School of Architecture and Built Environment

Department of Architecture

Bachelor of Science Program in
Architecture

Study Plan
Academic Year 2021/2022

Curriculum of Bachelor of Science Degree in Architecture

Classification	Credit Hours		
	Compulsory	Elective	Total
University Requirements	21	6	27
School Requirements	31	6	37
Program Requirements	72	0	72
Stream Requirements	22	29	51
Total	**146**	**41**	**187**

1. University Requirements (27 Credit Hours)

1.1 University Compulsory Subjects (21 Credit Hours):

Course No.	Course Title	Cr. Hrs	Lecture	Lab.	Prerequisite
ARB99	Arabic 99*	0	0	3	-
ARB100	Arabic *	3	3	0	ARB 99
ENGL98	English I*	0	0	3	-
ENGL99	English II*	0	0	3	ENGL98
ENGL101	English III*	1	0	3	ENGL99
ENGL102	English IV*	1	0	3	ENGL101
ENGL201	English V*	2	0	3	ENGL102
ENGL202	English VI*	2	0	3	ENGL201
GERL101	German I	3	0	9	-
GERL102	German II	3	0	9	GERL 101
NE101	National Education(in Arabic)	3	3	0	ARB 99
	National Education(in English)	3	3	0	ENGL 101
MILS 100	Military Sciences	3	3	0	For Jordanian only
	Total	**21**			

* Student's score on the Placement Test will decide the course level to start from

1.2 University Elective Subjects (6 Credit Hours) to be chosen from:

Course No.	Course Title	Cr. Hrs.	Lecture	Lab.	Prerequisite
DES101	Art's appreciation (in Arabic)	3	3		ARB 99
	Art's appreciation (in English)	3	3		ENGL 101
PE101	Sports and Health	3	3	0	ARB 99
SFTS101	Soft Skills	3	3	0	ENGL 101
IC101	Intercultural Communications	3	3	0	ENGL 101
EI 101	Leadership and Emotional Intelligence	3	3	0	ENGL 101
BE302 **OR** SE 301	Business Entrepreneurship **OR** Social Entrepreneurship and Enterprises	3 **OR** 3	3	0	ENGL 101
	Total Required	**6**			

2. School Requirements (37Credit Hours):

2.1 Compulsory Requirements:(31 Credit Hours)

Course No.	Course Title	Credit Hours	Lecture	Studio	Prerequisite
ARC 111	Fundamentals of Design I	4	2	4	-
ARC 112	Fundamentals of Design II	4	2	4	ARC 111
ARC 131	Technical Graphics A	3	0	6	-
ARC 132	Technical Graphics B	3	0	6	ARC 131
DES 130	Freehand Sketching I	2	0	4	-
DES 135	Freehand Sketching II	2	0	4	DES 130
SABE 231	Computing Fundamentals for Architects and Designers	4	2	4	ARC 232
GERL202	German IV	3	0	6	GERL 201
GERL301	German V	3	0	9	GERL 202
GERL201	German III	**3**	**0**	6	GERL 102
	Total	**31**			

2.2 Elective Requirements: (6 Credit Hours)

Course No.	Course Title	Credit Hours	Lecture	Studio	Prerequisite
AC 227	Comparative History of Architecture	3	3	0	-
AC 228	Architecture in the Islamic Context	3	3	0	AC 227
AC225	Comparative History of Arts	3	3	0	-
AC226	Visual arts in The Islamic Context	3	3	0	AC225
	Total Required	**6**			

