



Faculty of Environmental Design

Faculty Contact:

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History:

The Faculty of Environmental Design, FED, was established in 1976 as school of Environmental Design (SED) under the administration of the Faculty of Engineering. It consisted of the Departments of Architecture (AR), Landscape Architecture (LA), and Urban and Regional Planning (URP). In 1998, it was upgraded to an independent Faculty of Environmental Design (FED). In 2007, the Department of Geomatics was established as the fourth department of the Faculty.

Vision:

Continued enhancement in learning through quality education, scientific research, and community service to achieve distinction through earning awards and merits in design competitions, and through acquiring global accreditation of the academic curricula and the faculty's performance.

Mission:

To maintain continuous upgrading of the curricula, teaching materials and methodology, and impart quality education via cutting edge ICT's and advanced facilities in research and community services, in order to endow graduates with scientific knowhow, academic excellence, and professional competence.

Faculty of Environmental Design

Unique Features:

The unique features of the faculty include, but are not limited to the following:

- (1) Adopting innovative teaching and learning methods, including Problem based Learning (PBL), project works, lectures, seminars, small group teaching sessions (supervisions), computer work, practical classes, online resources, and field trips.
- (2) Practical applications of planning and design theory in a way that adapts and responds to local social issues and needs.
- (3) Effective leadership along with excellent interpersonal relationships through students' participation in sports, social functions, and other extracurricular activities.

Graduation Requirements:

To earn a degree in Environmental Design, students must complete a total of 166 credit hours distributed as follows:

1. (26) Credit hours of university requirements
2. (33) Credit hours of faculty requirements,
3. (107) Credit hours of Departmental courses

Department Core Courses (Credit Hours 33)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	AR	190	Visual Communication	4	0	8		
2	URP	403	Urban Design	3	3	0		AR 191
3	URP	211	Comp. for Environmental Design	2	1	3		
4	LA	141	Environment and Man	3	1	4		
5	AR	191	Basic design	4	0	8		AR 190
6	AR	210	Freehand Drawing	2	0	4		AR 212
7	URP	130	Evolution of the Built Environment.	3	3	0		
8	LA	121	Introduction to Environmental Design	2	2	0		
2	LA	250	Surveying for Environmental Design	2	1	2		
10	LA	222	Site Planning	2	2	0		
11	AR	240	Energy and Design	3	3	0		AR 320
12	URP	400	Housing I	3	3	0		AR395,URP395,LA395
Total				33	19	29		

Department and Academic Degrees:

Department / Program	Academic Degree
Architecture	Bachelor of Science in Architecture
Landscape Architecture	Bachelor of Science in Landscape Architecture
Urban and Regional Planning	Bachelor of Science in Urban and Regional Planning
	Master of Urban and Regional Planning
Geomatics	Bachelor of Science in Geomatics

Public Journals:

Publication	:	Journal of King Abdulaziz - Environmental Design Sciences
University	:	King Abdulaziz University
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Faculty of Environmental Design

Course Descriptions:

AR 190: Visual Communication

This course is designed to enable first year students to understand basic visual communication skills such as lettering, basic design elements, constructing two dimensional shapes and three dimensional volumes, model making and manual rendering techniques.

AR 240: Energy and Design

Introductory course that discusses main energy sources such as solar, thermal, and wind. It exposes students to the basics in heat transfer and thermal properties of building envelope. It includes the study of the basics of human thermal comfort, analysis of climatic factors and their effects on architectural design. In addition, the course includes the study of building form and the thermal properties of building material and their effect on building thermal performance and building energy requirement.

AR 191: Basic Design

An introductory level course in basic design. Design topics regarding symmetry such as forms, organization, movement and balance are taught through projects. The projects include the study of the various design relationships in two and three dimensions and the use of color in design. In addition, the course stresses the use of model making in understanding basic design relationships and manual and computer based rendering methods.

Prerequisites:

AR 190

LA 121: Introduction to Environmental Design

An introduction to the College of Environmental Design and its philosophy, the meaning of environmental design, the relationship between the professional disciplines concerned, and the importance of environmental design in Saudi Arabia. Simple descriptions and explanations of the elements and factors involved by reference to the environmental conditions and patterns of settlements in the Kingdom.

AR 210: Freehand Drawing

The course serves as an introduction to freehand drawing principles and graphic representation of objects, masses, and voids. It includes the study and use of visual effects such as color, light, texture, and basics of perspective drawing... etc. It stresses the enhancement of student's graphic presentation ability.

LA 141: Environment and Man

Study of the natural processes in the environment and their interaction with human activity in the context of environmental planning and design. The course deals with solar and wind movements and the effect of each on residential complexes, buildings, exterior spaces and appropriate responses in each scale. Other aspects of the natural environment are also dealt with.

LA 222: Site Planning

Students are taught the site planning process, aspects of site and program analysis and the principles of design concerned in site development, including simple site surveying. Different scales of projects are covered, but the emphasis throughout is on practical working knowledge. Natural and manmade elements and aspects of site planning are dealt with.

URP 211: Visual Communication

An introduction to the application of computers in environmental design. Caters to architecture, urban and regional planning, and landscape architecture. Covers fundamentals of computing, applications of design and other software for three disciplines.

LA 250: Surveying for Environmental Design

This course deals with several subjects related to surveying, such as: principles of surveying, theory of measurement and errors, measurements of distances using tapes and electronic equipment, determination of levels (theory, methods, equipment), determination of levels (practical applications and calculations), measurement of angles and determination of directions, topographic surface and the preparation of maps and survey of buildings and districts.

URP 400: Housing I

This course provides students with a general understanding of the basis of shelter provision. It deals with housing as a process and a product. It delves into the local indigenous as well as the international generic housing types. It addresses design, economic, social, institutional, and environmental issues involved in planning, building, and allocating housing units..

URP 130: Visual Communication

This deals with the study of the cultural and urban basis of development. It will address the variations in urban form, and its development from pre renaissance to modern times. Ideas, technologies and other impacts on the built environment will be addressed.

URP 403: Visual Communication

This course includes theoretical as well as field investigations of the basis, foundations, and elements of urban design as required in planning of new area and (or) upgrading an existing one. The course includes the study of economic, social, spatial, public and private interests, circulation requirements, and the pattern and effect of land ownership. Comparative analysis between the Kingdom of Saudi Arabia and other world cities will be included.

