



جامعة الأمير محمد بن فهد **PMU**
PRINCE MOHAMMAD BIN FAHD UNIVERSITY



COLLEGE OF ARCHITECTURE AND DESIGN



GENERAL CATALOG

2020-2022



RECTOR'S MESSAGE

The continuing rapid development of Saudi Arabia and the growth of various new sectors of the Kingdom's economy call for a substantial number of university graduates capable of leadership in diverse fields of business, engineering, information technology, culture, education, community development and public administration.

Prince Mohammad Bin Fahd University aims to be among the potential contributors ensuring that the Kingdom develops the necessary manpower with the appropriate competencies, technical knowledge and foresight to rise to the challenges ahead.

Prince Mohammad Bin Fahd University is a new private university located in the Al-Khobar area of the Eastern Province of Saudi Arabia. The University was established by a group of renowned Saudi individuals under the auspices of HRH Prince Mohammad Bin Fahd Bin Abdulaziz.

Dr. Issa Al Ansari

Rector of PMU

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PROGRAM DEFINITION

Overview

The PMU College of Architecture and Design will be dedicated to recruiting the highest caliber students, retaining them through guidance and direction, and graduating degreed designers who will compete and be recognized both locally and in a global society. To further fulfill this mission, an ongoing and active recruitment program will be carried out to attract faculty and staff who will not only be recognized nationally for their expertise, but also for their ability to impart to students the most needed skills to function in a competitive work environment.

The PMU College of Architecture and Design will be comprised of the following academic units:

- Department of Architecture
- Department of Interior Design
- Department of Graphic Design

These basic level programs will be designed to give the student an understanding of the fundamental principles underlying architecture and design as well as architecture and design practice. Each curriculum will contain core curriculum courses designed to develop a solid foundation in mathematics, science, and physics, with a general background in social and behavioral sciences. Building on this background, the architecture and design courses will provide application of basic theories and principles using predesign processes that lead to studio solutions of complex design problems.

Laboratory facilities in the College of Architecture and Design will be equipped to facilitate learning. In these labs, students will become familiar with the instruments, procedures, and processes employed by industry. Computer laboratories will be available for students' use throughout their course of study. In addition, every student will be required to have their own laptop computer.

Vision and Mission

1. Vision

The College of Architecture and Design at PMU will offer a unique and distinguished education that prepares future leaders, innovators, and creative global citizens in the professions of Architecture, Interior Design and Graphic Design. To address the fundamental and grand challenges of achieving economic, ecological, social, and aesthetic design solutions, its graduates will apply research-informed design and innovative technology.

2. **Mission**

The PMU College of Architecture and Design and its faculty will provide education for future leaders and innovators in the professions of Architecture, Interior Design and Graphic Design, create new knowledge about the built environment and design, provide resources for lifelong learning, and serve the Kingdom of Saudi Arabia by increasing the quality of the environment of its communities and positively impact its economic prosperity.

Goals

The PMU College of Architecture and Design will have the following objectives:

- To increase the pool of qualified Saudi Arabian architects, interior and graphic designers.
- To provide students in the University's service region a high quality architecture, interior design or graphic design education that equips them for professional employment and/or licensure in the local, national, and international job markets.
- To enable graduates to navigate and accommodate cultural differences and provide leadership across international boundaries to address important challenges and opportunities.
- To equip graduates with principles and knowledge to enable them to adapt to rapidly changing technologies and to become leaders and entrepreneurs in the fields of Architecture, Interior Design and Graphic Design.

STUDENT ENROLLMENT

The character and quality of students entering the College of Architecture and Design will define the quality of the degree programs within the college. Therefore, it is important that students be properly qualified to enter their chosen discipline and that they fulfill all of the admission requirements.

Admissions to the College of Architecture and Design will be open to students who have completed the PMU Preparation Year Program or who have met the university criteria for bypassing the program.

Admissions Process and Requirements

1. **Required Courses in the Preparation Year Program**

The PMU Preparation Year Program (as described in the report *Preparation Program Design*) concentrates on English language, mathematics, and study skills and learning strategies. English language, study skills, and the first semester math course, PRPM 0011: Introductory Algebra, are required of all students. However, during the second semester of

mathematics, students have a choice of two tracks, depending on their desired major in the college.

- Students seeking entrance to the Department of Architecture and Design will be required to pass PRPM 0022: Pre-Calculus, during the second semester of the Preparation Year Program.
- Students seeking entrance to the Department of Interior Design or Graphic Design will be required to pass PRPM 0012: Intermediate Algebra or higher, during the second semester of the Preparation Year Program.

2. Application for Admission

Upon completion (or waiver) of the Preparation Year Program, students will make application to the college in which they wish to study. This application will include:

- Preparation Year Program Certificate of Completion
- PMU placement test results
- Interview with the college
- Essay on a topic assigned by the college

A detailed discussion of admissions requirements and procedures is contained in the report *PMU Admissions Plan*.

Performance Expectations

The College of Architecture and Design will require minimum standards of academic performance from its students. Using a 4.0 scale for course grades, the College of Architecture and Design will require that students maintain minimum grade point averages (GPA) for various categories of courses consisting of:

- 2.0 GPA in courses from the PMU Core Curriculum
- 2.0 GPA in all degree-specific courses (courses from the Core Curriculum that students must take beyond the minimum requirement)
- 2.5 GPA in all courses within the major academic discipline

A student who receives a D (1.0) or F in any course will be required to repeat the course and to achieve the required grade point average for that category of course. In the case of an elective, another elective may be selected. These students will be required to participate in tutoring and remediation programs offered by the college faculty and the PMU Learning Resources Center. (See Section III. B. 2, Departmental Responsibilities, above).

Students may repeat a course one time, with additional repeats allowed at the discretion of the faculty. However, no more than 10 repeated courses will be allowed over the student's career at the PMU. After the first repeat, prior grades will count toward the student's GPA.

For example: A student who receives a D followed by an A will have the D erased and replaced with the A on the transcript. A student who receives an F followed by a D followed by an A will have the F erased, and both the D and the A will be averaged into the GPA.

In order to graduate, all students at the PMU will be required to maintain an overall GPA of 2.0.

STUDENT TECHNOLOGY REQUIREMENTS

Architecture and Interior Design

It should be noted, however, that hardware and software capabilities change rapidly and should be revised annually.

Personal laptops

Like all other students at PMU, students within the Departments of Architecture and Interior Design will be required to have personal laptop computers. They will have access to the University-wide technology-infused environment including wireless Internet access. The Departments will develop and revise specifications for student computers to assure that the computers are appropriate to the graphics and analysis performance needs of a design professional.

However, students in the Departments will have specific computing and other technology requirements that extend beyond the standard Microsoft Office applications of a typical laptop. Many of these specific computing requirements will be available to students' laptop computers through the University's technology infrastructure. Others will be provided through general access and specialized computer laboratories.

Hardware

Laptop configurations for PMU Architecture and Interior Design students

Hardware Component	Minimum	Recommended
Processor	Intel i5 dual core or AMD equivalent	Intel i7 quad core or AMD equivalent
Memory	8.0 GB	16.0 GB with expansion space or 32 GB
Hard drive	250+ GB 7200RPM	256+ GB SSD
Video card (1)	1 GB NVIDIA Quadro or AMD FirePro	2GB or more NVIDIA Quadro or AMD FirePro
Screen size (2)	13 inch	14-17 inch
Networking (Wireless)	802.11 a/g/n	802.11 a/g/n
Networking (Wired)	10/100 Ethernet	10/100/1000 Ethernet

Peripheral connectivity	USB 2.0	USB 3.0
Warranty	3 year	5 year + accidental damage (# of years should match program length - minimum

Because several applications used in the curriculum are available only for the Windows operating system, Apple users will but require Parallels emulator for Windows to run Windows on their Apple hardware. As a result, the Department of Architecture should strongly urge students to purchase Windows-based PC laptops rather than machines running the Mac OS.

PMU also should encourage students to adopt high performance computers.

Software

Given variations in software packages and the frequent introduction of new software versions, the Departments of Architecture and Interior Design should recommend that students wait to purchase applications until after they have had the opportunity to consult with their instructors about exactly what they will need and when they will need it.

Graphic Design

Like all other students at the PMU, students studying Graphic Design will be required to have personal laptop computers to assist in their studies. Students will benefit from having continuous computing access to support research, communication, and studio practice. They will have access to the university-wide technology-infused environment including wireless Internet access. Technologies such as interactive television, video conferencing, and BLACKBOARD will be central to maintaining effective communication between faculty and students and among students. Faculty and students involved in classroom presentations will have access to modern presentation technology connected to University computing and library resources as well as to the Internet.

However, students will have specific computing requirements that stem largely from the demanding software created for the graphic design industry that they must learn and use. As a result, students in the Graphic Design program will require a laptop computer capable of handling this software. Laptop computers should meet or exceed the capabilities of the computers in the department's dedicated computer labs.

Since access to a personal computer is essential for the successful completion of the Graphic Design degree, the university requires all incoming Graphic Design students must have the following minimum configurations in their Apple or Windows laptops:

Apple laptop	
Display	MacBook Pro 15" Retina Display
Operating system	Mac OS
Processor	3.1GHz Quad-core Intel Core i7
Memory	16GB RAM
Storage	2TB SSD
Graphics card	Radeon Pro 550 2GB

Windows laptop	
Display	DELL Alienware 15" G-SYNC Display
Operating system	Windows 10 64-bit
Processor	3.1GHZ Quad-core Intel Core i7
Memory	16GB RAM
Storage	128GB SSD
Graphics card	Nvidia GeForce GTX1070 8GB

COMPONENTS OF DEGREE PROGRAMS

- The Architecture program consists of five years and 164 credit hours
- The Interior Design program is four years and 126 credit hours.
- The Graphic Design Program is four years and 126 credit hours.

General Education and Core Classes

Interior Design and Graphic Design are required to take 51 credit hours and Architecture requires 53 credit hours of general education credits for the University Core Curriculum which include classes in the PMU core competencies, communication Arabic language and Islamic studies, physical education, mathematics, laboratory science and social/behavioral sciences. The Architecture program extends the basic Core requirements for 6 credits of math to 8 credits.

University required courses are as follows:

Communication

- COMM 1311 Written Communication
- COMM 1312 Writing & Research
- COMM 2311 Oral Communication
- COMM 2312 Technical Communication

University Core Competency

- UNIV 1211 Professional Development
- UNIV 1212 Critical Thinking
- UNIV 1213 Leadership & Teamwork

Arabic Language and Islamic Studies

- ALIS 1211 Introduction to Islamic Culture
- ALIS 1212 The Social System in Islam
- ALIS 2211 Linguistic and Communication Skills
- ALIS 2212 The Biography of the Prophet Mohammad

Physical Education

- PHED 1112 Healthy Behaviors & Management
- PHED 1111 Active Living Lifestyle

Learning Assessment

- ASSE 2111 Learning Outcomes Assessment I
- ASSE 3211 Learning Outcomes Assessment II

University Core course requirements are:

- Math- 8 credits for Architecture, 6 credits for Interior and Graphic Design
- Social/Behavioral Sciences- 6 credits required
- Laboratory Sciences- 8 credits required

Each COAD major has specific course requirements chosen from the Core classes to enhance the learning involved in the major. In addition, the majors may allow students to choose from the list of available classes to meet program requirements. See individual the major program of study for these requirements.

Architecture and Interior Design Required COAD Core Classes

Due to crossover in subject matter, Architecture and Interior Design share 31 credits. These are held as combined COAD prefixed classes with both majors attending together. The classes are:

- COAD 1311: Design Studio I- Fundamentals
- COAD 1312: Hand Drawing & Rendering Techniques
- COAD 1313: Design Studio II- Fundamentals
- COAD 1314: Construction Documents & Detail Drawings
- COAD 2251: Digital Design I- 2D
- COAD 3322: Building Codes and Universal Design
- COAD 3341: Built World Design History and Theory I
- COAD 3342: Built World Design History and Theory II
- COAD 3353: Digital Design III: BIM

Degree Program Requirements

Each degree program has unique course requirements that apply to the degree major and that also differentiate the program from other majors within the college.

Electives

Each degree program identifies the available electives and any constraints that will apply to the selection and scheduling of electives.

Internship

All COAD students are required to complete three credits of internship before their final year of classes. This translates to 320 working hours in the field of choice for the student. Every effort is made to place students in positions that will enhance their learning and simulate real-world experiences in their fields.

Capstone Series

PMU's Core Curriculum includes a series of required assessment courses. The series begins in the second year with ASSE 2111: Learning Outcome Assessment I and continues in the third year with ASSE 3211: Learning Outcome Assessment II. The series culminates in the final year with two final capstone courses.

During their final year, each student will undertake and complete a comprehensive design project in consultation with COAD faculty. Intended to simulate a work-world design project in the specialization sought after graduation, the course includes skills and subject-matter the student has learned in earlier classes including concepts, procedures, and processes.

All majors must complete a research portion for their final capstone project in the first semester of their final year. In the final semester of their final year, they will complete the design of the project.