3. Program Requirements (72 Credit Hours):

Course No	Course Title	Cr. Hrs.	Lecture	Studio	Prerequisite
General:					
ARCH 140	Understanding the Built Environment	3	3	0	-
ARC 211	Architectural Design: Methods and Typologies	5	1	8	ARC 112
ARCH 221	Modern Foundations of Architecture	3	3	0	AC 227
ARC 231	Computer Visualizations I	2	0	4	ARC 131
ARC 232	Computer Visualizations II	2	0	4	ARC 231
ARCH 261	Structural Systems I	3	3	0	ARCH 150
ARCH 262	Utility Planning and Design I	3	3	0	ARCH 150
ARCH 323	Contemporary Architecture	2	2	0	ARCH 221
ARCH 341	Landscape Architecture	3	2	2	ARC 211
ARCH 350	Local Internship	0	-	-	ARC 212 OR ARC 213 OR ARC 214 IARC 213 OR IARC 214 OR IARC 215
ARCH 353	Land Surveying	2	1	3	ARC 131
ARCH 362	Utility Planning and Design II	3	3	0	ARCH 262
ARCH 421	Excursion: International Architecture	0	-	-	-
ARCH 459	International Internship	12	-	-	Dept. Approval
ARCH 591 OR ARCH 593	Graduation Project I (Arch.) OR Graduation Project I (Int.)	1	1	0	Dept. Approval
ARCH 592 OR ARCH594	Graduation Project II (Arch.) OR Graduation Project II (Int.)	6	0	12	ARCH 591 +ARC541 OR ARCH 593 +ARC441
AC 323	Heritage Conservation and Management	3	3	0	AC 227
GERL302	German VI	3	-	6	GERL301
DES151	Principles of Photography	2	1	2	-
DES136	Rendering and Presentation Techniques	2	1	2	ARC131
Pure Sciences and Supporting Fields:					
MATH 099	Pre Math	0	0	0	-
MATH 101	Calculus I*	3	3	0	MATH 099
ARCH 150	Physics for Architects	3	3	0	-

ARCH 354	Project Management and Site Organization I	3	3	0	ARC 211
ARCH 458	Contracts, Specifications and Quantity Surveying	3	3	0	ARCH 354
	Total	**72**			

* Has to pass the placement test

4. Stream Requirements (51 Credit Hours):

4.1 Architecture Stream Requirements (51 Credit Hours):

4.1.1 Architecture Stream Compulsory Requirements (22 Credit Hours):

Course No.	Course Title	Cr. Hrs.	Lecture	Studio	Prerequisite
ARCH 151	Building Construction Materials and Processes I	3	2	2	ARC 131
ARCH 251	Building Construction Materials and Processes II	3	2	2	ARCH 151
ARCH 351	Working Designs	3	2	2	ARCH 251 + ARCH 232
ARCH 361	Structural Systems II	3	3	0	ARCH 261
ARC 341	Housing	2	2	0	ARC 211
ARC 346	Urban Studies	3	3	0	ARC 211
ARC 541	Urban Design	5	1	8	ARC346
	Total	**22**			

4.1.2 Architecture Stream Elective Requirements (29 Credit Hours):

4.1.2.1 Project Electives (5 Credit Hours) to be chosen from the following list:

Course No.	Course Title	Cr. Hrs.	Lecture	Studio	Prerequisite
ARC 212	Design of Residential Buildings	5	1	8	ARC 211
ARC 213	Design of Educational Buildings	5	1	8	ARC 211
ARC 214	Design of Commercial Buildings	5	1	8	ARC 211
	Total Required	**5**			

4.1.2.2 Project Electives (15 Credit Hours) to be taken from the following list:

Course No.	Course Title	Cr. Hrs.	Lecture	Studio	Prerequisite
ARC 311	High-Rise Buildings Design and Planning	5	1	8	ARC 212 OR ARC 213 OR ARC 214