Department of Architecture

Department Contact:

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History:

The Department of Architecture (AR) was established in 1976 as one of the 3 departments of the School of Environmental Design (SED). The school was later upgraded to become an independent Faculty of Environmental Design (FED).

Vision:

To impart quality education, and achieve the optimum level of performance in instruction and in the proliferation of advanced research and community services.

Mission:

To develop students' academic and research capabilities, upgrade their scientific and technical skills, enhance their artistic talents and cultural values, and prepare them as professional architects, designers and builders.



Department of Architecture

Departmental Requirements:

To earn the degree of Bachelor of Science in Architecture, students are required to satisfactorily complete 166 credit hours distributed as follows:

1. (26) credit hours of the university requirements
2. (33) credit hours of college requirements,
3. (101) credit hours of departmental courses
 - Divided into 70 credit hours of core courses
 - 31 credit hours of specialization courses and
 - 6 credit hours of electives.

Department Core Courses (Credit Hours 70)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	AR	230	Architecture in Islamic Civilization	3	3	0		
2	AR	292	Architectural Design Studio I	6	0	12		AR 191
3	AR	211	Architectural Presentation	2	0	4		
4	AR	212	Computer Applications in Arch.	3	1	4		
5	AR	293	Architectural Design Studio II	6	0	12		AR 192
6	AR	313	Architectural Presentation by CAD	3	1	4		AR 212
7	AR	320	Comparative Arch. Thought I	3	3	0		
8	AR	360	Structures in Architecture I	3	3	0		Math 101
9	AR	370	Building Construction I	2	2	0		
10	AR	394	Architectural Design Studio III	6	0	12		AR 293
11	AR	321	Comparative Architectural Thought II	3	3	0		AR 320
12	AR	331	Saudi Architectural Heritage	2	3	0		
13	AR	361	Structures in Architecture II	3	3	0		AR 360
14	AR	371	Building Construction II	2	2	0		AR 370
15	AR	395	Architectural Design Studio IV	6	0	12		AR 394
16	AR	441	Mechanical Systems in Architecture	3	3	0		AR 240
17	AR	472	Working Drawing I	4	3	7		
18	AR	496	Architectural Design Studio V	6	0	12		AR 395
19	AR	432	Psychology and Sociology in Architecture	2	2	0		AR 321
20	AR	451	Acoustics & Illumination in Architecture	2	2	0		
Total				70	34	79		

Requirements for Architecture (Credit Hours 31)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	AR	473	Working Drawing II	4	1	6		AR 472
2	AR	497	Architectural Design Studio VI	6	0	12		AR 496
3	AR	500	Graduation Project Research	2	2	0		
4	AR	575	Project Management	3	3	0		
5	AR	598	Architectural Design Studio VII	6	0	12		AR 497
6	AR	576	Professional Practice	2	2	0		
7	AR	599	Graduation Project	8	0	16		AR598, AR 500
Total				31	8	46		

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Elective Courses: (Credit Hours 6)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	AR	414	Introduction to Interior Design	2	2	3		AR 472
2	AR	417	Architectural Photography	2	2	2		AR 496
3	AR	434	Contemporary Architecture in KSA	2	2	0		
4	AR	509	Special Studies in Architecture	2	2	0		
5	AR	531	Advanced Studies of Arch. in Islamic Civilization	2	2	0		AR 497
6	AR	578	Architectural Design Economics	2	2	0		
Total				12	12	5		

Course Descriptions:

AR211: Architectural Presentation

The use of graphic techniques (pens, pencils, markers, airbrush, watercolor, colors, etc., rendering), methods of shades and shadows, and perspective drawings in architectural presentation.

AR 212: Computer Applications In Architecture

The use of latest computer software applications in architecture, in addition to the software on rendering and graphic design applications and presentation, and plotting techniques.

AR 230: Architecture In Islamic Civilization

A survey of architecture development in Muslim regions in history. The course acquaints students with the urban character of Islamic culture through the ages, increases their understanding of urban principles and Islamic values, and familiarizes them with the vocabulary of Islamic architecture.

AR 292: Architectural Design Studio I

The course provides students with the principles of creating interior and exterior space and forms, their relationships in achieving visual functional requirements, through architectural design projects, so that they students gain skills in the application of design graphic techniques and concepts in presentations.

AR 293: Architectural Design Studio II

Basic principles of creating interior and exterior spaces and forms, their relationships, while achieving aesthetics and functional requirements. Students are trained in design graphics techniques in the presentation of architectural concepts.

Prerequisites: AR 192

AR 313: Architectural Presentation By CAD

A continuation of the architectural graphic course where the skills of the students are developed in utilizing computer software programs used for architectural presentations dealing with 3D simulations and rendering.

Prerequisites: AR 212

AR 320: Comparative Architectural Thought I

A study of detailed comparative architectural thoughts worldwide, discussing concepts and concerns that shaped the environment. Issues of differences in values and concerns of various regions in terms of social, economic and natural conditions, cov-

ering the industrial development period to the beginning of the modern architectural movement.

AR 321: Comparative Architectural Thought II

A study of architectural thoughts in the global contexts as a continuation of the previous course (AR 320). It begins with the detailed study of the components and elements of modern architectural thoughts until the present time.

Prerequisites: AR 32

AR 331: Saudi Arabian Architectural Heritage

A study of urban fabric and its nomenclature in Saudi cities to acquaint students with local heritage, through a review, historical analysis, and classification of elements and their respective locations in the Muslim world, their use and benefits in both traditional and modern setting, highlighting the characteristics of traditional style in Jeddah and the Hejaz region.

AR 360: Structures In Architecture I

The role of structural elements in the design of architectural space, the basics of building structures related to the architectural design, i.e. tension and compression, stress, moment, deflection and torsion force in building structural member, structural frames with flat surfaces, and structural shapes such as tents system, vault, domes and membranes structures.

Prerequisites: Math 101

AR 370: Building Construction I

Various construction materials and methods (loadbearing walls construction methods, traditional reinforced concrete construction methods, prefabricated and prestressed concrete construction techniques, wood construction methods, and structural steel construction.

AR 37: Building Construction II

A continuation of AR 370, construction materials and methods of main building components are studied. It covers also finishing methods, insulation on walls, ceilings and roofs; rough carpentry and cabinetry, and doors and windows.