Architecture: ARCH 5327: Design Studio IX- Capstone Project Programming
(9 credits) ARCH 5628: Design Studio X- Capstone Project

Graphic Design: GDES 4112: Graphic Design Capstone Research
(5 credits) GDES 4413: Graphic Design Capstone Project

Interior Design: IDES 4112: Interior Design Capstone Research
(5 credits) IDES 4413: Interior Design Capstone Project

COURSE OF STUDY INFORMATION BY MAJOR

ARCHITECTURE

Architecture Courses Required

The requirements for the Bachelor of Architecture degree consist of 110 credit hours of coursework in architecture. These courses are divided into the following categories:

- Foundation Classes (12 credit hours & shared with other COAD majors):
 - COAD 1311: Design Studio I- Fundamentals
 - COAD 1312: Hand Drawing and Rendering Techniques
 - COAD 1313: Design Studio II- Fundamentals
 - COAD 1314: Construction Documents and Detail Drawings

- Design Studios (37 credit hours):
 - ARCH 2421: Design Studio III- Architectural Design
 - ARCH 2422: Design Studio IV- Integrated Architectural Design
 - ARCH 3523: Design Studio V- Architectural Design
 - ARCH 3524: Design Studio VI- Integrated Architectural Design
 - ARCH 4525: Design Studio VII- Architectural Design
 - ARCH 4526: Design Studio VIII- Integrated Architectural Design
 - ARCH 5327: Design Studio IX- Capstone Project Programming
 - ARCH 5628: Design Studio X- Architectural Capstone

- History and Theory of Architecture and Design (6 credit hours & shared with IDES majors):
 - COAD 3341: Built World Design History and Theory I
 - COAD 3342: Built World Design History and Theory II

- Materials, Structure, and Environmental Systems (18 credit hours):
 - ARCH 2341: Principles of Design with Climate
 - ARCH 2342: Materials and Methods
 - ARCH 3343: Principles of Structural Systems
 - ARCH 4344: Introduction to Environmental Systems
 - ARCH 4345: Architectural Structures
 - ARCH 4346: Integrated Hybrid Environmental Systems

- Professional Courses (18 credit hours with 6 shared with IDES):
 - COAD 2333: Environmental Psychology for Design
 - COAD 3322: Building Codes and Universal Design
 - ARCH 4361: Preparing the Project Brief
 - ARCH 4362: Construction Process and Building Economics
 - ARCH 5363: Professional Practice and Ethics
 - ARCH 4365: Internship

- Digital Technology Courses (10 credit hours with 7 shared with IDES majors):
 - COAD 2251: Digital Design I: 2D
 - COAD 2252: Digital Design II: 3D
 - COAD 3353: Digital Design III: BIM
 - ARCH 4354: Simulation and Optimization

- Degree Electives: The Bachelor of Architecture degree program will require 9 semester credit hours of professional electives to be taken from elective courses.
 - COAD 4333: History of Islamic Design (shared with IDES)
 - COAD 4351: Built World Photography (shared with IDES)
 - ARCH 4371: Contemporary Materials in Architecture and Design
 - ARCH 5372: Building Energy Use Modeling and Simulation
 - ARCH 5373: Sustainable Housing and GeoDesign
 - ARCH 5374: Advanced Design Visualization
 - ARCH 5375: Computational Modeling and Simulation

Architecture Course Sequence

Total Semester Credit Hours: 163

First Year

<i>First Semester</i>	<i>Hours</i>
COMM 1311: Written Communication	3
UNIV 1211: Prof. Development	2
MATH 1422: Calculus I	4
COAD 1311: Design Studio I- Fundamentals	3
COAD 1312: Hand Drawing & Rendering Techniques	3
Total Hours: 15	

<i>Second Semester</i>	<i>Hours</i>
PSYC 1311: Intro to Psychology	3
ALIS 1211: Introduction to Islamic Culture	2
COMM 1312: Writing & Research	3
UNIV 1212: Critical Thinking	2
COAD 1313: Design Studio II- Fundamentals	3
COAD 1314: Construction Docs & Detail Drawings	3
Total Hours: 16	

Second Year

<i>First Semester</i>	<i>Hours</i>
MATH 1423: Calculus II	4
ASSE 2111: Learning Outcome Assessment I	1
COAD 2333: Environmental Psychology for Design	3
ARCH 2341: Principles of Design with Climate	3
ARCH 2421: Design Studio III	4
COAD 2251: Digital Design I- 2D	2
Total Hours: 17	

<i>Second Semester</i>	<i>Hours</i>
UNIV 1213: Leadership & Teamwork	2
COMM 2311: Oral Communication	3
PHYS 1421: Physics for Engineers I	4
ARCH 2342: Materials and Methods	3
ARCH 2422: Design Studio IV	1
COAD 2252: Digital Design II- 3D	2
Total Hours: 18	

Third Year

<i>First Semester</i>	<i>Hours</i>
COMM 2312: Technical Communication	3
ASSE 3211: Learning Outcome Assessment II	2
COAD 3341: Built World Design History and Theory I	2
COAD 3353: Digital Design III: BIM	3
ARCH 3523: Design Studio V	5
Total Hours: 16	

<i>Second Semester</i>	<i>Hours</i>
ALIS 1212: The Social System in Islam	2
COAD 3322: Building Codes and Universal Design	3
COAD 3342: Built World Design History and Theory II	3
ARCH 3343: Principles of Structural Systems	3
ARCH 3524: Design Studio VI	5
Total Hours: 16	

Fourth Year

<i>First Semester</i>	<i>Hours</i>
Social Science Elective*	3
ARCH or COAD 43xx: Professional Elective	3
ARCH 4344: Introduction to Environmental Systems	3
ARCH 4354: Simulation and Optimization	3
ARCH 4525: Design Studio VII	5
Total Hours: 17	

*Select any Social Science course from the College Core Curriculum.

<i>Second Semester</i>	<i>Hours</i>
ARCH 4345: Architectural Structures	3
ARCH 4346: Integrated Environmental Systems	3
ARCH 4361: Preparing the Project Brief	3
ARCH 4362: Construction Process and Building Economics	3
ARCH 4526: Design Studio VIII	5
Total Hours: 17	

<i>Summer Semester</i>	<i>Hours</i>
ARCH 4365: Internship (320 work hours)	3
Total Hours: 3	

Fifth Year

<i>First Semester</i>	<i>Hours</i>
ALIS 2211: Linguistic Communication Skills	2
PHED 1111: Active Living Lifestyle	1
Natural Sciences Elective CHEM 1411 or BIOL 1411	4
ARCH 53xx: Professional Elective	3
ARCH 5327: Design Studio IX- Capstone Project Programming	3
Total Hours: 13	

<i>Second Semester</i>	<i>Hours</i>
ALIS 2212: The Biography of Prophet Mohammad	2
PHED 1112: Healthy Behaviors and Management	1
ARCH 53xx: Professional Elective	3
ARCH 5363: Professional Practice and Ethics	3
ARCH 5628: Design Studio X- Capstone Project	6
Total Hours: 15	

Bachelor of Science in Architecture for Full Time Students Five Year Study Plan as of Academic Year 2019/2020

FIRST YEAR (31 Credit Hours)											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec-ture	Studio / Tutorial					Lec-ture	Studio / Tutorial	
COMM 1311	Written Communication	3	3	0		PSYC 1311	Intro to Psychology <i>(Soc-Sci Restricted Elective)</i>	3	3	0	
UNIV 1211	Prof. Development and Competencies	2	2	0		ALIS 1211	Introduction to Islamic Culture	2	2	0	
MATH 1422	Calculus I	4	3	1	PRPM 0022	COMM 1312	Writing and Research	3	3	0	COMM 1311
						UNIV 1212	Critical Thinking & Problem Solving	2	2	0	
COAD 1311	Design Studio I- Fundamentals	3	1	4	PRPM 0022* (C)COAD 1312	COAD 1313	Design Studio II- Fundamentals	3	1	4	COAD 1311 COAD 1312
COAD 1312	Hand Drawing and Rendering Techniques	3	1	4	(C) COAD 1311	COAD 1314	Construction Documents and Detail Drawings	3	1	4	COAD 1311 (C) COAD 1313
Total		15	10	9		Total		16	12	8	

SECOND YEAR (35 Credit Hours)											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec-ture	Studio / Tutorial					Lec-ture	Studio / Tutorial	
MATH 1423	Calculus II	4	3	1	MATH 1422	UNIV 1213	Leadership And Teamwork	2	2	0	
ASSE 2111	Learning Outcome Assessment I	1	1	1	Second Year Level	COMM 2311	Oral Communication	3	3	0	COMM 1312
COAD 2333	Environmental Psychology for Design	3	3	0	COAD 1313 PSYC 1311	PHYS 1421	Physics for Engineers I	4	3	3	PRPM 0022
ARCH 2341	Principles of Design with Climate	3	3	0		ARCH 2342	Materials and Methods	3	2	2	
ARCH 2421	Design Studio III- Architectural Design	4	1	6	COAD 1313 (C)COAD 2333 (C) COAD 2251	ARCH 2422	Design Studio IV- Integrated Architectural Design	4	1	6	ARCH 2421 (C)COAD 2252 (C)ARCH 2342
COAD 2251	Digital Design I: 2D	2	1	3	COAD 1314 (C)ARCH 2421	COAD 2252	Digital Design II: 3D	2	1	3	COAD 2251 (C)ARCH 2422
Total		17	12	12		Total		18	12	14	

THIRD YEAR (32 Credit Hours)											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
COMM 2312	Technical and Professional Communications	3	3	0	<i>COMM 2311</i>	ALIS 1212	The Social System in Islam	2	2	0	
ASSE 3211	Learning Outcome Assessment II	2	2	1	<i>ASSE 2111 & Third Year Level</i>	ARCH 3343	Principles of Structural Systems	3	3	0	<i>ARCH 2342</i>
COAD 3341	Built World Design History and Theory I	3	3	0	<i>ARCH 2422</i>	COAD 3342	Built World Design History and Theory II	3	3	0	<i>COAD 3341</i>
COAD 3353	Digital Design III-BIM	3	1	4	<i>COAD 2252</i>	COAD 3322	Building Codes and Universal Design	3	3	0	<i>ARCH 2342</i>
ARCH 3523	Design Studio V- Architectural Design	5	1	8	<i>ARCH 2422 (C) COAD 3353</i>	ARCH 3524	Design Studio VI- Integrated Architectural Design	5	1	8	<i>ARCH 3523 (C) COAD 3342</i>
Total		16	10	13		Total		16	12	8	

FOURTH YEAR (34 Credit Hours)											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
PROPOSED NEW COURSE	Social Science Research Methods OR other Social Science elective (Counted as Optional Studies)**	3	3	0		ARCH 4361	Preparing the Project Brief	3	3	0	<i>UNIV 1213 COAD 2332</i>
ARCH 4344	Introduction to Environmental Systems	3	3	0	<i>ARCH 2341</i>	ARCH 4362	Construction Process and Building Economics	3	3	0	<i>ARCH 3343</i>
ARCH 4354	Simulation and Optimization	3	2	2	<i>COAD 3353 ARCH 3343</i>	ARCH 4345	Architectural Structures	3	2	2	<i>ARCH 4354 (C)ARCH 4526</i>
ARCH OR COAD 43XX	Professional Elective*	3	<i>Varies</i>	<i>Varies</i>	<i>Varies</i>	ARCH 4346	Integrated Environmental Systems	3	2	2	<i>ARCH 4344 (C)ARCH 4526</i>
ARCH 4525	Design Studio VII- Architectural Design	5	1	8	<i>ARCH 3524 ARCH 3322</i>	ARCH 4526	Design Studio VIII- Integrated Architectural Design	5	1	8	<i>ARCH 4525 (C)ARCH 4345 (C)ARCH 4346</i>
Total		17	9+	10+		Total		17	11	12	

SUMMER OF FOURTH YEAR (3 Credit Hours)				
Course Code	Course Title	Credit Hours	Pre-Requisite/Co-Requisite	
ARCH 4365	Internship	3	8 weeks (320 hours) full time Completion of 100 credit hours and department approval (summer before graduation)	

FIFTH YEAR (28 Credit Hours)											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
ALIS 2211	Linguistic Communication Skills/ Ethical Social System in Islam	2	2	0		ALIS 2212	The Biography of Prophet Mohammad	2	2	0	
PHED 1111	Active Living Lifestyle	1	1	0		PHED 1112	Healthy Behaviors and Management	1	1	0	
CHEM 1411 or BIOL 1411	Natural and Physical Sciences	4	3	3	PRPM 0022	ARCH 5363	Professional Practice and Ethics	3	3	0	ARCH 4526
ARCH 53XX	Professional Elective*	3	Varies	Varies	Varies	ARCH 53XX	Professional Elective*	3	Varies	Varies	Varies
ARCH 5327	Design Studio IX-Capstone Project Programming	3	1	4	ARCH 4365 ARCH 4526	ARCH 5628	Design Studio X-Architectural Capstone Project	6	1	10	ARCH 5327
Total		13	7+	7+		Total		15	7+	10+	
ARCHITECTURE PROGRAM TOTAL DEGREE CREDIT HOURS = 163											

*PROFESSIONAL ELECTIVES											
3 courses required (9 credit hours)											
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
COAD 4333	History of Islamic Design	3	3	0	COAD 3342	ARCH 5372	Building Energy Use Modeling and Simulation	3	2	2	ARCH 4354 ARCH 4346
COAD 4351	Built World Photography	3	2	2	ARCH 3524	ARCH 5373	Sustainable Housing and GeoDesign	3	2	2	ARCH 4354
ARCH 4371	Contemporary Materials in Architecture and Design	3	3	0	ARCH 2342	ARCH 5374	Advanced Design Visualization	3	2	2	COAD 3353
						ARCH 5375	Computational Modeling and Simulation	3	2	2	ARCH 4354 ARCH 4326

**SOCIAL SCIENCE ELECTIVES											
1 course required (3 credit hours)											
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
HIST 1311	World Civilizations, 1600 Present	3	3	0		GEGR 1311	World Regional Geography	3	3	0	
SUST 1311	Introduction to Sustainability	3	3	0		FREN 1311	Introduction to French Language	3	3	0	
SPAN 1311	Introduction to Spanish Language	3	3	0							

NOTES:

- Completion of PRPM 0022 Pre-Calculus is required before entry into Architecture Program.
- This Program of Study applies to ONLY full time students. Minimum of 12 credit hours constitutes full time status.
- Student GPA determines maximum semester course load as per department advisement criteria.
- ARCH major courses may be offered only in the semester shown on this plan.
- ARCH major summer course offerings are not guaranteed.
- Internship experience may not be combined with any courses.

