Riodan, Timthy, "Project Approach and Policy Review", John wiley, New York, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	:	<u>DISTRICT & REGIONAL PLANNING</u>
Discipline	:	City & Regional Planning
Semester	:	7 th
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	Rural Planning
Assessment	:	Co-requisite: Community Development Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours	:	Theory: 3 Practical: 1
Marks	:	Theory: 100 Practical: 50
Contact Hours	:	Minimum: 42 Minimum: 42

Aims : To develop the knowledge of planning at district & regional level.

Objectives : After completing the course student should be able to
1. understand the concept, need and objectives of district & regional planning;
2. understand and make use of district & regional development theories in planning;

Contents : **Theory**
Introduction to District Planning. The Local Government Acts of Pakistan. Role of Town Planner at district level. District level Master Plan and local subject plans for rural sanitation, health centre development, educational institutions, service centres, rural water supply schemes and rural transportation.
Introduction to Regional Planning; concept, need and objectives. Planning regions, Delineation of regions. National and regional economy; economic base resources, etc. Inter and intra regional inequalities, spatial flows; rural urban linkages, urbanization and regional growth, Regional development theories. Preparation and presentation of regional plans and their implementation. Review of public sector programs with particular reference to Pakistan.

Practical

Critical evaluation of Regional Plans, Inter Regional and Intra Regional disparities.

Recommended Books:

1. Glasson, John, "An Introduction to Regional Planning", Hutchison Ltd., London, (Latest Edition).
2. Hall, Peter, "Urban and Regional Planning", Penguin books (NZ) Ltd., Auckland, New Zealand (Latest Edition).
3. Richardson, H. W., "Elements of Regional Economics", Penguin books (NZ) Ltd., Auckland, New Zealand (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	: <u>COMMUNITY DEVELOPMENT</u>
Discipline	: City & Regional Planning
Semester	: 7 th
Effective	: 13 CRP Batch and onwards
Pre-requisite	: Socio-Economic aspects of Planning Co-requisite: District and Rural Planning
Assessment	: Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours	: Theory: 2 Practical: 1
Marks	: Theory: 50 Practical: 50
Contact Hours	: Minimum: 28 Minimum: 42

Aims : To develop the knowledge of how to mobilize people in community development.

Objectives : After completing the course student should be able to

1. understand the concept, need and objectives of community development;
2. understand and make use of regional development theories in planning;

Contents : **Theory**

Introduction: Community Mobilization, Objectives, Principles; Community empowerment and development approaches; National and international examples of community empowerment and development, Social work and welfare organizations as planning aid, Role of NGOs; Managerial skills of the poor; Community credit mechanism; Poverty alleviation strategies for Pakistan; Community participation for effective implementation and monitoring of projects; Scope of community participation in the provision of health, education and other civic amenities in rural and urban areas on self-help basis; Gender issues: Role of women in community development activities.

Practical

Preparation of improvement plans and implementation frameworks for the provision of education, health and recreational or infrastructure facilities in low income communities/slums or villages on self-help basis. Organization of forums in urban/ rural communities for community meeting/ mobilization.

Recommended Books:

1. Sodhi, J.S, "Poverty Alleviation and Rural Development", Ceriterion Publishers, New Delhi, (Latest Edition).
2. Blitzter, Donna, "Solving Life Problem in Community Resources", McGraw Hill, London, (Latest Edition).
3. Ward, Peter.M, "Self-help housing, A Critique" Mansel Publishing Ltd., New York, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	:	<u>MASTER PLANNING - II</u>
Discipline	:	City & Regional Planning
Semester	:	8th
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	Master Planning-I Co-requisite: Project
Assessment	:	Theory: 20% Sessional Work, 20% Mid Semester and 60% Final Semester Examination Practical: 40% Sessional Work and 60% Final Semester Examination
Credit Hours	:	Theory: 3 Practical: 2
Marks	:	Theory: 100 Practical: 100
Contact Hours	:	Minimum: 42 Minimum: 84

Aim : To develop the knowledge of preparing Master Plan/ Development Plan of an area.

Objectives : After completing this course student should be able to:

1. understand the contents of various planning instruments like master plan, local plan, action area plan and district plan;
2. prepare appropriate and viable development plan ;

Contents : **Theory**
 Policy planning in the light of existing studies and strategies. Cotangents and purpose of Master Plan. Local development plans such as Subject Plans, Local District Plans and Action Area Plans. Phasing and programming. Financing and Legislating the plan provisions. Administering the master plan; Coordination between various line departments and the local planning agency. Public participation as a tool for effective implementation of the plans and component projects.

Practical

Evaluation of an existing Master Plan. Preparation of a Master Plan, Subject Plans, Local District Plans and Action Area Plans for a town.

Recommended Books:

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1. Ministry of Housing & Local Government, "Development Plans: A manual on Form & Content", HMSO, (Latest Edition).
 2. Bracken, Lan, "Urban Planning Methods: Research and Policy Analysis", Mathew, London, (Latest Edition).
 3. Taylor, I. John, "Urban Planning Practice in Developing Countries", Pergamen, Oxford, (Latest Edition).
 4. Karachi Development Authority, "Karachi Master Plan", (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	:	<u>ESTATE MANAGEMENT</u>
Discipline	:	City & Regional Planning
Semester	:	8th
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	Project Planning & Management Co-requisite: Master Planning
Assessment	:	Theory: 20% Sessional Work 20% Mid Semester and 60% Final Semester Examination
Credit Hours	:	Theory: 3
Marks	:	Theory: 100
Contact Hours	:	Minimum: 42

Aim : To develop the knowledge of how to solve the various problems related to real state.