Prerequisites: AR 370

AR 394: Architectural Design Studio III

Architectural design projects are used to develop students' design skills in dealing with fundamental design factors that influence form and function of architectural space, including site

Department of Architecture

conditions, interior and exterior circulation, building technology, and individual and group level user behavior.

Prerequisites: AR 293

AR 395: Architectural Design Studio IV

Architectural design projects are used to train students in the application and development of basic skills needed to deal with design studies preparation, search and data collection, data analysis, problem identification, listing of alternatives, preparation of architectural programs, building codes and regulations, and economic consideration in building design.

AR 432: Psychology And Sociology In Architecture

Introductory information related to the different concepts and concerns of the effects of psychological and social implications, which resulted from designing and forming the human and built-up environment.

AR 441: Mechanical Systems In Architecture

A study of mechanical systems in buildings that includes airconditioning systems, heating and cooling loads calculations, and comparative study of the various airconditioning systems and their suitability for certain architectural designs. It also covers mechanical services in buildings, such as elevators, escalators, and fire safety equipments.

Prerequisites: AR 240

AR 451: Acoustics And Illuminations In Architecture

A study of mechanical systems in buildings that includes airconditioning systems, heating and cooling loads calculations, and comparative study of the various airconditioning systems and their suitability for certain architectural designs. It also covers mechanical services in buildings, such as elevators, escalators, and fire safety equipments.

AR 472: Working Drawing I

A study of applications of techniques used in preparation of working drawing sheets, drawing symbols and interpretations in plans, elevations, sections and details, as well as wood and metal works, electrical, mechanical and plumbing. They are all based on genuine projects.

AR 473: Working Drawing II

Students prepare a complete set of working drawings for an appropriate size project.

AR 497: Architectural Design Studio VI

Architectural design projects used to improve student awareness and skills needed to deal with architectural design in consideration of time, place and people

AR 500: Graduation Project Research

Students are aided in the selection, preparation and completion of an architectural program.

AR 575: Project Management

An introductory course on principles of management of architectural projects, contemporary management methods and techniques used in the field.

AR 576: Professional Practice

An introduction to the state of professional architectural practice and principles for administering architectural offices.

AR 598: Architectural Design Studio VII

Preselected design project(s) to study prominent local urban problems aimed at developing the student's decisionmaking skills relating to urban design and policy issues, environmental design issues, and social issues.

AR 599: Graduation Project

Transformation of the previously prepared architectural program into a complete design solution with a defined philosophical direction and clear vision.

AR 414: Introduction To Interior Design

Primary and secondary characteristics that influence design, form and construction of interior space, including the use of color, texture and furniture; and space functional requirements with a focus on traditional and local interior space.

AR 417: Architectural Photography

A study of the basics of photography and print techniques, photographic arts and its use in architectural graphics and presentation. Issues include angle of vision, image formation, photo perspective, background, and use of light and photographic illusion techniques.

AR 531: Advanced Studies Of Architecture In Islamic Civilization

The significant achievements of Muslim civilization in the annals of history are reviewed, exposing students to the influencing factors including buildings in the region, civic norms, human values, and historical and religious influences on design and construction.

AR 578: Architectural Design Economics

An introduction to cost and value engineering principles on building design, the methods of projects improvement via value enhancement, technical reviews, and quality and cost control, without affecting project functional requirements.

AR 434: Contemporary Architecture In KSA

An analytical study of contemporary architecture in Saudi Arabia, exposing major characteristics that influence the development of local architecture, by means of field visits and surveys of cases covering all spectrums of regional architectural styles and deepening students' understanding of local styles in relation to its heritage.

AR 509: Special Studies In Architecture

A study of topics selected by students, each supervised by a faculty member, based on a program whereby the faculty and guest lecturers participate in a series of lectures and seminars on contemporary issues of architecture disciplines in Saudi Arabia and abroad. Students are aided in their study, findings, and progress reports preparation.

Department of Architecture

■ ■ ■ ■ ■ FACULTY MEMBERS ■ ■ ■ ■ ■

Professors

Hesham Ali Mortada

Sustainable Development & Traditional
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Department of Geomatics

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History:

The Department of Geomatics was established in 2007 as the fourth department in the Faculty of Environmental Design. It was formally inaugurated in 2008.

Vision:

To produce excellent graduates of Geomatics using new technology, organize geomatics scientific events, develop research environment and work in synergy with other Departments on common interest, and exhibit works in business partnership by conducting studies through pilot projects.

Mission:

Ensure excellence in Geomatics, integrate graduates in the professional world via the best training adaptable to corporate culture, provide comfortable conditions to enable students to complete graduation projects within a company, and offer adequate training for access to research.

Departmental Requirements:

To earn the degree of Bachelor Science in Geomatics, students are required to satisfactorily complete a total of 136 credit hours distributed as follows

1. (26) credit hours of the university requirements
2. (33) credit hours of faculty requirements,
3. (71) credit hours of departmental courses
 - 59 credit hours of compulsory core courses and
 - 12 credit hours of electives and
 - 6 credit hours of free courses.



Department of Geomatics

Department Requirements:

Departmental Core Courses (Credit Hours 59)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	GEOM	101	Introduction to Geomatics	3	2	3		MATH101,PHYS101
2	GEOM	111	CAD for Geomatics	2	1	3		MATH 101, PHYS 101
3	GEOM	102	Surveying Fundamentals	3	2	3		GEOM 101
4	GEOM	121	GIS Fundamentals	3	2	3		GEOM 101
5	GEOM	201	Advanced Surveying	3	2	3		GEOM 101, GEOM 102
6	GEOM	202	Geodetic Positioning	3	2	3		GEOM 201
7	GEOM	211	Fundamentals of Cartography	3	2	3		GEOM 101, GEOM 111
8	GEOM	212	Map Analysis	3	2	3		GEOM 111, GEOM 211
9	GEOM	221	GIS Database Management	3	2	3		GEOM 101, GEOM 121
10	GEOM	222	Principles of Photogrammetry	3	2	3		GEOM 101
11	GEOM	231	Image Processing	3	2	3		GEOM 231
12	GEOM	232	Digital Cartography	3	2	3		GEOM 101, GEOM 211
13	GEOM	311	GIS Mapping	3	2	3		GEOM 101
14	GEOM	321	Digital Photogrammetry	3	2	3		GEOM 231
15	GEOM	331	Planning and LIS	3	2	3		GEOM 111 , GEOM211
16	GEOM	312	GPS Kinetic Positioning	3	2	3		GEOM 201, GEOM 202
17	GEOM	301	GPS System Implementation	3	2	3		GEOM 222
18	GEOM	322	RS Mapping	3	2	3		GEOM212, GEOM 331
19	GEOM	411	GIS Project Management	3	2	3		GEOM 121
20	GEOM	421	Acoustics & Illumination in Architecture	6	2	10		GEOM 312, GEOM 421
21	GEOM	408	Surveying and Mapping Project	6	2	10		GEOM 312, GEOM 421
22	GEOM	428	GIS and RS Project	6		10		GEOM 311, GEOM 421
Total				74	41	87		