College Of Architecture and Design Architecture Study Plan 2019/2020										163 Total Credit Hours
First Year		Second Year			Third Year			Fourth Year		Fifth Year
First Semester 15H		First Semester 17H			First Semester 16H			First Semester 17H		First Semester 13H
3H	COMM 1311: Written Comm.	MATH 1422	4H	MATH 1423: Calculus II	3H	COMM 2311: Technical Comm.	3H	Social Science Elective	2H	ALIS 2211: Linguistic Communication Skills
2H	UNIV 1211: Prof. Development	Second Year Level	3H	ASSE 2111: Learning Outcome Ass. I	2H	ASSE 3211: Learning Outcome Ass. II	3H	ARCH or COAD 43xx: Professional Elective	1H	PHED 1111: Active Living Lifestyle
4H	MATH 1422: Calculus I	PRPM 0022	3H	COAD 2333: Environmental Psychology for Design	3H	COAD 3341: Built World Design History and Theory I	3H	ARCH 4344: Introduction to Environmental Systems	4H	Natural Sciences Elective CHEM 1411 or BIOL 1411
3H	COAD 1311: Design Studio I Fundamentals	PRPM 0022(P) COAD 1312(C)	3H	ARCH 2341: Principles of Design with Climate	3H	COAD 3353: Digital Design III: BIM	3H	ARCH 4354: Simulation and Optimization	3H	ARCH 53xx: Professional Elective
3H	COAD 1312: Hand Drawing & Rendering Techniques	COAD 1311(C) COAD 2251(C) COAD 2333(C)	4H	ARCH 2421: Design Studio II	5H	ARCH 3523: Design Studio IV	5H	ARCH 4525: Design Studio VII	3H	ARCH 5327: Design Studio IX- Capstone Project Programming
		COAD 1314 (P) ARCH 2421 (C)	2H	COAD 2251: Digital Design I- 2D						
Second Semester 16H		Second Semester 18H			Second Semester 16H			Second Semester 17H		Second Semester 15H
3H	PSYC 1311: Intro to Psychology	UNIV 1212	2H	UNIV 1213: Leadership & Teamwork	2H	ALIS 1212: The Social System in Islam	3H	ARCH 4354(P) ARCH 4526 (C)	2H	ALIS 2212: The Biography of Prophet Mohammad
2H	ALIS 1211: Introduction to Islamic Culture	COMM 1312	3H	COMM 2311: Oral Communication	3H	COAD 3322: Building Codes and Universal Design	3H	ARCH 4346: Integrated Environmental Systems	1H	PHED 1112: Healthy Behaviors and Management
3H	COMM 1312: Writing & Research	COMM 1311	4H	PHYS 1421: Physics for Engineers I	3H	COAD 3342: Built World Design History and Theory II	3H	ARCH 4361: Preparing the Project Brief	3H	ARCH 53xx: Professional Elective
2H	UNIV 1212: Critical Thinking	UNIV 1211	3H	ARCH 2342: Materials and Methods	3H	ARCH 3343: Principles of Structural Systems	3H	ARCH 4362: Construction Process and Building Economics	3H	ARCH 5363: Professional Practice and Ethics
3H	COAD 1313: Design Studio II- Fundamentals	COAD 1311 COAD 1312	4H	ARCH 2422: Design Studio III	5H	ARCH 3524: Design Studio V	5H	ARCH 4526: Design Studio VIII	6H	ARCH 5628: Design Studio X- Capstone Project
3H	COAD 1314: Construction Docs & Detail Drawings	COAD 1311 (P) COAD 1313 (C)	2H	COAD 2252: Digital Design II- 3D			3H	ARCH 4365: Internship		
		ARCH 2421 (P) ARCH 2342 (C) COAD 2252 (C)								
							Completion of 100 credit hours			Work & registered in summer after 4th year

How to read study plan:

The bold-lined square indicates a pre-requisite or co-requisite class.

(P) Pre-requisite course

(C) Co-requisite course

Professional elective courses: 3 courses required (9 credits): COAD 4333: History of Islamic Design (ARCH 3342(P)); COAD 4351: Built World Photography (ARCH 3524(P)); ARCH 4371: Contemporary Materials in Architecture and Design (ARCH 3524(P)); ARCH 5372: Building Energy Use Modeling and Simulation (ARCH 4354 (P) & ARCH 4346(P)); ARCH 5373: Sustainable Housing and GeoDesign(ARCH 4354 (P)); ARCH 5374: Advanced Design Visualization (ARCH 3353(P)); ARCH 5375: Computational Modeling and Simulation(ARCH 4354 (P) & ARCH 4346(P)).

Social Science elective courses: HIST 1311: World Civilizations, GEGR 1311: World Regional Geography, FREN 1311: Introduction to French Language, SUST 1311 Introduction to Sustainability.

Natural and Physical Sciences elective courses: CHEM 1411(PRPM 0012(P)); BIOL 1411(PRPM 0022(P)).

Note: This Program of Study applies to ONLY full time students. Minimum of 12 credit hours constitutes full time status. Student GPA determines maximum semester course load as per department advisement criteria.

Note: ARCH major courses may be offered only in the semester on shown on this plan.

ARCH Study Plan : October 2019

Architecture Courses Offered

COAD 1311: Design Studio I – Fundamentals

Semester Credit Hours: 3 (1,2)

Course Overview:

This foundation course exposes students to architecture as a profession utilizing new skills and knowledge. It focuses on learning about architecture through graphic conventions and hand drafting.

Prerequisite: PRPM 0022: Introductory Calculus or equivalent

Co-requisite: COAD 1312: Hand Drawing and Rendering Techniques.

Semester offered: As shown in the study plan except for the freshmen level courses

COAD 1312: Hand Drawing and Rendering Techniques

Semester Credit Hours: 3 (1,2)

Course Overview:

Hand drawing and rendering are essential tools in interpreting ideas and visual thinking. The course focuses on simple, basic techniques for drawing and rendering. Even in the computer age, hand drawing is the designer's most useful tool for notation, design exploration, and graphic communication. This course will build skill and confidence through the techniques of hand drawing and rendering using various media.

Co-requisite: COAD 1311: Design Studio I- Fundamentals

Semester offered: As shown in the study plan

COAD 1313: Design Studio II- Fundamentals

Semester Credit Hours: 3 (1,2)

Course Overview

This course is a continuation of the foundations class sequence begun in COAD 1311: Design Studio I- Fundamentals. It continues the introduction to professional skills and to written, graphic, and oral communication through creative projects.

Pre-requisites: COAD 1311: Design Studio I- Fundamentals

COAD 1312: Hand Drawing and Rendering Techniques

Semester offered: As shown in the study plan.

COAD 1314: Construction Documents and Detail Drawings**Semester Credit Hours:** 3 (1,2)**Course Overview:**

This studio course covers architectural/interior environment construction documents and detail drawings that graphically represent and communicate how to construct and/or install a design project.

Pre-requisites: COAD 1311: Design Studio I- Fundamentals**Co-requisite:** COAD 1313: Design Studio II- Fundamentals**Semester offered:** As shown in the study plan.**COAD 2251: Digital Design I – Computer Aided 2D Drawing****Semester Credit Hours:** 2 (1,1)**Course Overview:**

This course is an introduction to computer drafting for architects and designers that teaches students the drafting skills required to produce two-dimensional architectural drawings. Small scale design projects (such a house, an art gallery, boutique, café, etc.) provides the site for students to gain an understanding of the commands and features of AutoCAD, or other standard of the industry, for designing and drawing architectural spaces. Students will expand other computer and design skills through the design and development of interior design presentations developed through the use of Photoshop or other presentation media.

Pre-requisite: COAD 1314: Construction Documents and Detail Drawings**Co-requisite:** ARCH 2421: Design Studio III**Semester offered:** As shown in the study plan.**COAD 2252: Digital Design II – Computer Aided 3D Modeling and Rendering****Semester Credit Hours:** 2 (1,1)**Course Overview:**

This course is the second of three computer-aided drawing courses. Topics covered in this course include three-dimensional drafting or modeling and color rendering of architectural spaces. Students explore the use of V-Ray rendering engine for improved design visualization. Other programs may be introduced as they become standards of the industry.

Pre-requisite: COAD 2251: Digital Design I – Computer Aided 2D Drawing**Co-requisite:** ARCH 2422: Design Studio IV**Semester offered:** As shown in the study plan.

COAD 2333: Environmental Psychology for Design**Semester Credit Hours:** 3 (3, 0)**Course Overview:**

The course introduces the 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 built environments.

Prerequisite: COAD 1313: Design Studio II- Fundamentals
PSYC 1311: Intro to Psychology

Semester offered: As shown in the study plan.

ARCH 2341: Principles of Design with Climate**Semester Credit Hours:** 3 (3, 0)**Course Overview:**

This course provides an introduction to the fundamentals of climate-responsive design. It explores different climate regions around the world and presents examples of how vernacular and contemporary construction methods have responded to changes in climate conditions. The course uses a case studies approach to introduce the basic principles of thermal comfort, daylighting, ventilation, energy efficiency, and resource efficiency. Case studies from different climate regions will be used to illustrate the possible range of climatic responses. Special focus will be given to vernacular approaches to building in hot and dry areas.

Pre-requisites: None

Semester offered: As shown in the study plan.

ARCH 2342: Materials and Methods**Semester Credit Hours:** 3 (2, 1)**Course Overview:**

The course provides an introduction to concepts and skills fundamental to structure, construction, building enclosure, sustainability, and interior environments. Analysis and selection of materials, components, and assemblies are also explored. The course provides an introduction to the historic role of materials in architecture.

Pre-requisites: None

Semester offered: As shown in the study plan.

ARCH 2421: Design Studio III- Architectural Design**Semester Credit Hours:** 4 (1, 3)

Course Overview:

This course provides a foundational introduction to architecture and architectural design. The course is conceived to address the breadth of knowledge in architecture to encourage students to situate their learning in subsequent courses to begin to identify a future area of focus for their careers. The course will use a design studio method that involves project-based learning.

Pre-requisites: COAD 1313: Design Studio II- Fundamentals**Co-requisites:** COAD 2251: Digital Design- 2D
COAD 2333: Environmental Psychology**Semester offered:** As shown in the study plan.**ARCH 2422: Design Studio IV- Integrated Architectural Design****Semester Credit Hours:** 4 (1, 3)

Course Overview:

This course provides a practical knowledge of materials and construction as they relate to architectural design. Working in teams, students will design and construct a small outdoor shelter. The course is conceived to address the breadth of knowledge in architecture to encourage students to situate their learning in subsequent courses and begin to identify a future area of focus for their careers.

The course will use a design studio method that involves project-based learning. It will be carefully coordinated with ARCH 2342: Materials and Methods.

Pre-requisite: ARCH 2421: Design Studio III- Architectural Design**Co-requisites:** ARCH 2342: Materials and Methods
COAD 2252: Digital Design II**Semester offered:** As shown in the study plan.**COAD 3322: Building Codes and Universal Design****Semester Credit Hours:** 3 (3, 0)

Course Overview:

This lecture course covers universal and barrier-free design, means of egress and the international building code as they apply to interior environments.

Pre-requisite: ARCH 2342: Materials and Methods.**Semester offered:** As shown in the study plan.

COAD 3341: Built World Design History and Theory I**Semester Credit Hours:** 3 (3, 0)**Course Overview:**

The course surveys the evolution of architecture, design and theory inclusive of the Ancient World period, Classical World period, Middle Ages, Renaissance, Baroque and design work up to 1800CE. The student explores design choices and critically analyzes existing designs based on historical information. This course prepares students to participate in designing in a broader context.

Pre-requisite: Successful completion of 50 credit hours.**Semester offered:** As shown in the study plan.**COAD 3342: Built World Design History and Theory II****Semester Credit Hours:** 3 (3, 0)**Course Overview:**

The course continues a survey of architecture, design and theoretical characteristics of specific design styles in selected cultures from 1800CE to the present. The progression and evolution of the design of the built environment throughout history gives an appreciation for humankind's achievements and aids in understanding current design trends.

Pre-requisite: COAD 3341: Built World Design History and Theory I**Semester offered:** As shown in the study plan.**ARCH 3343: Principles of Structural Systems****Semester Credit Hours:** 3 (3,0)**Course Overview:**

This course provides an introduction to the principles of architectural structures as related to architectural design. It includes consideration of spatial, structural and aesthetic issues of building structural systems and introduces structural behavior, forces and responses in structural systems.

Pre-requisite: ARCH 2342: Materials and Methods**Semester offered:** As shown in the study plan.**COAD 3353: Digital Design III - Building Information Modeling****Semester Credit Hours:** 3 (1, 3)**Course Overview:**

This course expands the student's professional skills in computer-aided design software through experience with building information modeling (BIM) using Revit Architecture, or any other standard of the industry, to build a virtual model and generate 2D and 3D views from the model.

Pre-requisites: COAD 2252: Digital Design II- 3D**Semester offered:** As shown in the study plan.

ARCH 3523: Design Studio V- Architectural Design**Semester Credit Hours:** 5 (1, 4)

Course Overview:

This course focuses on the integration of architectural theories and philosophy with environmental design systems; the study of theoretical approaches to graphic and analytical thinking, problem identification, and design dissemination through various media, case studies, and problem resolution; conditions and forces associated with a variety of building types; and the generation of design solutions.

Prerequisite: ARCH 2422: Design Studio IV- Integrated Architectural Design**Co-requisite:** COAD 3353: Digital Design III - Building Information Modeling**Semester offered:** As shown in the study plan.**ARCH 3524: Design Studio VI- Integrated Architectural Design****Semester Credit Hours:** 5 (1, 4)

Course Overview:

This course focuses on the application of verbal, graphic, research, critical thinking, and fundamental design skills to architectural projects that emphasize the integration of architectural history and theory issues.

Prerequisite: ARCH 3523: Design Studio V- Architectural Design**Co-requisite:** COAD 3342: Built World Design History and Theory II**Semester offered:** As shown in the study plan.**COAD 4333: History of Islamic Design****Semester Credit Hours:** 3 (3, 0)

Course Overview:

This course examines the architecture, interior design and decorative arts of the Islamic world from pre-Islamic time through today. It studies the main characteristic of the Islamic style, focusing on the form and function of architecture, interior design and decorative arts as well as historical and cultural backgrounds.