ARC 312	Design of Large Span Buildings	5	1	8	ARC 212 OR ARC 213 OR ARC 214
ARC 313	Design of Cultural and Civic Buildings	5	1	8	ARC 212 OR ARC 213 OR ARC 214
ARC 331	Parametric Architecture	5	1	8	ARC 212 OR ARC 213 OR ARC 214
ARC 343	Infill Architecture	5	1	8	ARC 212 OR ARC 213 OR ARC 214
ARC 344	Housing Planning and Design	5	1	8	ARC 212 OR ARC 213 OR ARC 214
ARC 371	Design of Sustainable Buildings	5	1	8	ARC 212 OR ARC 213 OR ARC 214
ARC 411	Healthcare Facilities Planning and Design	5	1	8	ARC 212 OR ARC 213 OR ARC 214
ARC 412	Tourist Facilities Design	5	1	8	ARC 212 OR ARC 213 OR ARC 214
ARC 413	Design of Mixed-Use Buildings	5	1	8	ARC 212 OR ARC 213 OR ARC 214
ARC 414	Advanced Architectural Design Project	5	1	8	ARC 212 OR ARC 213 OR ARC 214

ARC 441	Adaptive Re-Use of Buildings and Sites	5	1	8	ARC 212 OR ARC 213 OR ARC 214
	Total Required	**15**			

4.1.2.3 Theory and Technical Electives (9 Credit Hours) to be taken from:

Course No.	Course Title	Cr. hrs.	Lecture	Studio	Prerequisite
ARCH 401	Special Topics in Architecture I	3	3	0	ARC 212 OR ARC 213 OR ARC 214
ARCH 403	Special Topics in Architecture II	2	2	0	ARC 212 OR ARC 213 OR ARC 214
ARCH 405	Special Topics in Architecture III	1	1	0	ARC 212 OR ARC 213 OR ARC 214
ARCH 423	Contemporary Issues in Architectural Design	3	3	0	ARC 212 OR ARC 213 OR ARC 214
ARCH 425	Regional and Vernacular Architecture	3	3	0	ARC 212 OR ARC 213 OR ARC 214

ARCH 426	Environmental Psychology and Sociology	3	3	0	ARC 212 OR ARC 213 OR ARC 214
ARCH 432	Geographic Information Systems	3	2	2	ARC 212 OR ARC 213 OR ARC 214
ARCH 442	Human Response to the Built Environment	3	2	2	ARC 212 OR ARC 213 OR ARC 214
ARCH 451	Design and Build	3	2	2	ARC 212 OR ARC 213 OR ARC 214
ARC 453	Building and Site Documentation	3	2	2	ARCH 353
ARCH 457	Advanced Construction Systems	3	2	2	ARC 212 OR ARC 213 OR ARC 214
ARCH 554	Project Management and Site Organization II	3	3	0	ARCH 354
ARCH 571	Architectural Environmental Systems	3	3	0	ARCH 362
IARC 212	Principles of Interior Design	3	2	2	ARC 211
DES 152	Model-Making Techniques	2	0	4	ARC 111
DES 253	Workshop Technology	2	1	2	ARC 131
DES 250	Photography Studio	2	1	2	DES 151
	Total Required	**9**			

4.2 Interior Architecture Stream Requirements (51 Credit Hours):

4.2.1 Interior Architecture Stream Compulsory Requirements (22 Credit Hours):

Course No.	Course Title	Cr. hrs.	Lecture	Studio	Prerequisite
ARCH 255	Interior Construction Works I	3	2	2	ARC 131
ARCH 355	Interior Construction Works II	3	2	2	ARCH 255
IARC 355	Interior Working Designs	3	2	2	ARCH 355 + ARC 232
ARCH 315	Furniture Design	3	2	2	ARC 211
IARC 316	Color, Light, and Space	3	2	3	ARC 211
ARCH 363	Lighting Design	2	2	0	IARC 213 OR IARC 214 OR IARC215
ARC 441	Adaptive Re-Use of Buildings and Sites	5	1	8	IARC 213 OR IARC 214 OR IARC215
	Total	**22**			

4.2.2 Interior Architecture Stream Elective Requirements (29 Credit Hours):

4.2.2.1 Project Electives (5 Credit Hours) to be chosen from the following list:

Course No.	Course Title	Cr. Hrs.	Lecture	Studio	Prerequisite
IARC 213	Space Planning for Temporary Uses	5	1	8	ARC 211
IARC 214	Retail Design Studio	5	1	8	ARC 211
IARC 215	Shopfront and Display Design	5	1	8	ARC 211
	Total Required	**5**			