Elective Courses: (Credit Hours 12)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	GEOM	414	Web Mapping	3	2	2		
2	GEOM	415	Map Publishing/Production	3	2	2		
3	GEOM	416	DEM Modeling and Analysis	3	2	2		
4	GEOM	427	GIS Case Studies	3	2	2		
5	GEOM	433	HighResolution Imaging	3	2	2		
6	GEOM	434	Advanced RS Analysis	3	2	2		
7	GEOM	406	Geodetic Networks	3	2	2		
8	GEOM	413	GPS/GIS Location Services	3	2	2		
9	GEOM	425	Enterprise GIS	3	2	2		
10	GEOM	403	Survey Law and Cadastre	3	2	2		
11	GEOM	426	Mobile GIS	3	2	2		
12	GEOM	432	Advanced Photgrammetry	3	2	2		
Total				36	24	24		

Course Descriptions:

Geom 101: Introduction to Geomatics

An overview of Geomatics which focuses on tools and techniques used in today's practice to locate spatial features on Earth's surface. A study of contemporary geomatics model from data acquisition systems and techniques, processing and sorting, to queering and decision support.

Prerequisites: Math 101, Phys 101

Geom 121: GIS Fundamentals for Geomatics

GIS and its components for Geomatics; how to create and use different forms of geospatial databases for Geomatics.

Prerequisites: Geom 101

Geom 111: CAD for Geomatics

Drafting and mapping techniques as applied to Geomatics Technology, introduction to drafting using computeraided drafting technology, CAD such as basic commands, syntax, features, and 2D and 3D geometry.

Prerequisites: Math 101, Phys 101

Department of Geomatics

Geom 201: Advanced Surveying for Geomatics

Advanced field surveying with topics to include the theory of observation error, precision and accuracy, adjustment computations and its surveying application, mapping and route surveys. The course involves practical applications for Geomatics through group field work.

Prerequisites: Geom 101, Geom 102

Geom 102: Surveying Fundamentals for Geomatics

Field surveying concepts and techniques as applied to Geomatics such as measurement using tapes, Electronic Distance Measurement (EDM), Optical Distance measurement (ODM); distance measurement error sources and obtained accuracy.

Prerequisites: Geom 101

Geom 211: Fundamentals of Cartography

Concepts of cartography for Geomatics; its historical, nature and background information relating to scale, reference, and coordinate systems.

Prerequisites: Geom 101, Geom 111

Geom 221: Database Management for Geomatics

GIS database principles and concepts, and Geomatics applications. Students learn to design, implement, and integrate spatial and nonspatial databases for Geomatics projects.

Prerequisites: Geom 101, Geom 121

Geom 331: Digital Photogrammetry

A course on photogrammetric measurements, object space coordinate systems, space resection and intersection, collinearity and coplanarity conditions, aerial triangulation, digital resampling, digital mapping, softcopy operations, terrestrial closerange photogrammetry, and topographic mapping and spatial data collection.

Prerequisites: Geom 231

Geom 231: Principles of Photogrammetry

A course on airborne remote sensing, image geometry, stereoscopic viewing, parallax, relief displacement, image measurement, vertical photo scale, relief displacement, tilted photo geometry, flight planning, remote sensing imaging cameras, photomap and mosaic generation, and aerial mapping.

Prerequisites: Geom 101

Geom 408: Surveying and Mapping Project for Geomatics

A course on laboratory, site, equipment, and/or literature investigation of surveying and mapping concepts and/or problems of contemporary interest resulting in a written work (report).

Prerequisites: Geom 312, Geom 411

Geom 202: Geodetic Positioning for Geomatics

A course on elementary geodesy, terrestrial coordinate systems, ellipsoidal applied to Geomatics, geometry, reduction of observations to a reference surface, direct and inverse coordinate computations, coordinate transformations, datum problems, astronomical observations, and control surveys.

Prerequisites: Geom 201

Geom 428: GIS and Remote Sensing Project for Geomatics

This course deals with laboratory, site, equipment, and/or literature investigation of GIS and remote sensing concepts and problems of contemporary interest resulting in a written work (report).

Prerequisites: Geom 331, Geom 421

Geom 232: Image Processing and remote Sensing for Geomatics

A study on imaging system geometry, image processing, electromagnetic radiation pertaining to remote sensing, radiometric and geometric corrections, atmospheric correction, registration and land cover classification algorithms, accuracy assessment and geospatial data integration, digital image acquisition and sampling, data manipulation, rectification, and so forth.

Prerequisites: Geom 231

Geom 301: GPS Kinematics Positioning for Geomatics

A study on Global Positioning System components, observables, error sources analysis, characteristics of instrumentation, introduction to mathematical models for absolute and differential static and kinematic positioning, preanalysis methods and applications, software consideration, static and kinematic survey procedures and operational aspects.

Prerequisites: Geom 201, Geom 202

Geom 212: Map Analysis for Geomatics

Cartographic map layout and design, controls, specifications and processes; manipulations; symbolization, methods, visual variables, quantitative and qualitative, colors and color model, pattern convention, fonts, compilation and output restrictions; execution and disseminations, presentation, plotting, file formats, finishing, publishing, reproduction and production, construction methods, and production problems.

Prerequisites: Geom 111, Geom 211

Geom 321: GIS Mapping for Geomatics

Basic principles and concepts of GIS mapping geomatics; the course provides theoretical, technical, and practical principles that must be understood to work efficiently with GIS from the mapping perspective. Students learn to present different GIS data types to be accepted cartographically, to manipulate GIS data symbology and 3D GIS data visualization tools, and to edit map data for GIS analysis purposes and how to produce maps from output of GIS analysis.