Pre-requisite: COAD 3342: Built World Design History and Theory II**Semester offered:** As shown in the study plan.

ARCH 4344: Introduction to Environmental Systems**Semester Credit Hours:** 3 (3, 0)

Course Overview:

This course provides an introduction to the design of environmentally responsive buildings and the natural and artificial systems that support them. It includes consideration of topics such as active and passive heating and cooling, indoor air quality, solar orientation, daylighting and artificial illumination, acoustics, embodied energy and building services systems.

Pre-requisite: ARCH 2341: Principles of Design with Climate**Semester offered:** As shown in the study plan.**ARCH 4345: Architectural Structures****Semester Credit Hours:** 3 (2, 1)

Course Overview:

This course provides an advanced study of architectural structures. It considers the physical principles that govern classical statics and strength of materials as well as graphical and mathematical design of structural systems. The course also addresses considerations of the role of structural articulation in the design of buildings.

Pre-requisites: ARCH 3343: Principles of Structural Systems**Co-requisites:** ARCH 4526: Design Studio VIII- Integrated Architectural Design**Semester offered:** As shown in the study plan.**ARCH 4346: Integrated Environmental Systems****Semester Credit Hours:** 3 (2, 1)

Course Overview:

This course covers advanced issues in the design of environmentally responsive buildings and the natural and artificial systems that support them, such as embodied energy, active and passive heating and cooling, indoor air quality, solar orientation, daylighting and artificial illumination, acoustics and building services systems. It includes the use of appropriate performance assessment tools.

Pre-requisite: ARCH 4344: Introduction to Environmental Systems**Co-requisite:** ARCH 4526: Design Studio VIII- Integrated Architectural Design.**Semester offered:** As shown in the study plan.

COAD 4351: Built World Photography**Semester Credit Hours:****3 (2, 1)****Course Overview:**

This course is an introduction to photography and will cover the fundamentals of photography and photo appreciation. Students will need a 35 mm single-lens reflex (SLR) camera with manual. This course provides the student with an understanding of the basic technical and creative processes associated with photography. In addition, instruction is given with broad reference to the history of photography, photographic theory, and contemporary photographic practice.

Pre-requisite: ARCH 3524: Design Studio VI**Semester offered:** As shown in the study plan.**ARCH 4354: Simulation and Optimization****Semester Credit Hours:****3 (2,1)****Course Overview:**

This course covers architectural design methods; collaboration with representatives of allied disciplines; search for solutions; simulation of various criteria, such as energy performance, structural performance, cost performance, lighting performance, visual performance, and code compliance; optimization and comparison of schemes; performance criteria; and selection of satisficing scheme.

Pre-requisites: COAD 3353: Digital Design III- BIM
ARCH 3343: Principles of Structural Systems**Semester offered:** As shown in the study plan.**ARCH 4361: Preparing the Project Brief****Semester Credit Hours:****3 (3, 0)****Course Overview:**

This course covers the contents of a project brief; methods for creating a brief; evidence-based design; fundamental concepts in environmental psychology and sociology; benchmarking; development of a basecase; and design using a brief. The course directly addresses research-informed design, one of the hallmarks of the PMU architecture program.

Pre-requisite: UNIV 1213: Leadership and Teamwork
COAD 2333: Environmental Psychology**Semester offered:** As shown in the study plan.

ARCH 4362: Construction Process and Building Economics**Semester Credit Hours:** 3 (3, 0)

Course Overview:

This course covers the development, design, construction, and operation of buildings; building market analysis; project financial structures; project scheduling; construction cost; facilities operations and management; and life cycle costing. It provides students with the context of architectural practice as related to clients, contractors, tenants, and society.

Pre-requisite: ARCH 4344: Introduction to Environmental Systems**Semester offered:** As shown in the study plan.**ARCH 4365: Architecture Internship Course****Semester Credit Hours:** 3 (1, 320)

Course Overview:

This course enables students to apply their studio and class experience to practical use in a work-world apprentice situation. Students have the opportunity to seek design employment in the surrounding geographic area or in the PMU Community Design Center, if it is established.

Pre-requisite: Completion of 100 credit hours
Departmental approval**Semester offered:** As shown in the study plan.**ARCH 4371: Contemporary Materials in Architecture and Design****Semester Credit Hours:** 3

Course Overview:

This course serves as an introduction to the development of building materials and their application methods in contemporary architecture, art, design, and the construction industry; aesthetics and performance of selected materials; the application of materials; construction/fabrication methods related to design proposals; and the theoretical understanding of the relationship between materials, materiality, and design intentions and executions.

Pre-requisite: ARCH 2241: Materials and Methods**Semester offered:** As shown in the study plan.

ARCH 4525: Design Studio VII- Architectural Design**Semester Credit Hours:** 5 (1, 4)**Course Overview:**

This course covers the application of verbal, graphic, research, critical thinking, and fundamental design skills to architectural projects that emphasize the integration of structural, environmental, life safety, building envelope systems, and building service systems. It also covers code compliance, resource conservation, cost control and economic analysis.

Pre-requisite: COAD 3322: Building Codes and Universal Design
ARCH 3524: Design Studio VI- Integrated Architectural Design

Semester offered: As shown in the study plan.

ARCH 4526: Design Studio VIII- Integrated Architectural Design**Semester Credit Hours:** 5 (1, 4)**Course Overview:**

This course offers a comprehensive and integrated design studio focused on the integration of design theory with functionally sustainable environmental systems (ARCH 4345: Architectural Structures) and structural systems (ARCH 4346: Integrated Environmental Systems). It considers projects from site analysis and programming through design detailing.

The integrated studio combines a studio focus with the environmental systems and structural course materials.

Prerequisite: ARCH 4525: Design Studio VII- Architectural Design
Co-requisites: ARCH 4345: Integrated Architectural Structures
ARCH 4346: Integrated Environmental Systems

Semester offered: As shown in the study plan.

ARCH 5327: Design Studio IX- Capstone Project Programming**Semester Credit Hours:** 3 (1, 2)**Course Overview:**

This first part of the capstone course in the Assessment Capstone Series is a research class that addresses the creative, professional, technical, and historical issues involved in a problem chosen and defined by the student. This course culminates in the formal presentation of a completed design program in preparation for the design segment of the capstone classes.

Pre-requisite: ARCH 4526: Design Studio VIII- Integrated Architectural Design

Semester offered: As shown in the study plan.

ARCH 5363: Professional Practice and Ethics**Semester Credit Hours:** 3 (3, 0)

Course Overview:

This course is a required course meeting accreditation standards and covers business, legal, and social issues in the practice of architecture; ethics in architecture and the environment; and architectural challenges of the 21st century.

Pre-requisite: ARCH 4526 Design Studio VIII- Integrated Architectural Design**Semester offered:** As shown in the study plan.**ARCH 5372: Building Energy Use Modeling and Simulation****Semester Credit Hours:** 3 (2, 1)

Course Overview:

This course offers an advanced study of the integration of building energy use modeling and simulation into the design process to improve building performance in new and existing buildings. It utilizes state-of-the-art design-phase energy use and carbon emissions simulation tools.

Pre-requisite: ARCH 4354: Simulation and Optimization
ARCH 4346: Integrated Environmental Systems**Semester offered:** As shown in the study plan.**ARCH 5373: Sustainable Housing and GeoDesign****Semester Credit Hours:** 3 (2, 1)

Course Overview:

This course explores the fundamentals of sustainable housing and community design in different world regions; theories and principles of dealing with different urban form and patterns of housing; and an introduction to tools using Geodesign, 3D analysis, and urban analytic approaches.

Pre-requisite: ARCH 4354: Simulation and Optimization**Semester offered:** As shown in the study plan.

ARCH 5374: Advanced Design Visualization**Semester Credit Hours:** 3 (2, 1)

Course Overview:

This course serves as an introduction to the history, elements, and rules of graphic design, including terminology, techniques, and tools. It also encompasses the advanced exploration of graphic processes and techniques utilized in the design of the built environment.

Pre-requisite: None**Semester offered:** As shown in the study plan.**ARCH 5375: Computational Modeling and Simulation****Semester Credit Hours:** 3 (2, 1)

Course Overview:

This course explores the fundamentals of computer software development for problems in architecture; software development processes and methods; fundamental concepts in software; object-oriented programming; fundamentals of database systems; fundamentals of HTML and Web development; parametric modeling scripting; application programming interfaces; process modeling; product modeling; workflow analysis; and entrepreneurship.

Pre-requisite: ARCH 4354: Simulation and Optimization
ARCH 4526: Design Studio VIII- Integrated Architectural Design**Semester offered:** As shown in the study plan.**ARCH 5628: Design Studio X- Architectural Capstone****Semester Credit Hours:** 6 (1, 5)

Course Overview:

The second part of capstone course in the Assessment Capstone Series is a design studio that addresses the creative, professional, technical, and historical issues involved in a problem chosen and defined by the student. This course culminates in the formal presentation of a unique solution to the problem as a part of the final professional portfolio.

Pre-requisite: ARCH 5327: Design Studio IX- Capstone Project Programming**Semester offered:** As shown in the study plan.

INTERIOR DESIGN

Interior Design Courses Required

- Foundation Classes (12 credit hours & shared with other COAD majors):
 - COAD 1311: Design Studio I- Fundamentals
 - COAD 1312: Hand Drawing and Rendering Techniques
 - COAD 1313: Design Studio II- Fundamentals
 - COAD 1314: Construction Documents and Detail Drawings

- Design Studios (23 credit hours):
 - IDES 2311: Interior Design III- Residential Design
 - IDES 2312: Interior Design IV- Commercial Prog. & Space Planning Studio
 - IDES 3411: Interior Design V- Office Design
 - IDES 3412: Interior Design VI- Hospitality Design
 - IDES 4425: Interior Design VII- Healthcare Design
 - IDES 4112: Interior Design VIII- Capstone Project Programming
 - IDES 4413: Interior Design VIII -Capstone Project Design

- History and Theory of Architecture and Design (6 credit hours & shared with ARCH majors):
 - COAD 3341: Built World Design History and Theory I
 - COAD 3342: Built World Design History and Theory II

- Materials, Lighting, Interior Systems, and Sustainable Design (12 credit hours):
 - IDES 2332: Materials for Interior Design
 - IDES 3321: Interior Building Systems
 - IDES 3331: Interior Lighting
 - IDES 4337: Sustainable Design

- Professional Courses (12 credit hours with 6 shared with ARCH):
 - COAD 2333: Environmental Psychology for Design
 - COAD 3322: Building Codes and Universal Design
 - IDES 4343: Professional Practices for Interior Designers
 - IDES 3338: Internship

- Digital Technology Courses (7 credit hours with 7 shared with ARCH majors):
 - COAD 2251: Digital Design I: 2D
 - COAD 2252: Digital Design II: 3D
 - COAD 3353: Digital Design III: BIM

- Degree Electives: The Interior Design degree program will require 3 semester credit hours of professional electives to be taken from elective courses.
 - COAD 4333: History of Islamic Design (shared with ARCH)
 - COAD 4351: Built World Photography (shared with ARCH)

- IDES 4314: Advanced Design Methods
 - IDES 4332: Custom Furniture Design
 - IDES 4344: Interior Design Study Tour
- Other electives allowed are: ACCT 2311, BUSI 3311, BUSI 3312, MATH 1313, MISY 2311, MISY 2312

Interior Design Course Sequence

Total Semester Credit Hours: 126

First Year

<i>First Semester</i>	<i>Hours</i>
COMM 1311: Written Communication	3
UNIV 1211: Professional Development	2
MATH 1311: Finite Math	3
PHED 1111: Active Living Lifestyle	1
COAD 1311: Design Studio I- Fundamentals	3
COAD 1312: Hand Drawing & Rendering Techniques	3
Total Hours: 15	

<i>Second Semester</i>	<i>Hours</i>
PSYC 1311: Intro to Psychology	3
PHED 1112: Healthy Behaviors and Management	1
COMM 1312: Writing & Research	3
UNIV 1212: Critical Thinking	2
COAD 1313: Design Studio II- Fundamentals	3
COAD 1314: Construction Documents & Detail Drawings	3
Total Hours: 15	

Second Year

<i>First Semester</i>	<i>Hours</i>
COMM 2311: Oral Communication	3
UNIV 1213: Leadership & Teamwork	2
MATH 1312: Calculus for Business	3
IDES 2332: Materials for Interior Design	3
IDES 2311: Interior Design III Residential Design Studio	3
COAD 2251: Digital Design I- 2D	2
Total Hours: 16	

<i>Second Semester</i>	<i>Hours</i>
ASSE 2111: Learning Outcome Assessment I	1
COMM 2312: Technical Communication	3
PHYS 1411: Intro to Physics	4
IDES 2312: Interior Design IV- Comm.Prog.& Sp. Plan. Studio	3
COAD 2252: Digital Design II- 3D	2
COAD 2333: Environmental Psych for Design	3
Total Hours: 16	

Third Year

<i>First Semester</i>	<i>Hours</i>
ALIS 1211: Introduction to Islamic Culture	2
ASSE 3211: Learning Outcome Assessment II	2
IDES 3411: Interior Design V Office Design Studio	4
COAD 3341: Built World Design History and Theory I	3
IDES 3321: Interior Building Systems	3
IDES 3331: Interior Lighting	3
Total Hours: 17	

<i>Second Semester</i>	<i>Hours</i>
ALIS 1212: The Social System in Islam	2
IDES 3353: Digital Design III- Building Information Modeling	3
IDES 3412: Interior Design VI Hospitality Design Studio	4
COAD 3342: Built World Design History and Theory II	3
COAD 3322: Building Codes and Universal Design	3
Total Hours: 15	

Summer Semester

IDES 3338: Internship (320 work hours)	3
Total Hours: 3	

Fourth Year

<i>First Semester</i>	<i>Hours</i>
ALIS 2211: Linguistic Communication Skills	2
CHEM 1411: Intro to Chemistry or BIOL 1411: Intro Biology	4
IDES 4425: Interior Design VII Healthcare Design Studio	4
IDES 4337: Sustainable Design	3
IDES 4112: Interior Design Capstone Research	1
Total Hours: 14	