4.2.2.2 Project Electives (15 Credit Hours) to be taken from the following list:

Course No.	Course Title	Cr. Hrs.	Lecture	Studio	Prerequisite
IARC 311	Domestic Environments Design Studio	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 312	Learning Environments Design Studio	5	1	8	IARC 213 OR IARC 214 OR IARC215

IARC 313	Workplace Design Studio	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 314	Cultural and Civic Environments Design Studio	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 315	Theatre Set Design	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 318	Site-Specific Furniture Design	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 317	Core and Shell Design	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 371	Sustainable Environments Design Studio	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 411	Healthcare Design Studio	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 412	Hospitality Design Studio	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 413	Museum and Exhibition Design	5	1	8	IARC 213 OR IARC 214 OR IARC215
IARC 414	Advanced Interior Design Studio	5	1	8	IARC 213 OR IARC 214 OR IARC215

Total Required	15

4.2.2.3 Theory and Technical Electives (9 Credit Hours) to be taken from:

Course No.	Course Title	Cr. hrs.	Lecture	Studio	Prerequisite
ARCH 402	Special Topics in Interior Architecture I	3	3	0	IARC 213 OR IARC 214 OR IARC215
ARCH 404	Special Topics in Interior Architecture II	2	2	0	IARC 213 OR IARC 214 OR IARC215
ARCH 406	Special Topics in Interior Architecture III	1	1	0	IARC 213 OR IARC 214 OR IARC215
ARCH 422	Contemporary Issues in Interior Architecture	3	3	0	IARC 213 OR IARC 214 OR IARC215
ARCH 451	Design and Build	3	2	2	IARC 213 OR IARC 214 OR IARC215
ARC 453	Building and Site Documentation	3	2	2	ARCH 353
ARCH 454	Interior Textiles, Accessories, and Resources	3	3	0	IARC 213 OR IARC 214 OR IARC215
ARCH 554	Project Management and Site Organization II	3	3	0	IARC 213 OR IARC 214 OR IARC215
ARCH 571	Architectural Environmental Systems	3	3	0	ARCH 362
DES 133	Calligraphy and Ornaments	3	2	2	ARC 111
DES 152	Model-Making Techniques	2	0	4	ARC 111
DES 253	Workshop Technology	2	1	2	ARC 131
DES 250	Photography Studio	2	1	2	DES 151
	Total Required	**9**			

Course Code:

The digits have the following representation:

The left digit represents the level of the course

The middle digit represents the specialized field of knowledge of the course:

0. Special Topics
1. Projects
2. History, Theory, and Society
3. Communication Skills and Techniques
4. Built Environment
5. Building Sciences and Technology
6. Engineering Systems
7. Environment
9. Graduation Project

The right digit represents the sequence of the course within the field.

Study Plan Guide for the Bachelor of Science Degree in Architecture

Main Stream: Architecture

First Year				
First Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARC 111	Fundamentals of Design I	4	-	-
ARC 131	Technical Graphics A	3	-	-
ARCH 140	Understanding the Built Environment	3	-	-
DES 130	Freehand Sketching I	2	-	-
GERL 101	German I	3	-	-
ENGL 098	English I	0	-	-
MATH 101	Calculus I	3	-	-
	Total	**18**		
Second Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARC 112	Fundamentals of Design II	4	ARC 111	-
ARC 132	Technical Graphics B	3	ARC 131	-
ARCH 150	Physics for Architects	3	-	-
DES 135	Freehand Sketching II	2	DES 130	-
DES 136	Rendering and Presentation Techniques	2	ARC 131	
DES 151	Principles of Photography	2	-	-
GERL 102	German II	3	GER L 101	-
ENGL 099	English II	0	ENGL 098	-
	Total	**19**		
Summer Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
	University Elective Requirement	3		
	University Elective Requirement	3		
	Total	**6**		