Prerequisites: Geom 101

Geom 222: GIS Applications for Geomatics

The course covers a review of GIS principles and concepts and its components, vector and raster data analysis techniques in environmental management applications, applications in the oil and natural gas resources management, urban planning and management, water resources management, identifying and collecting data needed for each application, data sources, design and execution of applications' workflow needed for decision making; and underlying theory of selected topics, including lab sessions.

Prerequisites: Geom 221

Department of Geomatics

Geom 312: Planning and LIS for Geomatics

Concepts of land tenure/ownership, descriptions of land boundary and concepts and hierarchy of survey evidence, types of monuments; methods and computation for subdivision, rightofway, wellsite and retracement surveys, requirements for survey of boundaries; design and layout of roads, sewers and subdivisions, application of superelevation and slope staking to road construction, study of plans: construction, roads and subdivisions.

Prerequisites: Geom 111, Geom 211

Geom 311: Digital Cartography for Geomatics

Handon practice of AutoCAD with mapping applications in geomatics; overview of digital mapping; coordinate systems, digital element creation, electronic editing and manipulation, insertion of symbols, text placement, elements symbology, use of imagery in raster form for mapping elements.

Prerequisites: Geom 101, Geom 211

Geom 322: GPS System Implementation for Geomatics

With the basic principles and concepts of Geomatics, the course provides theoretical, technical, and practical principles that work with GIS project implementation. Students learn to analyze factors affecting GIS projects, prepare a needs assessment document, and study steps in project implementation process, including database design, data preparation and implementation and data dissemination and distribution, and opportunity to gain handson experience with ESRI ArcGIS 9.x, ArcSDE 9., and Microsoft SQL server software.

Prerequisites: Geom 222

Geom 411: Remote Sensing Mapping

A study of image mapping using airborne and spacebased data; historical background of photomapping, map accuracies, photo scale and planning aerial photo missions, direct and indirect georeferencing, aerotriangulation, map compilation, image interpretation, digital mapping data, computer aided mapping, geographic information systems and orthophotography, process and costing of aerial projects.

Prerequisites: Geom 212, Geom 331

Geom 421: GIS Project Management for Geomatics

A study of the methods of structured project management in the context of a GIS work environment: project management fundamentals, planning methods common to GIS environments, feasibility studies, planning and scheduling, cost, risk, project administration and communication, leadership and team building, marketing, sales, and senior management staff, and total quality management.

Prerequisites: Geom 121

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Department of Landscape Architecture

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History:

The Department of Landscape Architecture (LA) was established in 1976 as one of the 3 departments of the School of Environmental Design (SED). The school was later upgraded and renamed the Faculty of Environmental Design (FED.)

Vision:

To impart quality education, and achieve the optimum level of performance in instruction and in the proliferation of advanced research and community services.

Mission:

To develop students' academic and research capabilities, upgrade their scientific and technical skills, and enhance their artistic talents and cultural values, in order to graduate competent professional landscape architects and designers.

Departmental Requirements:

In order to earn the degree of Bachelor of Science in Landscape Architecture, students are required to satisfactorily complete 166 credit hours distributed as follows:

1. (26) credit hours of the university requirements
2. (33) credit hours of faculty requirements,
3. (98) credit hours of departmental courses
4. (9) credit hours of electives.



Department of Landscape Architecture

Department Requirements:

Department Core Courses (Credit Hours 98)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	LA	251	Plants in LA	3	3	0		
2	LA	292	Basic Design Analysis Studio I	6	6	12		191
3	LA	242	Landscape Technology I	3	2	2		
4	LA	253	Planting Design	3	2	2		LA 251
5	LA	293	Basic Design of LA Studio II	6	6	12		LA 251
6	LA	331	Landscape of Man	3	3	0		
7	LA	343	Landscape Technology II	3	2	2		LA 242
8	LA	352	Soil and Hydrology	3	2	2		
9	LA	354	Planting Technology	3	2	2		LA 251, LA253
10	LA	394	Design Process in LA Studio III	6	6	12		LA 293
11	LA	344	Landscape Technology III	3	2	2		LA 343
12	LA	355	Irrigation in LA	3	2	2		LA 343
13	LA	395	Detailed Design in LA Studio IV	6	6	12		LA 394
14	LA	411	Landscape Management	3	3	0		
15	LA	445	Landscape Technology IV	3	3	0		LA 344
16	LA	496	Urban Design in LA Studio V	6	6	12		LA 395
17	LA	412	Professional Practice	3	3	0		
18	LA	433	Landscape Planning	3	0	0		
19	LA	497	Landscape Planning Studio VI	6	6	12		LA 496
20	LA	501	Graduation Project Research	3	3	0		
21	LA	513	Contract Documents in LA	3	2	2		LA 411, LA 412
22	LA	561	Computer Applications in LA	3	2	3		
23	LA	598	LA Professional Studio VII	6	6	12		LA 497
24	LA	599	Graduation Project	8	8	16		LA 598
Total				98	86	119		

Elective Courses: (Credit Hours 9)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	LA	502	Landscape Architecture Special Studies	3	3	0		
2	LA	425	Towards an Islamic LA	3	3	0		
3	LA	526	Sustainable Communities LA	3	3	0		
4	LA	527	Ecotourism Tourism	3	3	0		
5	LA	424	Contemporary Directions in LA	3	3	0		
6	LA	456	Land Reclamation	3	3	0		
Total				18	18	0		

Course Descriptions:

LA 502: Landscape Architecture Special Studies

Students conduct indepth research on a topic of their choice, under the direct supervision of the instructor or by invited specialists from within the faculty. A concurrent seminar program exposes the students to current topics of interest within Saudi Arabia, taking advantage of the expertise of various speakers (external). They undergo instructions on project proposal preparation and interim reports, to come up with a brief dissertation.

LA 527: EcoTourism Tourism

Diversified subjects that include the relationship between man and his environment. Ecotourism is the ideal alternative to

wellknown international tourism techniques, integration, responsibility, and the concept of sustainable development. The course deals with the importance of Ecotourism for Saudi Arabia and emphasizes practical environmental education in the role of the landscape architect in private projects related to Ecotourism.