<i>Second Semester</i>	<i>Hours</i>
ALIS 2212: The Biography of Prophet Mohammad	2
ECON 1311: Intro to Macroeconomics	3
IDES 4413: ID Capstone Project Studio	4
IDES 4343: Professional Practices	3
IDES or COAD XXXX: Professional Elective	3
Total Hours: 15	

Bachelor of Science in Interior Design for Full Time Students Four Year Study Plan as of Academic Year 2019/2020

FIRST YEAR (30 Credit Hours)

FIRST SEMESTER						SECOND "SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec-ture	Studio / Tutorial					Lec-ture	Studio / Tutorial	
COMM 1311	Written Communication	3	3	0		PSYC 1311	Intro to Psychology <i>(Soc-Sci Elective)</i>	3	3	0	
UNIV 1211	Prof. Development and Competencies	2	2	0		PHED 1112	Healthy Behaviors and Management	1	1	0	
MATH 1311	Finite Math <i>(Math Requirement)</i>	3	3	1	PRFM 0012 or PRFM 0022	COMM 1312	Writing and Research	3	3	0	COMM 1311
PHED 1111	Active Living Lifestyle	1	1	0		UNIV 1212	Critical Thinking & Problem Solving	2	2	0	
COAD 1311	Design Studio I- Fundamentals	3	1	4	PRFM 0012* (C)COAD 1312	COAD 1313	Design Studio II- Fundamentals	3	1	4	COAD 1311 COAD 1312
COAD 1312	Hand Drawing and Rendering Techniques	3	1	4	(C)COAD 1311	COAD 1314	Construction Documents and Detail Drawings	3	1	4	COAD 1311 (C) COAD 1313
Total		15	11	9		Total		15	11	8	

SECOND YEAR (32 Credit Hours)

FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec-ture	Studio / Tutorial					Lec-ture	Studio / Tutorial	
COMM 2311	Oral Communication	3	3	0	COMM 1312	ASSE 2111	Learning Outcome Assessment I	1	1	1	Sophomore Level
UNIV 1213	Leadership And Teamwork	2	2	0		COMM 2312	Technical and Professional Communications	3	3	0	COMM 2311
MATH 1312	Calculus for Business <i>(Math Requirement)</i>	3	3	1	MATH 1311	PHYS 1411	Intro to Physics <i>(Nat-Phs Science Elective)</i>	4	3	3	PRFM 0012 Or PRFM 0022
IDES 2332	Materials for Interior Design	3	3	0	COAD 1313	COAD 2333	Environmental Psychology for Design	3	3	0	COAD 1313 PSYC 1311
IDES 2311	Interior Design III- Residential Design Studio	3	1	4	COAD 1313 COAD 1314 (C)COAD 2251	IDES 2312	Interior Design IV- Commercial Programming & Space Planning Studio	3	1	4	IDES 2311 (C)COAD 2252
COAD 2251	Digital Design I: 2D	2	1	3	COAD 1314 (C)IDES 2311	COAD 2252	Digital Design II: 3D	2	1	3	COAD 2251 (C)IDES 2312
Total		16	13	8		Total		16	12	11	

THIRD YEAR (32 Credit Hours)

THIRD YEAR (32 Credit Hours)											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec-ture	Studio / Tutorial					Lec-ture	Studio / Tutorial	
ALIS 1211	Introduction to Islamic Culture	2	2	0		ALIS 1212	The Social System in Islam	2	2	0	
ASSE 3211	Learning Outcome Assessment II	2	2	0	ASSE 2111 & Junior Level	IDES 3412	Interior Design VI- Hospitality Design Studio	4	1	6	IDES 3411
IDES 3411	Interior Design V- Office Design Studio	4	1	6	IDES 2312 COAD 2252						
COAD 3341	Built World Design History and Theory I	3	3	0	COAD 2333	COAD 3342	Built World Design History and Theory II	3	3	0	COAD 3341
IDES 3321	Interior Building Systems	3	3	0	COAD 1314 IDES 2332 PHYS 1411	COAD 3322	Building Codes and Universal Design	3	3	0	IDES 3321
IDES 3331	Interior Lighting	3	2	2	COAD 1314 IDES 2332 MATH 1312	COAD 3353	Digital Design III- BIM	3	1	4	COAD 2252
Total		17	13	8		Total		15	12	9	

SUMMER OF THIRD YEAR (3 Credit Hours)

Course Code	Course Title	Credit Hours	Pre-Requisite/Co-Requisite
IDES 3338	Internship	3	8 weeks (320 hours) full time Completion of 80 credit hours and department approval (summer before graduation)

FOURTH YEAR (29 Credit Hours)


FOURTH YEAR (29 Credit Hours)											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec-ture	Studio / Tutorial					Lec-ture	Studio / Tutorial	
ALIS 2211	Linguistic Communication Skills/ Ethical Social System in Islam	2	2	0		ALIS 2212	The Biography of Prophet Mohammad	2	2	0	
CHEM 1411 or BIOL 1411	Intro to Chemistry or Introductory Biology (Nat-Phys Science Elective)	4	3	3	PRPM 0012 Or PRPM 0022	ECON 1311	Intro to Macroeconomics (Social Science Elective)	3	3	0	
IDES 4112	Interior Design Capstone Project Research/Pre-Design	1	1	0	IDES 3338 IDES 3412	IDES 4413	Interior Design Capstone Project Studio	4	0	8	IDES 4112 IDES 4425
IDES 4337	Sustainable Design	3	3	0	IDES 3321	IDES 4343	Professional Practices	3	3	0	IDES 4112
IDES 4425	Interior Design VII: Healthcare Design Studio	4	1	6	IDES 3412	IDES OR COAD 43XX	Technical Elective*	3	Varies	Varies	Varies
Total		14	10	9		Total		15	8+	8+	

INTERIOR DESIGN PROGRAM TOTAL DEGREE CREDIT HOURS = 126

*TECHNICAL ELECTIVES											
1 course required (3 credits)											
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
IDES 4314	Advanced Design Methods	3	1	4	<i>IDES 3412</i>	IDES 4344	Interior Design Study Tour	3	1	Travel	<i>COAD 3342</i> <i>IDES 3412</i>
IDES 4332	Custom Furniture Design	3	3	0	<i>IDES 3412</i>	COAD 4351	Built World Photography	3	2	2	<i>IDES 3412</i>
COAD 4333	History of Islamic Design	3	3	0	<i>COAD 3342</i>						

NOTES:

- Completion of PRPM 0012 Intermediate Math or PRPM 0022 Pre-Calculus is required before entry into Interior Design.
- This Program of Study applies to ONLY full time students. Minimum of 12 credit hours constitutes full time status.
- Student GPA determines maximum semester course load as per department advisement criteria.
- IDES major courses may be offered only in the semester shown on this plan.
- IDES major summer course offerings are not guaranteed.
- Internship experience may not be combined with any courses.

		College of Architecture and Design				126 Total Credit Hours			
		Interior Design Study Plan (2019-2020 Track)							
First Year		Second Year		Third Year		Fourth Year			
First Semester 15H		First Semester 16H		First Semester 17H		First Semester 14H			
3H	COMM 1311: Written Communication	COMM 1312	3H	COMM 2311: Oral Communication	2H	ALIS 1211: Introduction to Islamic Culture	2H	ALIS 2211: Linguistic Communication Skills	
2H	UNIV 1211: Professional Development		2H	UNIV 1213: Leadership & Teamwork	2H	ASSE 3211: Learning Outcome Assessment II	4H	CHEM 1411: Intro Chem or BIOL 1411: Intro Biol	
3H	MATH 1311: Finite Math	PRPM 0012 or PRPM 0022	MATH 1311	3H	MATH 1312: Calculus for Business	4H	IDES 3411: Interior Design V Office Design Studio	4H	IDES 4425: Interior Design VII Healthcare Design Studio
1H	PHED 1111: Active Living Lifestyle		COAD 1313	3H	IDES 2332: Materials for Interior Design	3H	COAD 3341: Built World Design History and Theory I	3H	IDES 4337: Sustainable Design
3H	COAD 1311: Design Studio I- Fundamentals	PRPM 0012(P) COAD 1312(C)	COAD 1313 (P) COAD 1314 (P) COAD 2251 (C)	3H	IDES 2311: Interior Design III Residential Design Studio	3H	IDES 3321: Interior Building Systems	1H	IDES 4112: Interior Design Capstone Research
3H	COAD 1312: Hand Drawing & Rendering Techniques	COAD 1311(C)	COAD 1314 (P) IDES 2311 (C)	2H	COAD 2251: Digital Design I- 2D	3H	IDES 3331: Interior Lighting		
Second Semester 15H		Second Semester 16H		Second Semester 15H		Second Semester 15H			
3H	PSYC 1311: Intro to Psychology	Second Year Level	1H	ASSE 2111: Learning Outcome Assessment I	2H	ALIS 1212: The Social System in Islam	2H	ALIS 2212: The Biography of Prophet Mohammad	
1H	PHED 1112: Healthy Behaviors and Management	PHED 1111(P)	COMM 2311	3H	COMM 2312: Technical Comm.	3H	IDES 3353: Digital Design III- Building Information Modeling	3H	ECON 1311: Intro to Macroeconomics
3H	COMM 1312: Writing & Research	COMM 1311	PRPM 0011	4H	PHYS 1411: Intro to Physics	4H	IDES 3412: Interior Design VI Hospitality Design Studio	4H	IDES 4413: ID Capstone Project Studio
2H	UNIV 1212: Critical Thinking		IDES 2311(P) COAD 2252(C)	3H	IDES 2312: Interior Design IV Commercial Programming & Space Planning Studio	3H	COAD 3342: Built World Design History and Theory II	3H	IDES 4343: Professional Practices
3H	COAD 1313: Design Studio II- Fundamentals	COAD 1311 COAD 1312	COAD 2251 (P) IDES 2312 (C)	2H	COAD 2252: Digital Design II- 3D	3H	COAD 3322: Building Codes and Universal Design	3H	IDES or COAD XXXX: Technical Elective*
3H	COAD 1314: Construction Documents & Detail Drawings	(P) COAD 1311 (C) COAD 1313	COAD 1313 (P) PSYC 1311 (P)	3H	COAD 2333: Environmental Psychology for Design	3H	IDES 3338: Internship		

How to read study plan:

The bold-lined square indicates a pre-requisite or co-requisite class.

(P) Pre-requisite course

(C) Co-requisite course

*Technical elective courses- 1 course required (3 credits): IDES 4314: Advanced Design Methods for Interior Design (IDES 3412(P)); IDES 4332: Custom Furniture Design (IDES 3412(P)); COAD 4333: History of Islamic Design (COAD 3342(P)); COAD 4351: Built World Photography (IDES 3412(P)); IDES 4344: Interior Design Study Tour (IDES 3412(P) & COAD 3342(P)).
Other allowed electives: ACCT 2311, BUSI 3311, BUSI 3312, MATH 1313 (PRPM 0012 (P)), MISY 2311, MISY 2312

Note: This Program of Study applies to ONLY full time students. Minimum of 12 credit hours constitutes full time status. Student GPA determines maximum semester course load as per department advisement criteria.

Note: IDES major courses may be offered only in the semester on shown on this plan.

Updated Study Plan : October 2019

Interior Design Courses Offered

COAD 1311: Design Studio I – Fundamentals

Semester Credit Hours: 3 (1, 2)

Course Overview:

This foundation course exposes students to architecture as a profession utilizing new skills and knowledge. It focuses on learning about architecture through graphic conventions and hand drafting.

Prerequisite: PRPM 0022: Introductory Calculus or equivalent

Co-requisite: COAD 1312: Hand Drawing and Rendering Techniques.

Semester offered: As shown in the study plan except for the freshmen level courses

COAD 1312: Hand Drawing and Rendering Techniques

Semester Credit Hours: 3 (1, 2)

Course Overview

Hand drawing and rendering are essential tools in interpreting ideas and visual thinking. The course focuses on simple, basic techniques for drawing and rendering. Even in the computer age, hand drawing is the designer's most useful tool for notation, design exploration, and graphic communication. This course will build skill and confidence through the techniques of hand drawing and rendering using various media.

Co-requisite: COAD 1311: Design Studio I – Fundamentals

Semester offered: As shown in the study plan except for the freshmen level courses

COAD 1313: Design Studio II- Fundamentals

Semester Credit Hours: 3 (1, 2)

Course Overview:

This course is a continuation of the foundations class sequence begun in COAD 1311: Design Studio I- Fundamentals. It continues the introduction to professional skills and to written, graphic, and oral communication through creative projects.

Prerequisites: COAD 1311: Design Studio I – Fundamentals

COAD 1312: Hand Drawing and Rendering Techniques

Semester offered: As shown in the study plan except for the freshmen level courses

COAD 1314: Construction Documents and Detail Drawings**Semester Credit Hours:** 3 (1, 2)

Course Overview:

This studio course covers architectural/interior environment construction documents and detail drawings that graphically represent and communicate how to construct and/or install a design project.

Prerequisite: COAD 1311: Design Studio I – Fundamentals**Co-requisite:** COAD 1313: Design Studio II – Fundamentals**Semester offered:** As shown in the study plan except for the freshmen level courses**COAD 2251: Digital Design I – Computer Aided 2D Drawing****Semester Credit Hours:** 2 (1,1)

Course Overview:

This course is an introduction to computer drafting for architects and designers that teaches students the drafting skills required to produce two-dimensional architectural drawings. Small scale design projects (such a house, an art gallery, boutique, café, etc.) provides the site for students to gain an understanding of the commands and features of AutoCAD, or other standard of the industry, for designing and drawing architectural spaces. Students will expand other computer and design skills through the design and development of interior design presentations developed through the use of Photoshop or other presentation media.