Second Year				
First Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
ARC 211	Architectural Design: Methods and Typologies	5	ARC 112	-
ARC 231	Computer Visualizations I	2	ARC 131	-
ARCH 151	Building Construction Materials and Processes I	3	ARC 131	-
ARCH 262	Utility Planning and Design I	3	ARCH 150	-
AC 227	Comparative History of Architecture	3	-	-
GERL 201	German III	3	GERL 102	-
ENGL 101	English III	1	ENGL 099	-
	Total	20		
Second Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
ARCH 000	Project Elective I	5	ARC 211	-
ARC 232	Computer Visualizations II	2	ARC 231	-
ARCH 251	Building Construction Materials and Processes II	3	ARCH 151	-
ARCH 261	Structural Systems I	3	ARCH 150	-
AC 228	Architecture in the Islamic Context	3	AC 227	-
GERL 202	German IV	3	GERL 201	-
ENGL 102	English IV	1	ENGL 101	-
	Total	20		
Summer Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
ARCH 353	Land Surveying	2	ARC 131	-
SABE 231	Computing Fundamentals for Architects and Designers	4	ARC 232	-
ARCH 362	Utility Planning and Design II	3	ARCH 262	-
	Total	9		

Third Year				
First Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
ARCH 000	Project Elective II	5	ARC212 OR ARC 213 OR ARC 214	-
ARCH 221	Modern Foundations of Architecture	3	AC 227	-
ARCH 351	Working Designs	3	ARCH 251 + ARCH 232	-
ARCH 361	Structural Systems II	3	ARCH 261	-
ARC 441	Housing	2	ARC 211	-
GERL 301	German V	3	GERL 202	-
ENGL 201	English V	2	ENGL 102	-
	Total	21		
Second Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
ARCH 000	Project Elective III	5	ARC212 OR ARC 213 OR ARC 214	-
ARCH 323	Contemporary Architecture	2	ARCH 221	
ARCH 341	Landscape Architecture	3	ARC 211	-
AC 323	Heritage Conservation and Management	3	AC 227	-
ARC 346	Urban Studies	3	ARC 211	-
ENGL 202	English VI	2	ENGL 201	-
GERL302	German VI	3	GERL301	-
	Total	21		
Summer Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
ARCH 350	Local Internship*	0	ARC212 OR ARC 213 OR ARC 214	-
	Total	0		

* Students must complete 160 hours of practical training in approved industries in Jordan by the end of their third academic year.

Fourth Year – to be studied in a university in a German speaking country				
First Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARCH 000	Project Elective IV	5	ARC212 OR ARC 213 OR ARC 214	-
ARCH 000	Elective I	7	3rd Year	-
ARCH 000	Elective II		3rd Year	-
ARCH 000	Elective III		3rd Year	-
ARC 421	Excursion: International Architecture	0	3rd Year	-
	Total	**12**		
Second Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARC 459	International Internship	12	4th Year	-
	Total	**12**		
Fifth Year				
First Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARCH 000	Elective IV	2	4th Year	-
ARCH 354	Project Management and Site Organization I	3	ARC 211	-
ARC 541	Urban Design	5	ARC346	-
ARCH 591	Graduation Project I	1	5th Year	-
NE 101	National Education	3	-	-
ARB 99	Arabic I	0	-	-
	Total	**14**		
Second Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARCH 458	Contracts, Specifications and Quantity Surveying	3	ARCH354	-
ARCH 592	Graduation Project II	6	ARCH 591 + ARC541	-
MILS 100	Military Sciences	3	-	-
ARB 100	Arabic II	3	ARB 99	-
	Total	**15**		