LA 423: Landscape Planning

Investigation of methods and techniques of landscape planning with special emphasis on environmental land assessment of landscape resources. Methods of land use and landscape planning in the context of Saudi Arabia. An introduction to the principles of landscape management and the important roles of a landscape manager and a maintenance specialist.

Department of Landscape Architecture

LA 424: Contemporary Directions In LA

Investigation of existing innovative plans and designs. Environmental analysis of management projects from the mid 19th century to today illustrating some perspectives that increase the complexities within the profession. Emphasis centers upon those examples and case studies that provide guidelines for successful design and practice today.

LA 425: Towards An Islamic La

An introduction to the role of the Islamic Shariah in guiding major principles of landscape design and planning. Revision and analysis of many case studies are done in order to trace the origin of such guiding principles.

LA 456: Landscape Reclamation

Investigation of methods of desert reclamation, reclamation of industrial sites (including quarries), methods of waste disposal and the reinstatement of despoiled and methods of the treatment and improvement of degraded environments through planning and design. Students prepare reports based on case studies in Saudi Arabia and internationally.

LA 222: Site Planning

Study of the site planning process, aspects of site and program analysis and the principles of design concerned in site development, including simple site surveying. Different scales of projects are covered, but the emphasis throughout is on practical working knowledge. Natural and manmade elements and aspects of site planning are dealt with.

LA 251: Plants In LA

A study of landscape plant materials, their morphology, physiology, and response to the range of environmental conditions experienced in Saudi Arabia, in relation to their use in landscape design and horticulture amenity.

LA 251: Plants In LA

A study of landscape plant materials, their morphology, physiology, and response to the range of environmental conditions experienced in Saudi Arabia, in relation to their use in landscape design and amenity horticulture.

LA 292: Basic Design

An interdisciplinary course consisting mainly of studio work with supplementary lectures, introducing the nature and role of environmental factors behind the elements of the built environment in general and the evolution of the Muslim built environment in particular. Analytical work occupies two-thirds of the semester, followed by guidelines for environmental design.

Prerequisites: LA 191

LA 242: Landscape Technology I

An investigation of the variety of hard materials available and suitable for landscape construction in Saudi Arabia. The emphasis will be on appearance, physical properties and behavior, and cost effectiveness. The principles of designing construction details will be investigated.

LA 253: Planting Design

A study of the design characteristics and landscape use of plant materials available in Saudi Arabia. This includes the principles of planting design, the aesthetic and functional uses of planting materials and the preparation of planting plans and plant schedules.

LA 29: Basic Design of LA Studio II

A study of smallscale site planning and design problems, the preparation of simple project briefs together with frequent presentations and studio critiques develop the student's oral and graphic skills and techniques.

Prerequisites: LA 292

LA 331: Landscape Of Man)

A study of the history of man's impact on the landscape and the different landscape design styles. Starting from early times to the present, with an emphasis on Muslim traditions and the relationship between the principles of landscape design, architecture and planning.

LA 343: Landscape Technology II

An investigation of the methods of installation of hard materials in landscape construction with the emphasis on structural concepts and the practical requirements of implementation. This involves the preparation of construction details, setting out drawings and writing simple specifications.

Prerequisites: LA 242

LA 352: Soil And Hydrology

A study of development of local arid soils and their physical, chemical and biological characteristics, the interactions between plants, soil and water, and the behavior of water in the soilplant-atmosphere continuum. The survey, analysis and evaluation of soils for landscape purposes will be studied.

Prerequisites: LA 242

LA 354: Planning Technology

An illustration of factors relating to plant supply and propagation, plant establishment and maintenance, and the planting specification. Studies related to suitability of plants to the ecological conditions of the site, maintenance schedules, and plant diseases. Preparations of specification outline with standard details.

Prerequisites: LA251, LA252

LA 394: Basic Design of LA Studio III

A study of small to mediumscale site design sequences with emphasis on the development of project briefs and the design process. Problems should have an ecological basis, which requires a strong presence of the natural environment, whether the context is urban or natural.

Prerequisites: LA 293

LA 344: Landscape Technology III

An investigation of the elements of landform design and site grading, including surveying, relief visualization, surface drainage and slope analysis, and realistic earthwork calculations. Fac-

Department of Landscape Architecture

tors affecting site development related to subsurface drainage and the location of public utilities will be examined.

Prerequisites: LA 343

LA 355: Irrigation In La

A study of the estimation of plant water need, the sources and quality of irrigation water in Saudi Arabia, the principles of simple hydraulics and the use of food, sprinkler or trickle (drip) irrigation for amenity planting. The principles of irrigation design and scheduling, the preparation of working drawings and specifications, and the installation and testing of irrigation systems will be demonstrated.

LA 395: Basic Design of LA Studio IV

A study of small to mediumscale projects that allow the development of details of both hard and soft features and their interrelationship, methodology of the design process, its various stages and appropriate graphic techniques to express each stage, as well as giving examples of similar projects executed or published for wellknown Landscape Architects.

Prerequisites: LA 394

LA 411 ; Landscape Management

A study of environmental management, world conservation strategy, conservation of nature, the management policies for national parks and natural reserves, principles of ecological management and landscape carrying capacities, recreation management, technical management and maintenance of natural, manmodified, and manmade landscapes, and the presentation of management plans.

LA 445: Landscape Technology IV

A study of plan and design of road systems, including horizontal and vertical alignment; methods of remote sensing; the processes, techniques and products of aerial photography, interpretation of aerial photographs; methods and principles of landform interpretation and land resources to site development.

Prerequisites: LA 344

LA 496: Urban Design Of LA Studio V

A study of the relationship between Urban Design and Landscape Architecture. Certain projects will be studied that will contain the vocabularies of Urban Design and the pattern of users' behaviors in residential areas and downtown. This will show the interrelationship between Landscape Architecture and Urban Design.

Prerequisites: LA 395

LA 412: Professional Practice

A study of the practical aspects of professional practice: social, legal, technical, ethical and financial factors, and the relationships between landscape architects, contractors and clients, office management and organization, tendering and contracting procedures and project management and supervision.

LA 497: Landscape Planning Studio VI

A study of largescale projects in broad urban or rural areas. It involves landscape planning methodologies, environmental resource analysis, and landform evaluation and infrastructure issues. A complex project illustrates the demands made upon the landscape architect to develop a landscape policy and plan and to create a framework for design. Presentations shall be assessed by an interdisciplinary committee.

