STUDY PLAN FOR THE BACHELOR DEGREE IN INTERIOR DESIGN ENGINEERING

(College of Engineering)

FIRST YEAR (FRESHMAN)

FIRST SEMESTER						
CODE	**COURSE TITLE**	**CRED**	**LECT**	**LAB**	**PRE-REQUISITE**	**CO-REQUISITE**
IDE 101	INTRODUCTION TO INTERIOR DESIGN I	1	1	0		
IDE 101 P	INTRODUCTION TO INTERIOR DESIGN I	2	0	4		
IDE 151	HISTORY OF INTERIOR DESIGN I	2	2	0		
PHYS 101	PHYSICS I	4	3	3		MATH 101
MATH 101	CALCULUS I	4	4	0		PHYS 101
ENGL 100	ENGLISH LANGUAGE	2	2	0		
CRCL 115	UNIVERSITY LIFE SKILLS	3	3	0		
TOTAL (CREDIT)		18				

SECOND SEMESTER						
CODE	**COURSE TITLE**	**CRED**	**LECT**	**LAB**	**PRE-REQUISITE**	**CO-REQUISITE**
IDE 102	INTRODUCTION TO INTERIOR DESIGN II	1	1	0	IDE 101	IDE 102P
IDE 102 P	INTRODUCTION TO INTERIOR DESIGN II	2	0	4		IDE 102
IDE 131	DRAWING AND COLORS	2	0	4		
IDE 141	CAD I FOR INTERIOR DESIGN	2	0	4		
MATH 102	CALCULUS II	4	4	0	MATH 101	
ENGL 214	TECHNICAL REPORT WRITING	3	3	0	ENGL 100	
ARAB 100	ARABIC LANGUAGE SKILLS	2	2	0		
TOTAL (CREDIT)		16				

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SECOND YEAR (SOPHOMORE)

FIRST SEMESTER						
CODE	COURSE TITLE	CRED	LECT	LAB	PRE-REQUISITE	CO-REQUISITE
IDE 201	INTERIOR DESIGN I	4	0	8	IDE 102	
IDE 221	ENVIRONMENT I: THERMAL CONTROL	3	3	0		
IDE 211	INTERIOR MATERIALS AND TECHNOLOGIES	3	3	0		
IDE 213	CONSTRUCTION SYSTEMS	3	3	0	IDE 102	
CE 201	STATICS	3	3	0	PHYS 101	
IC 111	ISLAMIC CULTURE	2	2	0		
TOTAL (CREDIT)		18				

SECOND SEMESTER						
CODE	COURSE TITLE	CRED	LECT	LAB	PRE-REQUISITE	CO-REQUISITE
IDE 202	INTERIOR DESIGN II	4	0	8	IDE 201	
IDE 222	ENVIRONMENT II: HEATING, VENTILATING AND AIR CONDITIONING	2	2	0	IDE 221	IDE 222P
IDE 222 P	ENVIRONMENT II: HEATING, VENTILATING AND AIR CONDITIONING	1	0	2	IDE 221	IDE 222
IDE 224	HISTORY OF INTERIOR DESIGN II	2	2	0	IDE 151	
IDE 242	CAD II 3D DESIGN	2	0	4	IDE 141	
IDE 232	MODEL MAKING FOR INTERIOR DESIGN	2	0	4	IDE 201	
ETEC 115	COMPUTER AND INFORMATION	2	2	0		
TOTAL (CREDIT)		15				

THIRD YEAR (JUNIOR)

FIRST SEMESTER						
CODE	COURSE TITLE	CRED	LECT	LAB	PRE-REQUISITE	CO-REQUISITE
IDE 301	INTERIOR DESIGN III	4	0	8	IDE 202	
IDE 323	ENVIRONMENT III: ILLUMINATION	2	2	0		IDE 323P
IDE 323 P	ENVIRONMENT III: ILLUMINATION	1	0	2		IDE 323
IDE 313	CONSTRUCTION DETAILS	2	2	0	IDE 213	
IDE 315	TEXTILES	3	1	4		
IDE 327	HUMAN BEHAVIOR	3	3	0		
EDUC 115	WORK VALUES AND ETHICS	2	2	0		
TOTAL (CREDIT)		17				