Study Plan Guide for the Bachelor of Science Degree in Architecture

Interior Architecture Stream

First Year				
First Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARC 111	Fundamentals of Design I	4	-	-
ARC 131	Technical Graphics A	3	-	-
ARCH 140	Understanding the Built Environment	3	-	-
DES 130	Freehand Sketching I	2	-	-
GERL 101	German I	3	-	-
ENGL 098	English I	0	-	-
MATH 101	Calculus I	3	-	-
	Total	**18**		
Second Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARC 112	Fundamentals of Design II	4	ARC 111	-
ARC 132	Technical Graphics B	3	ARC 131	-
ARCH 150	Physics for Architects	3	-	-
DES 135	Freehand Sketching II	2	DES 130	-
DES 136	Rendering and Presentation Techniques	2	ARC 131	
DES 151	Principles of Photography	2	-	-
GERL 102	German II	3	GERL 101	-
ENGL 099	English II	0	ENGL 098	-
	Total	**19**		
Summer Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
	University Elective Requirement	3		
	University Elective Requirement	3		
	Total	**6**		

Second Year				
First Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
ARC 211	Architectural Design: Methods and Typologies	5	ARC 112	-
ARC 231	Computer Visualizations I	2	ARC 131	-
AC 227	Comparative History of Architecture	3	-	-
ARCH 255	Interior Construction Works I	3	ARC 131	-
ARCH 262	Utility Planning and Design I	3	ARCH 150	-
GERL 201	German III	3	GERL 102	-
ENGL 101	English III	1	ENGL 099	-
	Total	**20**		
Second Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
IARC 000	Project Elective I	5	ARC 211	-
ARC 232	Computer Visualizations II	2	ARC 231	-
ARCH 355	Interior Construction Works II	3	ARCH 255	-
ARCH 261	Structural Systems I	3	ARCH 150	-
AC 228	Architecture in the Islamic Context	3	AC 227	-
GERL 202	German IV	3	GERL 201	-
ENGL 102	English IV	1	ENGL 101	-
	Total	**20**		
Summer Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
ARCH 353	Land Surveying	2	ARC 131	-
SABE 231	Computing Fundamentals for Architects and Designers	4	ARC 232	-
IARC 316	Colour, Light and Space	3	ARC 211	-
	Total	**9**		

Third Year				
First Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
IARC 000	Project Elective II	5	IARC 213 OR IARC 214 OR IARC 215	-
ARCH 221	Modern Foundations of Architecture	3	AC 227	-
IARC 355	Interior Working Designs	3	ARCH 355 + ARC 232	-
ARCH 315	Furniture Design	3	ARC 211	-
ARCH 363	Lighting Design	2	3rd Year	-
GERL 301	German V	3	GERL 202	-
ENGL 201	English V	2	ENGL 102	-
	Total	**21**		
Second Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
IARC 000	Project Elective III	5	IARC 213 OR IARC 214 OR IARC 215	-
ARCH 341	Landscape Architecture	3	ARC 211	-
ARCH 323	Contemporary Architecture	2	ARCH 221	
ARCH 362	Utility Planning and Design II	3	ARCH 262	-
AC 323	Heritage Conservation and Management	3	AC 227	-
GERL302	German VI	3	-	
ENGL 202	English VI	2	ENGL 201	-
	Total	**21**		
Summer Semester				
Course No.	Course Title	Cr. hrs.	Prerequisite	Co-requisite
ARCH 350	Local Internship*	0	IARC 213 OR IARC 214 OR IARC 215	-
	Total	**0**		

* Students must complete 160 hours of practical training in approved industries in Jordan by the end of their third academic year.

Fourth Year – to be studied in a university in a German speaking country				
First Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
IARC 000	Project Elective IV	5	IARC 213 OR IARC 214 OR IARC 215	-
ARCH 000	Elective I	7	4th Year	-
ARCH 000	Elective II		4th Year	-
ARCH 000	Elective III		4th Year	-
ARC 421	Excursion: International Architecture	0	4th Year	-
	Total	**12**		
Second Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARC 459	International Internship	12	4th Year	-
	Total	**12**		