Objectives : After completing this course student should be able to:

1. understand various techniques and measures to solve the urban problems;
2. apply various tools for providing housing to the real targetgroup;

Contents : **Theory**
 Process and problems of urban growth in developing countries with particular reference to Pakistan, land planning and management for urban expansions, operation of urban land prices; and urban development in Governmental and informal sector, public and private land development and management approaches viz; land pooling and readjustment, land banking, leasehold system, sites and services projects, public-private joint ventures, plot allotment criteria, land management process for the modern city, master planning incremental development approach for low-income housing, people's involvement for the development and maintenance of infrastructure.

Recommended Books:

1. "HS 17 Readings in Urban Land Management", Urban Land Programme, Human Settlements Division, Asian Institute of Technology, Bangkok, (Latest Edition).
2. Broslorman, Robert, "Complete Estate Planning Guide", McGraw Hill, London, (Latest Edition).
3. Lichfield, Nathaniel, "Land Policy in planning", George Allen, London, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **FINANCE PLANNING & MANAGEMENT**
Discipline : City & Regional Planning
Semester : 8th
Effective : 13 CRP Batch and onwards
Pre-requisite : Project Planning & Management **Co-requisite:** Estate Management / Project
Assessment : Theory: 20% Sessional Work 20% Mid Semester and 60% Final Semester Examination
Credit Hours : Theory: 3
Marks : Theory: 100
Contact Hours : Minimum: 42

Aim : To understand the process of managing the town/ city, specially through the instrument of financial management.

Objectives : After completing this course student should be able to:
1. equip himself with various tools of finance planning and management;
2. learn various techniques and measures to solve urban financial problems;

Contents : **Theory**
Methods of estimating the cost of development plans and individual projects and means of financing. Effect of affordability on the densities and space standards. Capital Improvement Programming. Internal rate of return and Cost Benefit Analysis. Time value of money, compounding and discounting measures of project worth. Preparation of development budgets and planning project evaluation

Recommended Books:

1. Cleland, David I., "System Analysis & Project Management", McGraw Hill Book Company, Singapore, (Latest Edition).
2. Kerzner, Harold, "Project Management & Systems Approach Planning, Scheduling & Controlling", Van Nostrand Reinhold, New York, (Latest Edition).
3. Merret, A. J., "Finance and Analysis of Capital Process", Longman, London, (Latest Edition).

Approval:	Board of Studies:	Resolution No. 22.2	Dated: 22-08-2014
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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject : **PLANNING PRACTICE**
Discipline : City & Regional Planning
Semester : 8th
Effective : 13 CRP Batch and onwards
Pre-requisite : Planning Law **Co-requisite:** Estate Planning
Assessment : Theory: 20% Sessional Work 20% Mid Semester and 60% Final Semester Examination
Credit Hours : Theory: 2
Marks : Theory: 50
Contact Hours : Minimum: 28

Aim : To understand legal terms and explanation required in the execution of a project.

Objectives : After completing this course student should be able to:

1. understand the local government organization and their function;
2. understand professional terms and steps in implementation of projects;

Contents : **Theory**
Local government organizations and their functions, municipal law for planning; general definition: land acquisition, arbitration, valuation, estimates and dilapidation, management of municipal services, role and function of planning section in local bodies, project planning, estimates, tender, contracts, site supervision and execution.

Recommended Books:

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1. Namavati Roshan, "Professional Practice", Union Book Stall, Karachi, (Latest Edition).
 2. "The Sindh Local Government Ordinance, 2002 & the Sindh Councils (Appeal) Rules", Hamid Ali & Zaka Ali, The Ideal, Karachi, Publishers.
 3. Telling, A. E., "Planning Law and Procedure", Butter North & Co., London, (Latest Edition).

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MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO
DEPARTMENT OF CITY AND REGIONAL PLANNING

Title of Subject	:	PROJECT
Discipline	:	City & Regional Planning
Semester	:	8th
Effective	:	13 CRP Batch and onwards
Pre-requisite	:	Planning Subjects
Assessment	:	Practical: 25% Sessional and 75% Final Semester Examination
Credit Hours	:	Practical: 6
Marks	:	Practical: 200
Contact Hours	:	Minimum: 84

Aim	:	To develop the professional research, planning and design skills in students.
Objectives	:	After completing this course student should be able to: <ol style="list-style-type: none"> 1. prepare plans and designs of various kinds of projects in the field of City & Regional Planning ; 2. implement, supervise and manage different planning assignments;
Contents	:	Practical Every student has to carryout an independent research and design project/ thesis under the guidance of a teacher of the faculty, the topic of the thesis should be relevant to the work of a planner, the topic of the project and the scope of the work has to be approved by the Departmental Committee, at the end of the term the student has to submit this project for the assessment and shall be examined for award of the marks.

Recommended Books:

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1. "National reference Manual on Planning and Infrastructure", Ministry of Housing & Works, Environment & Urban Affair Division, Government of Pakistan, Islamabad, (Latest edition).
 2. "Research/ Project Report", Mehran University of Engineering & technology, Jamshoro.

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