SECOND SEMESTER						
CODE	COURSE TITLE	CRED	LECT	LAB	PRE-REQUISITE	CO-REQUISITE
IDE 302	INTERIOR DESIGN 1V	4	0	8	IDE 301	
IDE 324	ENVIRONMENT IV: ACOUSTICS	2	2	0		IDE 324P
IDE 324 P	ENVIRONMENT IV: ACOUSTICS	1	0	2		IDE 324
IDE 326	FURNITURE DESIGN	3	0	6	IDE 242 – IDE 232	
IDE 328	WORKING DRAWING FOR INTERIOR DESIGN I	3	0	6	IDE 313	
IDE 3XX	IDE ELECTIVE I	3	3	0		
TOTAL (CREDIT)		16				

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FOURTH YEAR (SENIOR)

FIRST SEMESTER						
CODE	COURSE TITLE	CRED	LECT	LAB	PRE-REQUISITE	CO-REQUISITE
IDE 401	INTERIOR DESIGN V	4	0	8	IDE 302	
IDE 451	PROJECT REPORT WRITING	2	2	0		
GS 4XX	TECHNICAL ELECTIVE	3	0	0		
IDE 435	WORKING DRAWINGS FOR INTERIOR DESIGN II	3	0	6	IDE 328	
IDE 453	PROFESSIONAL PRACTICE OF INTERIOR DESIGN	3	3	0		
IDE 456	HANDCRAFT	2	0	4		
TOTAL (CREDIT)		17				

SECOND SEMESTER						
CODE	COURSE TITLE	CRED	LECT	LAB	PRE-REQUISITE	CO-REQUISITE
IDE 402	CAPSTONE PROJECT	4	0	8	IDE 401	
IDE 454	PROJECT CONSTRUCTION MANAGEMENT	3	3	0		
IDE 426	SUSTAINABLE INTERIOR DESIGN	3	3	0		
IDE 4XX	IDE ELECTIVE II	3	3	0		
EDUC 125	ENTREPRENEURSHIP	2	2	0		
TOTAL (CREDIT)		15				

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DEPARTMENT ELECTIVE COURSES (ONLY 6 CREDIT HOURS)						
CODE	**COURSE TITLE**	**CRED**	**LECT**	**LAB**	**PRE-REQUISITE**	**CO-REQUISITE**
IDE 311	BUILDING MATERIALS	3	3	0		
IDE 352	DAY LIGHTING ANALYSIS AND DESIGN	3	3	0		
IDE 357	INTRODUCTION TO BUILDING MAINTENANCE MANAGEMENT	3	3	0		
IDE 458	QUANTITATIVE METHODS IN CONSTRUCTION MANAGEMENT	3	3	0		
IDE 459	CONTRACTS AND SPECIFICATIONS	3	3	0		
IDE 490	SPECIAL TOPICS IN ARCHITECTURAL ENGINEERING	3	3	0		
TOTAL (CREDIT)		(ONLY 6 CREDIT HOURS)				

GENERAL STUDIES EELECTIVES (GS XXX)						
CODE	**COURSE TITLE**	**CRED**	**LECT**	**LAB**	**PRE-REQUISITE**	**CO-REQUISITE**
ISE 307	ENGINNERING ECONOMIC ANALYSIS	3	2	3		
ARE 413	CONSTRUCTION MANAGEMENT	3	3	0		
ARE 431	BUILDING ECONOMY	3	3	0		
TOTAL (CREDIT)		(ONLY 3 CREDIT HOURS)				

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COURSE DESCRIPTION

INTERIOR DESIGN GROUP (X 0 X)

IDE 101 INTRODUCTION TO INTERIOR DESIGN I (1-1-0) : CO-REQUISITE (IDE 101 P)

IDE 101 P INTRODUCTIONS TO INTERIOR DESIGN 1 (2-0-4): CO-REQUISITE (IDE 101)

The course exposes students to interior design as a profession and provides an outline for future courses. It introduces the processes of interior design (goals and budget, information, Design Concept Presentation and Approval, Scheduling, Procurement, Design and Trades Implementation, Installation & Accessorizing, Refinement Punch List, Professional Photography) and the different aspects and considerations involved. Further, the course provides the student with the profession of interior design such as design basics, planning, materials and elements, furniture, textiles, lighting, color, art and accessories, kitchens and bathrooms, public spaces, human factors, design history, working methods, systems, and business practices.