Prerequisite: COAD 1314: Construction Documents and Detail Drawings**Co-requisite:** IDES 2311: Interior Design III – Residential Design**Semester offered:** As shown in the study plan except for the freshmen level courses**COAD 2252: Digital Design II – Computer Aided 3D Modeling and Rendering****Semester Credit Hours:** 2 (1, 1)

Course Overview:

This course is the second of two computer-aided drawing courses. Topics covered in this course include three-dimensional drafting or modeling and color rendering of an interior space. Students study space planning and dimensioning as it relates to the human body. Students explore the use of V-Ray rendering engine for improved design visualization. Other programs may be introduced as they become standards of the industry.

Prerequisite: COAD 2251: Digital Design I – Computer Aided 2D Drawing**Co-requisite:** IDES 2312: Interior Design IV**Semester offered:** As shown in the study plan except for the freshmen level courses

IDES 2311: Interior Design III- Residential Design Studio**Semester Credit Hours:** 3 (1, 2)

Course Overview:

This course continues student learning of two-dimensional and three-dimensional hand drafting and representation of interior spaces while focusing on residential design. Students study the effects of light, color, furniture and decorative objects in residential design. Space planning and volumetric study as it relates to the human body are emphasized.

Prerequisites: COAD 1313: Design Studio II – Fundamentals
COAD1314: Construction Documents and Detail Drawings

Co-requisite: COAD 2251: Digital Design I

Semester offered: As shown in the study plan except for the freshmen level courses

IDES 2312: Interior Design IV- Commercial Programming and Space Planning Studio**Semester Credit Hours:** 3 (1, 2)

Course Overview:

This class emphasizes the study of programming, complex space planning, circulation patterns and building codes related to non-residential design. It continues student learning of two-dimensional and three-dimensional hand and/or computer aided drafting and representation of interior spaces while focusing on non-residential design.

Prerequisites: IDES 2311: Interior Design III

Co-requisite: COAD 2252: Digital Design II

Semester offered: As shown in the study plan except for the freshmen level courses

IDES 2332: Materials for Interior Design**Semester Credit Hours:** 3 (3, 0)

Course Overview:

The course covers the technical aspects of surface and structural materials in relation to function and appropriate application in the interior environment. It covers ways in which materials are communicated in design projects including: estimation, specification writing and contract documentation.

Co-requisite: COAD 1313: Design Studio II – Fundamentals

Semester offered: As shown in the study plan except for the freshmen level courses

COAD 2333: Environmental Psychology for Design**Semester Credit Hours:** 3 (3, 0)

Course Overview:

The course introduces the 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 built environments.

Pre-requisite: COAD 1313: Design Studio II – Fundamentals
PSYC 1311: Intro to Psychology

Semester offered: As shown in the study plan except for the freshmen level courses

IDES 3321: Interior Building Systems**Semester Credit Hours:** 3 (3, 0)

Course Overview:

This lecture course covers standard interior building systems including partitions, ceilings, floors, and stairs. Students learn about glazing, woodwork, hardware, structural coordination, heating, ventilation, air conditioning, plumbing, and electrical distribution.

Pre-requisite: IDES 2332: Materials for Interior Design
COAD 1314: Construction Documents and Detail Drawings

Semester offered: As shown in the study plan except for the freshmen level courses

COAD 3322: Building Codes and Universal Design**Semester Credit Hours:** 3 (3, 0)

Course Overview:

This lecture course covers universal and barrier-free design, means of egress and the international building code as they apply to interior environments.

Pre-requisite: IDES 3321: Interior Building Systems

Semester offered: As shown in the study plan except for the freshmen level courses

IDES 3331: Interior Lighting**Semester Credit Hours:** 3**Course Overview:**

This course focuses on lighting design for interior spaces. Students gain knowledge of the perception and psychological aspects of light as well as technical information related to current fixture types and appropriate application.

Pre-requisites: COAD 1314: Construction Documents and Detail Drawings
 IDES 2332: Materials for Interior Design
 Math 1312: Calculus for Business

Semester offered: As shown in the study plan except for the freshmen level courses

IDES 3338: Interior Design Internship**Semester Credit Hours:** 3**Course Overview:**

This course enables students to apply their studio and class experience to practical use in a work-world apprentice situation. Students have the opportunity to seek design employment in the surrounding geographic area or in the PMU Community Design Center, if it is established.

Pre-requisites: Completion of 80 credit hours
 Departmental approval

Semester offered: As shown in the study plan except for the freshmen level courses

COAD 3341: Built World Design History and Theory I**Semester Credit Hours:** 3 (3, 0)**Course Overview:**

The course surveys the evolution of architecture, design and theory inclusive of the Ancient World period, Classical World period, Middle Ages, Renaissance, Baroque and design work up to 1800CE. The student explores design choices and critically analyzes existing designs based on historical information. This course prepares students to participate in designing in a broader context.

Pre-requisite: Successful completion of 50 credit hours.

Semester offered: As shown in the study plan except for the freshmen level courses

COAD 3342: Built World Design History and Theory II**Semester Credit Hours: 3 (3, 0)**

Course Overview:

The course continues a survey of architecture, design and theoretical characteristics of specific design styles in selected cultures from 1800CE to the present. The progression and evolution of the design of the built environment throughout history gives an appreciation for humankind's achievements and aids in understanding current design trends.

Pre-requisite: COAD 3341: Design History and Theory I**Semester offered:** As shown in the study plan except for the freshmen level courses**COAD 3353: Digital Design III - Building Information Modeling****Semester Credit Hours: 3 (1, 2)**

Course Overview:

This course expands the student's professional skills in computer-aided design software through experience with building information modeling (BIM) using Revit Architecture, or any other standard of the industry, to build a virtual model and generate 2D and 3D views from the model.

Pre-requisite: COAD 2252: Digital Design II-3D**Semester offered:** As shown in the study plan except for the freshmen level courses**IDES 3411: Interior Design V - Office Design Studio****Semester Credit Hours: 4 (1, 3)**

Course Overview:

This course focuses on contemporary approaches to office design projects. In addition to refining students design skills for non-residential projects, the studio emphasizes research and programming methods. Selection and specification of office system products, finishes, and design of custom millwork balance practical aspects of practice with a design solution that meets client requirements for corporate branding and budget.

Pre-requisites: IDES 2312: Interior Design IV
COAD 2252: Digital Design II**Semester offered:** As shown in the study plan except for the freshmen level courses

IDES 3412: Interior Design VI – Hospitality Design Studio**Semester Credit Hours:** 4 (1, 3)

Course Overview:

In this course, students develop a restaurant and hotel project that applies research and specific knowledge related to the hospitality industry. The course builds the student's ability to apply acquired interior design knowledge by adding specialized information and skills appropriate in the hospitality industry.

Pre-requisite: IDES 3411- Interior Design V**Semester offered:** As shown in the study plan except for the freshmen level courses**IDES 4112: Interior Design Capstone Project Research****Semester Credit Hours:** 1 (1, 0)

Course Overview:

This first part of the capstone course in the Assessment Capstone Series is a research class that addresses the creative, professional, technical, and historical issues involved in a problem chosen and defined by the student. This course culminates in the formal presentation of a completed design program in preparation for the design segment of the capstone classes.

Co-requisite: IDES 3412: Interior Design Studio VI – Hospitality Design Studio**Semester offered:** As shown in the study plan except for the freshmen level courses**IDES 4314: Advanced Design Methods (Elective)****Semester Credit Hours:** 3 (1, 2)

Course Overview:

This course expands student professional skills in various media used for design ideation and communication. Media could include, but are not limited to, Photoshop, Rhino, Microstation, 3D printing applications, fabrication techniques, video and internet communications as well as programs/methods that may be developed in the future.

Pre-requisite: IDES 3412: Interior Design Studio VI – Hospitality Design Studio**Semester offered:** As shown in the study plan except for the freshmen level courses

IDES 4332: Custom Furniture Design (Elective)**Semester Credit Hours:** 3 (3, 0)

Course Overview:

The course covers the basic skills of concept development, three-dimensional fabrication, and presentation techniques appropriate to furniture design and object making for application in the interior environment.

Pre-requisite: IDES 3412: Interior Design Studio VI – Hospitality Design Studio**Semester offered:** As shown in the study plan except for the freshmen level courses**COAD 4333: History of Islamic Design (Elective)****Semester Credit Hours:** 3 (3, 0)

Course Overview:

This course examines the architecture, interior design and decorative arts of the Islamic world from pre-Islamic time through today. It studies the main characteristic of the Islamic style, focusing on the form and function of architecture, interior design and decorative arts as well as historical and cultural backgrounds.

Pre-requisite: COAD 3342: Built World Design History and Theory II**Semester offered:** As shown in the study plan except for the freshmen level courses**IDES 4337: Sustainable Design****Semester Credit Hours:** 3 (3, 0)

Course Overview:

The course will expand the student's awareness of the relationship between ecology and the built environment. It exposes the student to sustainable design utilizing skills and knowledge obtained in all previous IDES courses.

Pre-requisite: IDES 3321: Interior Building Systems**Semester offered:** As shown in the study plan except for the freshmen level courses

IDES 4343: Professional Practices for Interior Designers**Semester Credit Hours:** 3 (3, 0)

Course Overview:

This course covers standard practices and procedures of the interior design profession. Students gain knowledge of the history of the profession, ethics, business structures, organization, management, legal issues, fee structures, and promotional activities.

Pre-requisite: IDES 4112- Interior Design Capstone Research**Semester offered:** As shown in the study plan except for the freshmen level courses**IDES 4344: Interior Design Study Tour (Elective)****Semester Credit Hours:** 3 (1, 80)

Course Overview:

This course examines architecture, interior design and decorative arts of the world through tours to historic places both national and international. It studies design and culture on location and explores historical and cultural backgrounds.

Pre-requisite: COAD 3342: Design History and Theory II
IDES 3412: Interior Design Studio VI – Hospitality Design Studio**Semester offered:** As shown in the study plan except for the freshmen level courses**COAD 4351: Built World Photography (Elective)****Semester Credit Hours:** 3 (2, 1)

Course Overview:

This course is an introduction to photography and will cover the fundamentals of photography and photo appreciation. Students will need a 35 mm single-lens reflex (SLR) camera with manual. This course provides the student with an understanding of the basic technical and creative processes associated with photography. In addition, instruction is given with broad reference to the history of photography, photographic theory, and contemporary photographic practice.

Co-requisite: COAD 1311: Design Studio I- Fundamentals**Semester offered:** As shown in the study plan except for the freshmen level courses

IDES 4413: Interior Design Capstone Project**Semester Credit Hours:****4 (1, 3)**

Course Overview:

The second part of capstone course in the Assessment Capstone Series is a design studio that addresses the creative, professional, technical, and historical issues involved in a problem chosen and defined by the student. This course culminates in the formal presentation of a unique solution to the problem as a part of the final professional portfolio.

Pre-requisite: IDES 4112: ID Capstone Project Research
IDES 4425: Interior Design VII- Healthcare Design

Semester offered: As shown in the study plan except for the freshmen level courses

IDES 4425: Interior Design VII - Healthcare Design**Semester Credit Hours:****4 (1, 3)**

Course Overview:

The course focuses on the interior design of healthcare facilities including hospital and out-patient services. Emphasis is placed on emerging technologies as well as space planning critical to healthcare facilities.

Pre-requisite: IDES 3412: Interior Design Studio VI - Hospitality

Semester offered: As shown in the study plan except for the freshmen level courses

GRAPHIC DESIGN

Graphic Design Courses Required

- Design Studios (50 credit hours):
 - GDES 1311: Drawing
 - GDES 1312: Digital Imaging
 - GDES 1321: Two-Dimensional Design
 - GDES 1322: Three-Dimensional Design
 - GDES 2311: Typography I
 - GDES 2312: Arabic Typography
 - GDES 2321: Illustration
 - GDES 2322: Digital Photography
 - GDES 3311: Typography II
 - GDES 3312: Information Design
 - GDES 3321: Brand Identity
 - GDES 3322: Motion Design
 - GDES 3331: Interaction Design I
 - GDES 3332: Interaction Design II
 - GDES 4112: Graphic Design Capstone Project Research
 - GDES 4321: Advanced Graphic Design
 - GDES 4413: Graphic Design Capstone Project
- History and Theory of Art and Graphic Design (9 credit hours):
 - GDES 1331: Art Appreciation
 - GDES 1332: Art History
 - GDES 2331: History of Visual Communication
- Professional Courses (12 credit hours):
 - GDES 2332: Design Thinking
 - GDES 3338: Internship
 - GDES 4322: Portfolio Development
- Degree Electives: The Graphic Design degree program will require 6 semester credit hours of professional electives to be taken from elective courses.
 - GDES 4331: Special Topics in Graphic DesignAdditional electives developed based on current trends and demand

Graphic Design Course Sequence

Total Semester Credit Hours: 125

First Year

<i>First Semester</i>	<i>Hours</i>
COMM 1311: Written Communication	3
PHED 1111: Active Living Lifestyle	1
MATH 1311: Finite Math	3
GDES 1311: Drawing	3
GDES 1321: 2D Design	3
GDES 1331: Art Appreciation	3
Total Hours: 16	

<i>Second Semester</i>	<i>Hours</i>
UNIV 1211: Professional Development	2
PHED 1112: Healthy Behaviors and Management	1
COMM 1312: Writing & Research	3
GDES 1312: Digital Imaging	3
GDES 1322: 3D Design	3
GDES 1332: Art History	3
Total Hours: 15	

Second Year

<i>First Semester</i>	<i>Hours</i>
COMM 2311: Oral Communication	3
UNIV 1212: Critical Thinking and Problem Solving	2
ASSE 2111: Learning Outcome Assessment I	1
GDES 2311: Typography I	3
GDES 2321: Illustration	3
GDES 2331: History of Visual Communication	3
Total Hours: 15	

<i>Second Semester</i>	<i>Hours</i>
ALIS 1211: Introduction to Islamic Culture	2
COMM 2312: Technical Communication	3
MATH 1313: Statistical Methods	3
GDES 2312: Arabic Typography	3
GDES 2322: Digital Photography	3
GDES 2332: Design Thinking	3
Total Hours: 17	

Third Year

<i>First Semester</i>		<i>Hours</i>
ALIS	1212: The Social System in Islam	2
ASSE	3211: Learning Outcome Assessment II	2
Social and Behavioral Science Elective*		3
GDES	3311: Typography II	3
GDES	3321: Brand Identity	3
GDES	3331: Interaction I	3
Total Hours: 16		

<i>Second Semester</i>		<i>Hours</i>
ALIS	2211: Linguistic Communication Skills	2
Natural and Physical Science Elective**		4
GDES	3312: Information Design	3
GDES	3322: Motion Design	3
GDES	3332: Interaction II	3
Total Hours: 15		

<i>Summer Semester</i>		<i>Hours</i>
GDES	3338: Internship	3
Total Hours: 3		

Fourth Year

<i>First Semester</i>		<i>Hours</i>
ALIS	2212: The Biography of Prophet Mohammad	2
UNIV	1213: Leadership & Teamwork	2
Social and Behavioral Science Elective*		3
GDES	4321: Advanced Graphic Design	3
GDES	4112: Graphic Design Capstone Research	1
GDES	43XX: Prof. Elective or GDES 4331: Special Topics	3
Total Hours: 14		

<i>Second Semester</i>		<i>Hours</i>
Natural and Physical Science Elective**		4
GDES	4413: GD Capstone Project	4
GDES	4322: Portfolio Development	3
GDES	43XX: Prof. Elective or GDES 4331: Special Topics	3
Total Hours: 14		

*Select any Social Science course from the College Core Curriculum.