Prerequisites: LA 496

LA 501: Graduation Project Research

Preparing graduates for their projects including acquainting them with sources of information available in the Kingdom. Basic principles of environmental data collection, processing and analysis, development of project proposals and creation of landscape planning and design program, essentials of report writing and presentation of material.

LA 513: Contract Documents In LA

A study of the technical and practical aspects of a full set of landscape contract documents, how to prepare and assemble all working drawings, the bills of quantities, the specifications in relations to the conditions of tender, and other contracts and agreements.

Prerequisites: LA 411, LA412

LA 561: Computer Applications In LA

A review of basic computer applications from contemporary literature, including computer applications in Landscape Planning, definition of routes, landscape construction, quantities and specifications, drawings with exercises using LANCAR, MapInfo, 3D Modeling Auto CAD and the like.

LA 598: La Professional Studio VII

A study of the interrelationships of environmental design professions, and the role of the Landscape Architect in the public and private sectors in Saudi Arabia. Exposure to such interrelationships is balanced with the noncompromising contribution of the Landscape Architecture profession at various scales and at urban versus natural situations.

Prerequisites: LA 497

LA 599: Graduation Project

A study of a multiscale design project, which requires the submission of drawings that illustrate all aspects of the design process, together with appropriate documentation with final presentations to be evaluated by external experts and or potential clients. Individual efforts will be evaluated on the completeness of the final submission and the student's ability to demonstrate competence in all aspects of professional practice.

Prerequisites: LA 598

Department of Landscape Architecture

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Department of Urban Regional Planning

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History:

The Dept. of Urban and Regional Planning, URP, was established in 1976 as one of the 3 departments of the School of Environmental Design.(SED which rose to be an independent Faculty of Environmental Design (FED).

Vision:

To impart quality education, and to ascertain the optimum level of performance in instruction and in the proliferation of advanced research and community services.

Mission:

To develop students' academic excellence and research capabilities, upgrade their scientific and technical skills, and enhance their aesthetic talents and cultural values, in order to prepare highly qualified professional urban planners.

Departmental Requirements:

To earn the degree of Bachelor of Science in Planning, students are required to satisfactorily complete 166 credit hours distributed as follows:

- 26 credit hours of university requirements,
- 33 credit hours of faculty requirements,
- 98 credit hours of department core courses and
- 9 credit hours of elective courses.

Department Core Courses Track A (Credit Hours 98)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	URP	220	Planning Process	3	3	0		
2	URP	231	Introduction to Town Planning	3	3	0		URP 130
3	URP	292	Planning Workshop I	5	0	12		AR 191
4	URP	210	Quantitative Methods in Planning	3	0	0		
5	URP	221	Urban Economics I	3	3	0		
6	URP	222	Urban Structure	3	3	0		
7	URP	293	Planning Workshop II	5	0	12		URP 292
8	URP	312	Planning Methods and Techniques	3	3	0		URP 210
9	URP	313	Spatial Information System	3	2	3		
10	URP	341	Urban Transformation	3	3	0		
11	URP	394	Planning Workshop III	5	0	12		URP 293
12	URP	314	Planning & Land Info System	3	2	3		
13	URP	323	Urban Economics II	3	3	0		URP 221
14	URP	342	Urban infrastructure	3	3	0		
15	URP	395	Planning Workshop IV	5	0	12		URP 194
16	URP	424	Urban Social Structure	3	3	0		
17	URP	425	Regional Planning I	3	3	0		
18	URP	470	Urban Land Development	3	3	0		
19	URP	496	Planning Workshop V	5	0	12		URP 395
20	URP	401	Housing II	3	3	0		URP 400
21	21	URP	Regional Planning II	3	3	0		URP 425
22	22	URP	Planning Workshop VI	5	0	12		URP 496
23	23	URP	City Management	3	2	0		
24	24	URP	Planning Workshop VII	5	0	12		URP 497
25	25	URP	Professional Practice in URP	3	3	0		
26	26	URP	Graduation Project	6	1	12		URP 598

Department of Urban Regional Planning

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
27	27	URP	Urban systems	3	3			
Total				98	52	102		

Elective Courses: (Track B) (Credit Hours_9)

No.	Course Code:	Course No.	Course Title	Credit	HOURS			Prerequisites
					Theory	Lab	Prac	
1	URP	471	Real Estate Development	3	3	0		
2	URP	472	Land and Property Market	3	3	0		
3	URP	502	Rural Planning	3	3	0		
4	URP	504	Recreation of Planning & Tourism	3	3	0		
5	URP	505	Special Studies in Planning	3	3	0		
6	URP	506	Urban Renewal	3	3	0		
Total				18	18	0		

Course Descriptions:

URP 471: Real Estate Development

A study of the goals and roles of the different actors in the real estate market. The course addresses supply and demand, market effects, information system, valuation and pricing, use of computers in real estate domain, analysis of market transactions, and the basics of real estate finance with emphasis on Saudi markets.

URP 504): Recreation Planning And Tourism

This course includes the study of recreational facilities in the realm of urban and regional planning. It includes the classification of different recreational activities, determinants of user groups, demand estimation, criteria for service provision at the local and regional scales.

URP 472: Land And Property Market

A study of the theory, methods, and variables of real estate market and the factors that influence it. The course explores investment method analysis and the effect of real estate returns on urban and rural development, the nature of land markets, its difference with markets of other goods, the influence of demand and supply on the land market and the determinants of land prices.

URP 505: Special Studies In Planning

This course deals with special topics in planning at local, regional, and national hierarchy of importance. It aims to keep up with the latest developments in those areas. Particular emphasis is given to the economic, social, environmental and technological aspects, so as to focus students attention on specialized issues.

URP 502: Rural Planning

This course covers the theoretical and contextual studies of socioeconomic, environmental and other factors in villages and rural areas. It explains the differences between the city form and rural areas and focuses on rural development, its relation to urban development at the national, regional and local levels, strategies and policies and implementation.

URP 506: Urban Renewal

The theoretical part of the course provides students with knowledge based on methods, techniques, and policies of urban re-

newal and preservation. Research should be conducted on the applied aspects of urban renewal and urban area improvement. A study of the theory and practice of urban renewal with particular emphasis on the Saudi context.