IDE 102: INTRODUCTION TO INTERIOR DESIGN II (1-1-0): (PRE-REQUISITE: IDE 101) (CO-REQUISITE (IDE 102 P)

IDE 102 P INTRODUCTIONS TO INTERIOR DESIGN II (2-0-4): (PRE-REQUISITE: IDE 101) (CO-REQUISITE (IDE 101)

This course explores the physical properties of interior design including building construction, interior components and materials, furnishings, and furniture arrangement. The course also enables the students to explore the relationship between the user and spatial form, function and material within the context of Interior Design.

IDE 201: INTERIOR DESIGN I (4-0-8): (PRE-REQUISITE IDE 102)

This course is considered as an application of interior design elements and principles. Students in this course are going to cover; an introduction to the programming, schematic design, and conceptual design phases with an emphasis on material selection, as well as investigation of material components used by the designer, focusing on accessibility, human factors, space planning, and electrical/lighting components.

IDE 202: INTERIOR DESIGN II (4-0-8):(PREREQUISITE: IDE 201)

This subject focuses on the practical application of all the theory subjects in the design studio. It aims at allowing the students to develop their designing skills by actually getting involved with progressively difficult design problems, and learns how to create comfortable functional and aesthetically appealing harmonious interior environment.

IDE 301 INTERIOR DESIGN III (4-0-8): (PREREQUISITE: IDE 202)

This course covers studies on multi-functional spaces. Design of medium to large space of medium complexity (several functions together) to introduce commercial designs like small shops, offices, etc. Site visits: site visits to complete buildings pertaining to design problems, group discussions among students, special discussions shall also be arranged with senior students, students should also play roles of clients, contractors and consultants. Study of groups of objects forms, masses with basic geometric forms, their compositions, for two and three dimensional study in relation with basic design.

IDE 302 INTERIOR DESIGN IV (4-0-8): (PREREQUISITE: IDE 301)

This studio course incorporates interior design problems of highly complex nature are to be tackled by students; it relates to the study and design of commercial spaces, with a focus on corporate workplaces and hospitality spaces. The components of this course include advanced application of interior design concepts, code requirements, and client presentations.

IDE 401 INTERIOR DESIGN V (4-0-8): (PREREQUISITE: IDE 302)

Interior design problems of highly complex nature are to be tackled by the students in this course. It aims at allowing the students to develop their designing skills by actually getting involved with progressively difficult design problems. students are expected to apply their knowledge while designing in a form like computer graphics, working details, practical knowledge regarding execution of the project.

IDE 402 CAPSTONE PROJECT (4-0-8): (PREREQUISITE: IDE 401)

In this course, the students are required to prepare independent project with help of knowledge acquired within their study. Students are expected to enter in highly competitive professional world after completing this project work so he is expected to put all their efforts with skills regarding design, working details, technology, materials, and computers.

CONSTRUCTION GROUP (X 1 X)

IDE 211: INTERIOR MATERIALS AND TECHNOLOGIES (3-3-0)

This course introduces students to the art and science of building, these topics are then further, and various design strategies, materials, fabrication techniques, and informative built works are explored. The material in class requires students to have some experience and understanding of architectural design, drawings and details. The course will cover the following units; Unit No. 1: Brick: Qualities of good brick. Field test, terminology. Precautions to be taken in brick laying & size. Unit No. 2: Stone. Classification. Qualities of good stone, Laying and Dressing. Different textures and applications. Unit No. 3: Sand. Types and application Unit No. 4: Timber Types Cross sections of exogenous tree. Defects in timber, seasoning. Application in interior. Application of artificial timber e.g. veneers plywood. Unit No. 5: Cement. Types. Field test for cement. Application of cement Unit No. 6: Mortar: Types. Application Unit No. 7 Clay Products. Types. Application Unit No. 8: Lime. Types. Application Unit No. 9: Miscellaneous Materials. Gypsum. Sound Absorbent Materials Unit No. 10: Stone Ware and Porcelain. Application in Interior Design.