**Select Physical or Natural Science course from the College Core Curriculum.

BACHELOR OF SCIENCE IN GRAPHIC DESIGN

Academic Year 2019-2020

FIRST YEAR											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
COMM 1311	Written Communication	3	3	0		COMM 1312	Writing and Research	3	3	0	(P)COMM 1311
PHED 1111	Active Living Lifestyle	1	1	0		PHED 1112	Healthy Behaviors and Management	1	1	0	
MATH 1311	Finite Math	3	3	1	(P)FRPM 0012	UNIV 1211	Prof. Development and Competencies	2	2	0	
GDES 1311	Drawing	3	1	4		GDES 1312	Digital Imaging	3	1	4	(P)GDES 1311
GDES 1321	2D Design	3	1	4		GDES 1322	3D Design	3	3	0	(P)GDES 1321
GDES 1331	Art Appreciation	3	3	0		GDES 1332	Art History	3	3	0	(P)GDES 1331
Total		16	12	9		Total		15	13	4	

SECOND YEAR											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
COMM 2311	Oral Communication	3	3	0	(P)COMM 1312	ALIS 1211	Introduction to Islamic Culture	2	2	0	
UNIV 1212	Critical Thinking & Problem Solving	2	2	0	(P)UNIV 1211	COMM 2312	Technical and Professional Communications	3	3	0	(P)COMM 1311 (P)COMM 2112 (P)COMM 2311
ASSE 2111	<i>Learning Outcome Assessment I</i>	1	1	0	<i>Second Year Level</i>	MATH 1313	Statistical Methods	3	3	1	(P)MATH 1311
GDES 2311	Typography I	3	1	4	(P)GDES 1321	GDES 2312	Arabic Typography	3	1	4	(P)IDES 1313 (P)PSYC 1311
GDES 2321	Illustration	3	1	4	(P)GDES 1322	GDES 2322	Digital Photography	3	1	4	(P)IDES 2311 (C)IDES 2252
GDES 2331	History of Visual Communication	3	3	0	(P)GDES 1332	GDES 2332	Design Thinking	3	3	0	(P)IDES 2251 (C)IDES 2312
Total		15	11	8		Total		17	13	9	

THIRD YEAR											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
ALIS 1212	The Social System in Islam	2	2	0		ALIS 2211	Linguistic Communication Skills/ Ethical Social System in Islam	2	2	0	
GDES 3311	Typography II	3	1	4	(P)GDES 2311	GDES 3312	Information Design	3	1	4	(P)GDES 3311 (P)GDES 3321 (P)GDES 3331
GDES 3321	Brand Identity	3	1	4	(P)GDES 2311 (P)GDES 2321	GDES 3322	Motion Design	3	1	4	(P)GDES 3311 (P)GDES 3321 (P)GDES 3331
GDES 3331	Interaction I	3	1	4	(P)GDES 2312 (P)GDES 2322 (P)GDES 2332	GDES 3332	Interaction II	3	1	4	(P)GDES 3331
ASSE 3211	Learning Outcome Assessment II	2	2	0	Third Year Level	ELECTIVE	Natural and Physical Sciences*	4	3	3	(P)PRPM 0012
ELECTIVE	Social and Behavioral Sciences**	3	3	0							
Total		16	10	12		Total		15	8	15	

SUMMER OF THIRD YEAR				
Course Code	Course Title	Credit Hours		Pre-Requisite/Co-Requisite
GDES 3338	Internship	3	8 weeks (320 hours) full time	Completion of 80 credit hours and department approval (summer before graduation)

*NATURAL AND PHYSICAL SCIENCE ELECTIVES 2course required (6 credits)											
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
CHEM 1411	Introductory Chemistry	4	3	0	(P)PRPM 0011	PHYS 1411	Introductory Physics	4	3	0	
SUST 1311	Introduction to Sustainability	3	3	0		FREN 1311	Introduction to French Language	3	3	0	

**SOCIAL SCIENCE ELECTIVES											
2course required (6 credits)											
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
HIST 1311	World Civilizations, 1600 Present	3	3	0		GEGR 1311	World Regional Geography	3	3	0	
SUST 1311	Introduction to Sustainability	3	3	0		FREN 1311	Introduction to French Language	3	3	0	
PSYC 1311	Introduction to Psychology										

FOURTH YEAR											
FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Code	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Studio / Tutorial					Lecture	Studio / Tutorial	
ELECTIVE	Social and Behavioral Sciences**	3	3	0		ELECTIVE	Natural and Physical Sciences*	4	3	3	<i>(P)PRFM 0012</i>
ALIS 2212	The Biography of Prophet Mohammad	2	2	0		GDES 4322	Portfolio Development	3	1	4	<i>(P)GDES 4321</i>
UNIV 1213	Leadership And Teamwork	2	2	0	<i>(P)UNIV 1212</i>						
GDES 4112	Graphic Design Capstone Project Research	1	1	0	<i>(P)GDES 3332</i>	GDES 4413	Graphic Design Capstone Project	4	0	8	<i>(P)GDES 4321 (P)GDES 4112</i>
GDES 4321	Advanced Graphic Design	3	1	4	<i>(P)GDES 3312 (P)GDES 3322 (P)GDES 3332</i>	ELECTIVE*	GDES 4331: Special Topics in Graphic Design or Graphic Design Elective*	3	1	4	<i>Varies</i>
ELECTIVE*	GDES 4331: Special Topics in Graphic Design or Graphic Design Elective*	3	1	4	<i>Varies</i>						
Total		14	10	8		Total		12	5	19	

GRAPHIC DESIGN PROGRAM TOTAL DEGREE CREDIT HOURS = 125

Technical elective courses: 2 courses required (6 credits): Taken from courses developed based on faculty expertise and professional demand and/or GDES4331: Special Topics in Graphic Design

Note: This Program of Study applies to ONLY full time students. Minimum of 12 credit hours constitutes full time status. Student GPA determines maximum semester course load as per department advisement criteria.

College of Architecture and Design Graphic Design Study Plan				125 Total Credit Hours			
First Year		Second Year		Third Year		Fourth Year	
First Semester 16H		First Semester 15H		First Semester 16H		First Semester 14H	
3H	COMM 1311: Written Comm.	3H	COMM 2311: Oral Communication	2H	ALIS 1212: The Social System in Islam	2H	ALIS 2212: The Biography of Prophet Mohammad
1H	PHED 1111: Active Living Lifestyle	2H	UNIV 1212: Critical Thinking and Problem Solving	2H	ASSE 3211: Learning Outcome Ass. II	2H	UNIV 1213: Leadership & Teamwork
3H	MATH 1311: Finite Math	1H	ASSE 2111: Learning Outcome Ass. I	3H	Social and Behavioral Science Elective	3H	Social and Behavioral Science Elective
3H	GDES 1311: Drawing	3H	GDES 2311: Typography I	3H	GDES 3311: Typography II	3H	GDES 4321: Advanced Graphic Design
3H	GDES 1321: 2D Design	3H	GDES 2321: Illustration	3H	GDES 3321: Brand Identity	1H	GDES 4112: Graphic Design Capstone Research
3H	GDES 1331: Art Appreciation	3H	GDES 2331: History of Visual Communication	3H	GDES 3331: Interaction I	3H	GDES 43XX: Technical Elective or GDES 4331: Special Topics

Second Semester 15H		Second Semester 17H		Second Semester 15H		Second Semester 14H	
2H	UNIV 1211: Prof. Development	2H	ALIS 1211: Introduction to Islamic Culture	2H	ALIS 2211: Linguistic Communication Skills	4H	Natural and Physical Science Elective
1H	PHED 1112: Healthy Behaviors and Management	3H	COMM 2312: Technical Comm.	4H	Natural and Physical Science Elective	4H	GDES 4413: GD Capstone Project
3H	COMM 1312: Writing & Research	3H	MATH 1313: Statistical Methods	3H	GDES 3312: Information Design	3H	GDES 4322: Portfolio Development
3H	GDES 1312: Digital Imaging	3H	GDES 2312: Arabic Typography	3H	GDES 3322: Motion Design	3H	GDES 43XX: Technical Elective or GDES 4331: Special Topics
3H	GDES 1322: 3D Design	3H	GDES 2322: Digital Photography	3H	GDES 3332: Interaction II		
3H	GDES 1332: Art History	3H	GDES 2332: Design Thinking	3H	GDES 3338: Internship		

How to read study plan:
The bold-lined square indicates a pre-requisite class

Technical elective courses: 2 courses required (6 credits): Taken from courses developed based on faculty expertise and professional demand and/or GDES4331: Special Topics in Graphic Design
Social Science elective courses: HIST 1311: World Civilizations, GEGR 1311: World Regional Geography, FREN 1311: Introduction to French Language, SUST 1311 Introduction to Sustainability.
Natural and Physical Sciences elective courses: CHEM 1411(PRPM 0011(P)); BIOL 1411(PRPM 0011(P)), PHYS 1411: Introduction to Physics (PRPM0011(P)).

Note: This Program of Study applies to ONLY full time students. Minimum of 12 credit hours constitutes full time status. Student GPA determines maximum semester course load as per department advisement criteria.
Note: GDES major courses may be offered only in the semester on shown on this plan.

GDES Study Plan : May 2019

Graphic Design Courses Offered

GDES 1311: Drawing

Semester Credit Hours: 3 (1, 3)

Course Overview:

This course focuses on the development of fundamental drawing skills. Students will develop skills in observing the physical environment and recording it on a two-dimensional surface with accuracy and sensitivity. Emphasis will be placed on developing core technical skills in a variety of drawing techniques and the exploration of various technical approaches to produce both descriptive and expressive drawings.

Prerequisite: There are no prerequisites to take this course.

Semester offered: As shown in the study plan

GDES 1312: Digital Imaging

Semester Credit Hours: 3 (1, 3)

Course Overview

This course provides an introduction to computers as a creative tool and explores topics such as the development of image making techniques, data handling and image compositing. This course introduces students to the fundamentals of digital drawing. Students will undertake a series of projects that encompass traditional drawing skills and scanning methods. They will learn digital illustration techniques, image manipulation, layout, color, digital output and graphic design visual literacy. Students will investigate visual aesthetics and explore digital media to produce works of art.

Pre-requisite: GDES 1311: Drawing

Semester offered: As shown in the study plan.

GDES 1321: Two-Dimensional Design

Semester Credit Hours: 3 (1, 3)

Course Overview:

This course is the study of the elements and concepts of two-dimensional (2D) design, including the basic design principles and sources of design inspiration fundamental to all visual arts through readings, discussion, exercises and laboratory application. This is a visual design theory course that introduces the core concepts of visual design — visual elements, principles of design and creative process. Composition issues and strategies valid in all areas of visual design are explored through examples, exercises, critiques and creative projects.

Prerequisites: There are no prerequisites to take this course.

Semester offered: As shown in the study plan.

GDES 1322: Three-Dimensional Design**Semester Credit Hours:****3 (1, 3)**

Course Overview:

This study of the elements and concepts of three-dimensional (3D) design introduces students to the fundamentals and technical principles of working three dimensionally. Students will experiment with a number of construction methods and materials used to create, represent, respond to and reflect on form in space. Students will read, watch and discuss perspectives on 3D art and design written/created by artists, curators, art historians and critics. Using this information as a springboard, they will create their own 3D works.

Prerequisite: GDES 1321: Two-Dimensional Design**Semester offered:** As shown in the study plan.**GDES 1331: Art Appreciation****Semester Credit Hours:****3 (3, 0)**

Course Overview:

This course is a general introduction to art and aesthetics and their role in human life and culture. The course includes discussion and analysis of architecture, sculpture, painting, ceramics, drawing, printmaking, photography, design, and other art forms from various historical periods and world cultures.

Prerequisite: There are no prerequisites for GDES 1331: Art Appreciation.**Semester offered:** As shown in the study plan.**GDES 1332: Art History****Semester Credit Hours:****3 (3, 0)**

Course Overview:

This course surveys the arts of the Western and non-Western world from prehistoric eras through the 14th century. The course will consider both the formal development of art and its cultural/historical context.

Prerequisite: GDES 1331: Art Appreciation**Semester offered:** As shown in the study plan.

GDES 2311: Typography I**Semester Credit Hours:****3 (1, 3)**

Course Overview:

This course provides an introduction to the study of the letterform as a cornerstone of graphic design. It focuses on how typography can be used as a communicative device as well as a graphic, compositional and expressive element. Areas explored include letterform anatomy, letterform analysis, measuring systems, typographic identification and practical issues of setting and using type effectively.