URP 220: Planning Process

Basic ideas and theories of planning. The course identifies necessary approaches to the planning process, including strategies of ideal planning. It applies professional practice under different constraints.

URP 293: Planning Workshop II

This course deals with different types of surveys in planning, the basics of analyzing and presenting data, including spatial data, writing technical reports and appropriate computer software applications.

URP 231: Introduction To Town Planning

An introduction to historical and global town planning. Topics include the development of contemporary thoughts in planning theory and practice. Theoretical and field visits to notable urban sites to explore factors that contributed to shaping urban environments.

Prerequisites: URP 130

URP 312: Special Information Systems

This course addresses analytical methods for planners. Topics include evaluation and budgeting, cost impacts and cost effectiveness, cost benefit analysis, goals achievement matrix, demographic studies, employment multipliers, and spatial analysis technique..

Prerequisites: URP 210

URP 210: Quantitive Methods In Planning

This covers statistical methods as applied to urban and regional planning, managing, analyzing, and grouping of planning data including measures of central tendency, the mean, median, mode, standard deviation, functions, sampling, parametric and nonparametric methods of analysis, correlation, analysis of variance, confidence intervals, regression analysis, probability and matrix algebra.

URP 313: Spatial Information Systems

The theory and application of Spatial Information System as a cornerstone of urban and regional planning, the course aims at providing the necessary technology and tools used in workshop projects and elsewhere. The theoretical part focuses on evolution and development of spatial information system and its related concepts and applications.

Department of Urban Regional Planning

URP 221: Urban Economics

Aims at providing a comprehensive understanding of economic ideas to analyzing economic problems, including the role of the planner in allocating scarce resources. This should provide a framework for future courses to analyze urban areas, its problems, and the economic impacts of land use allocation.

URP 341: Urban Transportation Planning

This course deals with the relationship between transportation and land use and urban structure. It includes analytical methods and planning criteria necessary to design urban transportation, plan public transport, forecast origins and destination, design, pedestrian movement, and distribution criteria.

URP 222: Urban Structural

This course deals with the spatial organization in urban areas. It includes land patterns and uses, densities and their effects, patterns of networks, service hierarchies, catchment areas, retail patterns, regional analysis, models of dynamics, and controlling urban growth.

URP 394: Planning Workshop III

The course includes analyzing an urban area to identify elements affecting its form. It also deals with the planning approach in studying urban areas, giving emphasis to the redevelopment and design of these areas.

Prerequisites: URP 293

URP 314: Planning And Land Inf. Systems

The course aims at building proficiency in using computer applications in urban and regional planning. It deals with forecasting, basic land use and ownership databases, building and application of property information systems and their relationship with spatial information.

Prerequisites: URP 293

URP 425: Regional Planning I

This course includes the study of the nature of regions and the means to develop them. Topics include methods of regional planning, aspects of socioeconomic and design, project related issues, and regional planning in the kingdom.

URP 323: Urban Economic II

This course applies economic analysis in urban planning. Topics include welfare economics, externalities, spatial effects, land use patterns, transportation costs, land values, urban redevelopment and renewal, and city size.

Prerequisites: URP 221

URP 470: Urban Land Development

This course includes the practice of developing urban land. It will introduce the different institutions and their respective goals, and the effects of determinants and constraints of land development.

URP 342: Urban Infrastructure

This course includes the study of the determinants of planning for public services, facilities, and infrastructure. Included are determinants of capacity, sitting within an urban development context, and the effects of these factors on urban growth and the city as a whole. The course familiarizes the students with infrastructure networks, their structural methods of planning, designing, implementing and maintaining networks of utilities.

URP 496: Planning Workshop V

This workshop includes evaluating mixed use development sites in

a planning context. It starts with a quantitative assessment of different activities and services, defining planning and design criteria, generating alternatives, the comprehensive design for the site. The workshop also includes the study of comparable projects, as well as the financial requirements of any project in such context.

Prerequisites: URP 395

URP 395: Planning Workshop IV

This workshop deals with the applications of spatial information systems in planning through urban redevelopment and/ or upgrading, land subdivision, in addition to land use allocation and choice through the use of these information systems.

Prerequisites: URP 394

URP 401: Housing II

This is a continuation of Housing I. It analyzes traditional and modern housing types, neighborhoods, and housing evaluation criteria. The course introduces the basis of housing finance schemes and project evaluation schemes.

Prerequisites: URP 400

URP 424: Urban Social Structure

This course includes the elements that form urban society, with specific emphasis on Islamic and Arts societies. The relationship between social and economic structure and the regional development policies and strategies and their evaluation.

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URP 426: Regional Planning II

A study of regional plans, evaluating alternatives in a national spatial context, and the impact in defining a context for local urban plans. The course is of an applied nature and attempts to explain the responsibilities of each agency and the importance of coordination in the implementation process.

URP 497: Planning Workshop VI

This workshop aims at conducting comprehensive planning studies for the city or town as a whole. It includes the preparation of a structure plan, including demographic studies, land uses, transportation, social services, infrastructure and development controls.

URP 527: Urban Systems

The course aims at exploring planning systems in general and the hierarchy of cities in regional and national contexts. It addresses urban structure and systems of cities, and their relevance and importance to planning. Included are urbanization development controls, theories of urban systems and their application in different countries in general and urban systems in Saudi Arabia.

Prerequisites: URP 497

URP 598: Planning Workshop VII

This workshop aims at teaching students the necessary skills needed to prepare a regional plan. It takes into consideration the basis of laying the foundations of regional plans with special emphasis on the relationships between different levels.

Prerequisites: URP 497

Department of Urban Regional Planning

URP 581: Professional Practice In URP

This course studies the professional context of the planning profession in multiple cultures. It addresses the administrative, institutional, financial, and cultural aspects “of” and “in” the planning field. It also studies planning as a profession and presents local and foreign experiences to acquaint students with available practical methods in the planning profession.

Prerequisites: URP 497

URP 580: City Management

This course focuses on the concerns of planners in the realm of managing cities. The nature of city planning, and cities dictates approaches of public finance, budgeting and administration unique to the built environment.

Prerequisites: URP 497

URP 599: Graduation Project

Students are required to submit a project that deals with a real world planning problem in an urban, regional, national context, or an urban design project.

Prerequisites: URP 598

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