IDE 213: CONSTRUCTION SYSTEMS (3-3-0)

This lecture course covers standard interior building systems including partitions, ceilings, floors, and stairs, as well as glazing, woodwork, hardware, structural coordination, barrier free design, international building code. More over the topics covers information about floors, walls, ceilings and other construction methods in lectures and discussions format.

IDE 313: CONSTRUCTION DETAILS (2-2-0): (PREREQUISITE: IDE 213)

This course covers latest technologies of combined different materials together, e.g. false ceiling, flooring materials and their construction technics, partitions, doors, windows, metals, fittings and appliances.

ENVIRONMENT GROUP (X 2 X)

IDE 221: ENVIRONMENT I - THERMAL CONTROL (3-3-0)

This course enables students to understand the effects of the thermal environment on people, learns to assess and control the risks associated with thermal stress, learns and Identify sources of thermal stress within the working environment. As well as understanding the nature of thermal strain on the body, make an assessment of the thermal environment through measurement and other methods evaluate risk from exposure to thermal stress, and Suggest appropriate control methods for the thermal environment.

IDE 222: ENVIRONMENT II: HEATING, VENTILATING, AND AIR CONDITIONING (2-2-0): (CO-REQUISITE (IDE 222 P)

IDE 222P: ENVIRONMENT II: HEATING, VENTILATING, AND AIR CONDITIONING (1-0-2):(CO-REQUISITE (IDE222)

This course concentrates on vertical transportation, etc… study of different type of systems used for high rise structures like water supply systems (hot & cold), fire protection system, ducts, drainage system, garbage system, refuse chutes etc. Type of A.C: Fundamental principles and engineering procedures for the design of heating, ventilating, and air conditioning systems; HVAC system characteristics; system and equipment selection; duct design and layout. Energy conservation techniques. Computer applications.

IDE 323: ENVIRONNEMENT III– ILLUMINATION (2-2-0): (CO-REQUISITE (IDE P)

IDE 323p: ENVIRONMENT III– ILLUMINATION (1-0-2): (CO-REQUISITE (IDE 323)

Introduction, natural lighting, artificial lighting, concept of light, vision and colors. Luminaries and lamps. Lighting system design procedures; calculation and measurement techniques, evaluation of interior lighting quality and day lighting. Computer applications in artificial and day lighting analysis and design.

IDE 324: ENVIRONMENT IV – ACOUSTICS (2-2-0): (CO-REQUISITE (IDE 324P)

IDE 324P: ENVIRONMENT IV – ACOUSTICS (2-2-0):: (CO-REQUISITE (IDE 324)

Introduction to architectural acoustics. Room acoustics and noise sources, measurements, and control. Acoustical properties of materials and room shapes. Acoustics and sound insulating materials. Sound absorption and transmission. Different methods of reduction & insulation of unwanted sound Computer applications in room acoustics simulation.

IDE 327: HUMAN BEHAVIOR (3-3-0)

This course introduces students to the basic psychology of designing spaces and places for human occupancy. Concepts introduced provide students with a basic knowledge of crowding, territoriality, attitudes relative to personal space, personality, and the definition of space and privacy as they relate to both residential and non-residential environments. Other concepts include managing limited resources and the design of habitable environments.

IDE 426: SUSTAINABLE INTERIOR DESIGN (3-3-0)

Students should know the efficient use of the natural resources is vitally important to our futures. This course enables students applying of different policies to attain the Concept of Sustainable interiors designing, understand the Principles, Environment Quality and concept of green interiors.

DRAWING GROUP (X 3 X)

IDE 131: DRAWING AND COLOURS (2-0-4)

Study and application of perspective drawing techniques and color rendering techniques as they relate to exterior and interior spaces, focuses on use of drafting equipment as a mean of visually communicating solutions to architectural design problems. This includes a study of drafting symbols, isometric and oblique drawings, sections, floor plans, and elevations. As well as laboratory course dealing with colors, theory and design principles.