Prerequisites: GDES 1321: 2D Design**Semester offered:** As shown in the study plan.**GDES 2312: Arabic Typography****Semester Credit Hours:****3 (1, 3)**

Course Overview:

This is an intermediate level course devoted to the study of the marriage of Latin and Arabic typography. This course develops the student's ability to create typographic designs by visually and aesthetically merging Arabic and Latin fonts. This multi-script combination targets the needs of the Arab market. Students will learn how to dissect fonts, create modules, experiment with type, generate Arabic adaptations and construct typographical patterns that evolve into 3D objects. The student further learns the rules of the typographic grid system in order to be able to experiment with breaking the grid while designing layouts, spreads and posters.

Prerequisites: GDES 2311: Typography I**Semester offered:** As shown in the study plan.**GDES 2321: Illustration****Semester Credit Hours:****3 (1, 3)**

Course Overview:

This is an introductory course to explore the professional field of illustration. Students will acquire fundamental illustration skills and become familiar with principal areas within the field, such as editorial, advertising and scientific-technical. Students will explore a variety of techniques, while developing critical thinking and problem-solving skills. Students will use their knowledge of drawing, design and style to communicate ideas graphically and start building a professional portfolio.

Pre-requisite: GDES 1322: Three-Dimensional Design**Semester offered:** As shown in the study plan.

GDES 2322: Digital Photography**Semester Credit Hours:****3 (1, 3)**

Course Overview:

This course will introduce students to how to see and communicate using the medium of photography, focusing on digital single-lens reflex (D-SLR) cameras and computer/editing software as creative tools. Students will learn to understand the principles of light, exposure and frame composition.

Pre-requisite: GDES 1312: Digital Imaging**Semester offered:** As shown in the study plan.**GDES 2331: History of Visual Communication****Semester Credit Hours:****3 (3, 0)**

Course Overview:

This course provides a historical analysis of visual communication with emphasis on the development of the profession of graphic design and the relationship of commerce and technology to the history of graphic design.

Pre-requisite: GDES1332: Art History**Semester offered:** As shown in the study plan.**GDES 2332: Design Thinking****Semester Credit Hours:****3 (3, 0)**

Course Overview:

Design thinking refers to a creative and strategic process for problem finding and solving. In this course, students learn how to understand a problem and deliver a design concept to their project stakeholders from a systemic perspective with data and empathy. Students also learn prototyping and testing methods.

Pre-requisite: GDES 2331: History of Visual Communication
UNIV 1212: Critical Thinking and Problem Solving**Semester offered:** As shown in the study plan.

GDES 3311: Typography II**Semester Credit Hours:****3 (1, 3)**

Course Overview:

This course is an advanced course that explores diverse typographic issues related to digital or screen-based communication. It expands on typographic principles and design elements for screen-based media while providing the groundwork for innovative and effective typographic and UI design practices.

Pre-requisites: GDES 2311: Typography I**Semester offered:** As shown in the study plan.**GDES 3312: Information Design****Semester Credit Hours:****3 (1, 3)**

Course Overview:

This course is an intermediate-level course in information visualization. The purpose of this class is to help students develop the skills necessary to research, analyze and present both quantitative and qualitative information in ways that promote greater understanding of a subject. The final deliverables in the course may be either print and/or Web-based infographic narratives.

Pre-requisites: GDES 3311: Typography II
GDES 3321: Brand Identity
GDES 3331: Interaction Design I**Semester offered:** As shown in the study plan.**GDES 3321: Brand Identity****Semester Credit Hours:****3 (1, 3)**

Course Overview:

This course covers the theory and practice of creating brand identity designs for products. Students will learn to combine typography, color theory and layout to form a cohesive brand identity and apply that identity across multiple platforms. Brand identity process and best practices will be explored.

Pre-requisite: GDES 2311: Typography I
GDES 2321: Illustration**Semester offered:** As shown in the study plan.

GDES 3322: Motion Design**Semester Credit Hours:****3 (1, 3)**

Course Overview:

This course will introduce students to effective communication using motion graphics, including its application in the areas of film titles, broadcast and commercial design, interactive media and gaming. The combination of music, visuals and typography will be explored following the basic theories of kinetic composition and aesthetics. Students will study the history of the field, including the work of pioneers in motion design.

Pre-requisite: GDES 3311: Typography II
GDES 3321: Brand Identity
GDES 3331: Interaction Design I

Semester offered: As shown in the study plan.

GDES 3331: Interaction Design I**Semester Credit Hours:****3 (1, 3)**

Course Overview:

This course introduces the fundamental knowledge of website design. The Internet has been one of the essential tools in many people's everyday lives from shopping to socializing. This course explores how to design well-organized and practical user interface and user experience (UI/UX) for various websites.

Pre-requisite: GDES 2312: Arabic Typography
GDES 2322: Digital Photography
GDES 2332: Design Thinking

Semester offered: As shown in the study plan.

GDES 3332: Interaction Design II**Semester Credit Hours:****3 (1, 3)**

Course Overview:

Interaction Design 2 continues to explore user interface and user experience (UI/UX) design for screen. The course introduces designing for mobile applications and the Internet of Things (IoT). The chosen device for this course will be iOS-based mobile devices such as the iPhone and iPad tablet. Students will also learn how their design concepts can be transferred to other, Android-based platforms.

Pre-requisites: GDES 3331: Interaction Design I

Semester offered: As shown in the study plan.

GDES 3338: Internship**Semester Credit Hours:****3 (1, 320)**

Course Overview:

The goal of this internship is to provide students with a valuable opportunity to advance their professional development by applying learned concepts and skills to real-world settings. It will combine classroom learning with related practical job experience. More specifically, the internship will enable students to obtain practical knowledge of the graphic design profession by working for a business, agency or institution while enrolled in classes. An internship may lead to other positions within the host firm or increase a student's likelihood of finding employment with other similar organizations. The internship will be arranged jointly by the student, faculty member and a cooperating organization.

Pre-requisite: Completion of 80 credit hours**Semester offered:** As shown in the study plan.**GDES 4112: Graphic Design Capstone Project Research****Semester Credit Hours:****1 (1, 0)**

Course Overview:

In this course, students conduct a self-directed graphic design writing project, applying their cumulative knowledge of graphic design. Students demonstrate in-depth design research skill and comprehensive understanding of graphic design. Upon the completion of the course, students will present their projects through written components and an oral presentation.

Pre-requisite: GDES 3312: Information Design

GDES 3322: Motion Design

GDES 3332: Interaction Design II

Semester offered: As shown in the study plan.**GDES 4321: Advanced Graphic Design****Semester Credit Hours:****3 (1, 3)**

Course Overview:

This course offers students the opportunity to work on assigned problems within specific areas of experience design. Work is done on a contract basis with specific objectives and tangible results.

Pre-requisite: GDES 3332: Interaction Design II**Semester offered:** As shown in the study plan.

GDES 4322: Portfolio Development**Semester Credit Hours:****3 (3,0)**

Course Overview:

In this course, students thoroughly organize and refine their previous graphic design works to create a strong portfolio to prepare for their career path after graduation. Students also learn how to develop a job application package, including cover letter, resume, business card and portfolio website.

Pre-requisite: GDES 4321: Advanced Graphic Design**Semester offered:** As shown in the study plan.**GDES 4413: Graphic Design Capstone Project****Semester Credit Hours:****4 (1, 3)**

Course Overview:

In this course, students continue their self-directed graphic design thesis project based on the written outcomes from GDES 4112: Graphic Design Capstone Project Research. The practicum component of this course allows students to apply the collective knowledge of graphic design to a defended undergraduate senior capstone project.

Pre-requisite: GDES 4112: Graphic Design Capstone Project Research
GDES 4321: Advanced Graphic Design**Semester offered:** As shown in the study plan.

SUMMARY OF COLLEGE OF ARCHITECTURE AND DESIGN COURSES WITH NUMBER OF CREDIT AND CONTACT HOURS

COAD Core Courses for Architecture and Interior Design				
Course Code	Course Name	Credit Hours	Classroom Hours	
			Lecture	Studio
COAD 1311	Design Studio I- Fundamentals	3(1,2)	1	4
COAD 1312	Hand Drawing & Rendering Techniques	3(1,2)	1	4
COAD 1313	Design Studio II- Fundamentals	3(1,2)	1	4
COAD 1314	Construction Documents & Detail Drawings	3(1,2)	1	4
COAD 2251	Digital Design I: 2D	2(1,1)	1	2
COAD 2252	Digital Design II: 3D	2(1,1)	1	2
COAD 2333	Environmental Psychology for Design	3(1,0)	1	0
COAD 3322	Building Codes and Universal Design	3(1,0)	1	0
COAD 3341	Built World Design History and Theory I	3(1,0)	1	0
COAD 3342	Built World Design History and Theory II	3(1,0)	1	0
COAD 3353	Digital Design III: BIM	3(1,2)	1	4
COAD 4333	History of Islamic Design (Elective)	3(1,0)	1	0
COAD 4351	Built World Photography (Elective)	3(2,1)	2	2

Architecture Courses				
Course Code	Course Name	Credit Hours	Classroom Hours	
			Lecture	Studio
ARCH 2421	Design Studio III- Architectural Design	4(1,3)	1	6
ARCH 2341	Principles of Design with Climate	3(3,0)	1	0
ARCH 2342	Materials and Methods	3(2,1)	1	0
ARCH 2422	Design Studio IV- Integrated Architectural Design	4(1,3)	1	6
ARCH 3343	Principles of Structural Systems	3(3,0)	1	0
ARCH 3523	Design Studio V- Architectural Design	5(1,4)	1	8
ARCH 3524	Design Studio VI- Integrated Architectural Design	5(1,4)	1	8
ARCH 4344	Introduction to Environmental Systems	3(3,0)	1	0
ARCH 4345	Architectural Structures	3(2,1)	1	0
ARCH 4346	Integrated Environmental Systems	3(3,0)	1	0
ARCH 4354	Simulation and Optimization	3(2,1)	2	2
ARCH 4361	Preparing the Project Brief	3(3,0)	1	0
ARCH 4362	Construction Process and Building Economics	3(3,0)	1	0
ARCH 4365	Internship	3(1,320)	1	320
ARCH 4371	Contemporary Materials in Architecture and Design (Elective)	3(3,0)	1	0
ARCH 4525	Design Studio VII- Architectural Design	5(1,4)	1	8
ARCH 4526	Design Studio VIII- Integrated Architectural Design	5(1,4)	1	8
ARCH 5327	Design Studio IX- Capstone Project Programming	3(1,2)	1	4
ARCH 5363	Professional Practice and Ethics	3(3,0)	1	0
ARCH 5372	Building Energy Use Modeling and Simulation (Elective)	3(2,1)	2	2
ARCH 5373	Sustainable Housing and GeoDesign (Elective)	3(2,1)	2	2
ARCH 5374	Advanced Design Visualization (Elective)	3(2,1)	2	2
ARCH 5375	Computational Modeling and Simulation (Elective)	3(2,1)	2	2
ARCH 5628	Design Studio X- Architectural Capstone	6(1,5)	1	10

Interior Design Courses				
Course Code	Course Name	Credit Hours	Classroom Hours	
			Lecture	Studio
IDES 2312	Interior Design IV- Commercial Programming & Space Planning Studio	3(1,2)	1	4
IDES 2332	Materials for Interior Design	3(3,0)	1	0
IDES 3321	Interior Building Systems	3(3,0)	1	0
IDES 3331	Interior Lighting	3(3,0)	1	0
IDES 3338	Internship	3(1,320)	1	320
IDES 3411	Interior Design V- Office Design	4(1,3)	1	6
IDES 3412	Interior Design VI- Hospitality Design	4(1,3)	1	6
IDES 4112	Interior Design VIII- Capstone Project Programming	1(1,0)	1	0
IDES 4314	Advanced Design Methods (Elective)	3(1,2)	1	4
IDES 4332	Custom Furniture Design (Elective)	3(3,0)	1	0
IDES 4337	Sustainable Design	3(3,0)	1	0
IDES 4343	Professional Practices for Interior Designers	3(3,0)	1	0
IDES 4344	Interior Design Study Tour (Elective)	3(1,80)	1	80
IDES 4413	Interior Design VIII -Capstone Project Design	4(1,3)	1	6
IDES 4425	Interior Design VII- Healthcare Design	4(1,3)	1	6

Graphic Design Courses				
Course Code	Course Name	Credit Hours	Classroom Hours	
			Lecture	Studio
GDES 1311	Drawing	3(1,2)	1	4
GDES 1312	Digital Imaging	3(1,2)	1	4
GDES 1321	Two-Dimensional Design	3(1,2)	1	4
GDES 1322	Three-Dimensional Design	3(1,2)	1	4
GDES 1331	Art Appreciation	3(3,0)	1	0
GDES 1332	Art History	3(3,0)	1	0
GDES 2311	Typography I	3(1,2)	1	4
GDES 2312	Arabic Typography	3(1,2)	1	4
GDES 2321	Illustration	3(1,2)	1	4
GDES 2322	Digital Photography	3(1,2)	1	4
GDES 2331	History of Visual Communication	3(3,0)	1	0
GDES 2332	Design Thinking	3(3,0)	1	0
GDES 3311	Typography II	3(1,2)	1	4
GDES 3312	Information Design	3(1,2)	1	4
GDES 3321	Brand Identity	3(1,2)	1	4
GDES 3322	Motion Design	3(1,2)	1	4
GDES 3331	Interaction Design I	3(1,2)	1	4
GDES 3332	Interaction Design II	3(1,2)	1	4
GDES 3338	Internship	3(1,320)	1	320
GDES 4112	Graphic Design Capstone Project Research	1(1,0)	1	0
GDES 4321	Advanced Graphic Design	3(1,2)	1	4
GDES 4322	Portfolio Development	3(3,0)	1	0
GDES 4331	Special Topics in Graphic Design (Elective)	3(1,2)	1	4
GDES 4413	Graphic Design Capstone Project	4(1,3)	1	6