IDE 328: WORKING DRAWING FOR DESIGN I (3-0-6): (REREQUISITE: IDE 313)

This subject provides the technical base for the execution of the designer's ideas. Students learn to make technical drawings explaining to the workmen how to execute the design in actual.

IDE 435: WORKING DRAWING FOR INTERIOR DESIGN II (3-0-6): (REREQUISITE: IDE 328)

This subject provides the technical base for the execution of the designer's ideas. As well as makes technical drawings explaining to the workmen how execute the design in actual. Contents: Working drawing and details of two to three interior design projects in both the semesters (preferably the student's own designs done in the second year. One residential project and other commercial project) should be completed by the students and presented as portfolios, minimum one portfolio should be done by hand drafting and others by computerized Drafting.

CAD GROUP (X 4 X)

IDE 141: CAD I FOR INTERIOR DESIGN (2-0-4)

Introduction to the techniques and applications of computer aided design in the context of architectural design. Emphases in the use of computer to seek, produce, manage, and exchange graphical information in the design process. Topics include introduction to personal computing in an office environment, two-dimensional editing and modifying techniques, standard layering system, associative dimensioning, blocks and external referencing system, layout management, CAD and the Internet. Introduction to computer programming to automate drafting functions.

IDE 242: CAD II 3D DESIGN (2-0-4): (PREREQUISITE: IDE 141)

This course covers new 3D workspace environment, new render engine, materials, lights & cameras. Interactive 3D shapes (real-time drag and draw). Sub-object editing (face, edge, vertex & Boolean history). Grip-edit nodes for 3D AutoCAD objects, dynamic UCS or ducs (temporarily switch to 3D face). Extrudes objects (convert any 2D object into a surface). Enhances visual objects, polysolid object (3d solid relative of a polyline), new sweep command (extrude along a path), new loft command (enhanced curved shapes). New presspull (isolates regions punch / extrude), and new surface command (from slice command).

HISTORY GROUP (X 5 X)

IDE 151 HISTORY OF INTERIOR DESIGN I (2-2-0):

This course is an introduction to the chronological development of architecture from pre-history, to Egyptian, Greek, and Byzantine, highlighting the development of structural systems, materials, construction and other building systems emphasis is on the middle and near east. The eastern architectures of the Indian, Chinese and Japanese civilizations are also covered.

IDE 224 HISTORY OF INTERIOR DESIGN II (2-2-0): (PREREQUISITE: IDE 151)

The focus of this course are those of developing an understanding for material use, and of creating an appreciation as to the factors that contribute to the development of the unique architecture of the various cultures. The first part of this course covers a chronological development of architecture from the early Christian period through the Gothic, to the Renaissance and Baroque periods. The second part studies architectural development from the Baroque period though the industrial revolution to the modern movements.

MANAGEMENT GROUP (X 5 X)

IDE 451: PROJECT REPORT WRITING (2-2-0)

This course involves research and writing appropriate to the field of interior design. Addresses design opportunities, including the skills of problem identification, formulation, qualitative and quantitative research, analysis, synthesis, and project proposals for interior design as well as introduces to techniques and methods of evaluative research.

IDE 453: PROFESSIONAL PRACTICES FOR INTERIOR DESIGNERS (3-3-0)

This course defines the profession and explains its history. The course includes topics of professional conduct and proper business procedures. It explains allied professions and advisors, differences in business formations, management strategies, job descriptions, legal responsibilities, financial management, preparation of design contracts, marketing, and relationships with trade sources, contract administration, and career options. Students in this course become familiar with, history of the profession of interior design, professional business structures internationally and locally. relationships with allied professions. legal issues specific to the profession. management techniques. free structures and design contracts, differences between marketing, selling, and promotion, working with trade sources, basics of contract documents and contract administration. Career options for women in Saudi Arabia, with emphasis on innovative methods of practice including how to establish and run a business from the home.

IDE 454 PROJECT CONSTRUCTION MANAGEMENT (3-3-0)

Emphasis on contract design that reflects knowledge and application of codes published by the National and International Code Council and National Fire Protection Association including plumbing, mechanical, electrical, communications, and finish/furniture selection requirements. Emphasis on contract design that reflects knowledge and application of sustainable building systems and construction.

IDE 315 TEXTILES (3-1-4)

Students work with a number of man-made and natural fibers in the class, as they learn about their characteristics and uses. The course content includes a study of textiles, materials and resources for the interior environment, which considers finish products and their application as well as manufacturing processes, design methods, aesthetic application, installation methods, maintenance, and specifications.

IDE 456 HANDCRAFT (2-0-4)

Introduction to basic process of making pottery: firing, glazing and decorating, stressing creative design, craftsmanship, aesthetic design, types of materials used in pottery, coil pottery, porcelain, Islamic pottery: pre-Islamic and early Islamic periods, Greeks and Chinese vases.

IDE 232 MODEL MAKING FOR INTERIOR DESIGN (2-0-4)

This course will introduce the students to basics of Model making with various materials. Acquisition of hands on experience in model - building. Introduction to concepts of model making and various materials used for model making. Block modeling preparation of base for models using wood or boards. Introduction to block models of buildings (or 3D Compositions) involving the usage of various materials like Soap/Wax, boards, clay etc. Detailed modeling 20. Making detailed models which includes the representation of various building elements like Walls, Columns, Steps, Windows/glazing, sunshades, handrails using materials like mount board, snow-white board, acrylic sheets. Representing various surface finishes like brick/stone representation, stucco finish etc. Various site elements – Contour representation, roads/pavements, trees/shrubs, lawn, water bodies, street furniture, fencing etc. Making models of the various interior spaces such as: residences, offices, retail spaces, recreational spaces, scaled models of furniture. Carpentry, introducing the techniques of planning, chiseling & jointing in timber to learn the use of hand tools.

IDE 326 FURNITURE DESIGN (3-0-6)

This is a survey course concerning materials, methods and manufacturing processes that are applied to interior furniture and fixture design. The course covers the analysis of custom and mass production costs and considers the benefits of durability, safety and human comfort. These factors are discussed with respect to various interior furnishings.

ELECTIVE COURSES

IDE 352: DAYLIGHTING ANALYSIS AND DESIGN (3-3-0)

Introduction to day lighting. Sources of day lighting. Solar spectrum and its relationship to daylight availability. Weather phenomenon and day lighting. Concept of cloudiness and design sky: Performance of building materials with respect to day lighting such as reflectivity and absorption. Decomposition and discoloring of materials under daylight. Detailed study of daylight transmission through openings with shading devices. Solar geometry and design of sun shading devices. Computer and lab methods for the study of daylight in buildings. Design of openings in desert areas with respect to glare and overheating.

IDE 357: INTRODUCTION TO BUILDING MAINTENANCE MANAGEMENT (3-3-0)

Basic concepts of building maintenance management, classification of maintenance types, work orders types, planning and scheduling of maintenance works, maintenance contract types, organizing preventive maintenance activities, maintenance contract documents.

IDE 311 BUILDING MATERIALS (3-3-0)

Properties, behavior, and selection of building materials including wood, laminates, cements, aggregates, concrete, masonry mortar, steel, and finishing materials. Structural and architectural use of traditional and modern building materials. Introduction to basic methods of construction; excavation, foundations, building systems, and construction equipment and general techniques in wood, masonry, and concrete construction, new building materials visits to building sites and manufacturers.

IDE 458: QUANTITATIVE METHODS IN CONSTRUCTION MANAGEMENT (3-3-0)

An introduction to the application of modeling techniques to problems in construction management. Topics include the application of linear programming, transportation and assignment.

IDE 459: CONTRACTS AND SPECIFICATIONS (3-3-0)

Contract documents, divisions of specifications, types of specifications, technical divisions options and alternatives, contracts, time and money, changes bonds liens, government contracts, general conditions, special conditions, proposal form, instruction to bidders, invitations to bid, checking, interpretation of specifications, computerized specifications and Saudi standard public works contract.

IDE 490: SPECIAL TOPICS IN INTEROR DESIGN ENGINEERING (3-3-0)

Variable contents. State-of-the-art advanced topics in the field of Interior Design. Prerequisites: Senior Standing, Consent of Instructor