Fifth Year				
First Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARCH 000	Elective IV	2	4th Year	-
ARCH 354	Project Management and Site Organization I	3	ARC 211	-
ARC 441	Adaptive Re-Use of Buildings and Sites	5	ARC 211	-
ARCH 593	Graduation Project I	1	5th Year	-
NE 101	National Education	3	-	-
ARB 99	Arabic I	0		
	Total	**14**		
Second Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
ARCH 458	Contracts, Specifications and Quantity Surveying	3	ARCH354	
ARCH 594	Graduation Project II	6	ARCH 593 + ARC441	-
MILS 100	Military Sciences	3	-	-
ARB 100	Arabic II	3	ARB 99	-
	Total	**15**		

Course Description

Bachelor of Science Degree in Architecture

Field 0: Special Topics

ARCH 401 Special Topics in Architecture I, 3 Crs.
This course allows specialized or in-depth study of a subject supplementing architecture. Student interest and instructor expertise help determine the topic, to be announced in the classroom.

ARCH 402 Special Topics in Interior Architecture, 3 Crs.
This course allows specialized or in-depth study of a subject supplementing interior architecture. Student interest and instructor expertise help determine the topic, to be announced in the classroom.

ARCH 403 Special Topics in Architecture II, 2 Crs.
This course allows specialized or in-depth study of a subject supplementing architecture. Student interest and instructor expertise help determine the topic, to be announced in the classroom.

ARCH 404 Special Topics in Interior Architecture II, 2 Crs.
This course allows specialized or in-depth study of a subject supplementing interior architecture. Student interest and instructor expertise help determine the topic, to be announced in the classroom.

ARCH 405 Special Topics in Architecture III, 1 Crs.
This course allows specialized or in-depth study of a subject supplementing architecture. Student interest and instructor expertise help determine the topic, to be announced in the classroom.

ARCH 406 Special Topics in Interior Architecture III, 1 Crs.
This course allows specialized or in-depth study of a subject supplementing interior architecture. Student interest and instructor expertise help determine the topic, to be announced in the classroom.

Field 1: Projects

ARC 111 Fundamentals of Design I, 4 Crs.
A project-based course; introduction to the basic principles of order using two- and three-dimensional compositions of basic design elements: point, line, and plane, addition and subtraction through intersection of these elements and the potential illusive volumes that make space shapes: circle, square, and triangle; spatial organization: symmetry and balance, unity, repetition and rhythm, transformation and datum; order: focality and centralization radiality, linearity, and grid. The course will establish space explorations through movement and circulation. Additional emphasis will be on color theory, textures and tones. Class assignments will be based on abstract concepts while acquainting student with using different media and presentation techniques.

ARC 112 Fundamentals of Design II, 4 Crs.

A project-based course; it provides understanding to the complex nature of space forming by synthesizing its basic elements; emphasis on constructive typology and form generation; formal expression and dependence/independence of mass and space using solid and void, ratio and proportions, and numerical logic. It provides an understanding of the different spatial relationships, ordering principles, and arrangements in relation to place making and preferences. Topics that may be covered include measured drawings, small objects, 2-D and 3-D compositions of abstract and real nature, etc.

ARC 211 Architectural Design: Methods and Typologies, 5 Crs.

A project-based course; a first architectural design course, it focuses on design methods and processes which require understanding spatial analysis and its relation to programming. It builds up skills towards synthesizing spatial arrangements, relationships, and typologies using experiential expression tools of geometry, order, and structure. Students will be exposed to hypothetical and real sites. Students will be required to use self expression in order to explore their understanding of problem solving and to demonstrate their abilities to go from abstract to contextual order.

ARC 212 Design of Residential Buildings, 5 Crs.

A project-based course; concerns the design of domestic and residential buildings as an expression of authentic style, while reflecting individual expressions and understanding functional requirements, spatial enclosures and exploration of movements and circulation. Emphases will be made on basic contextual behavioral, social, historical, cultural, economic, and environmental dimensions. Topics that may be covered include detached and semi-detached houses, apartment blocks, condominiums, etc.

ARC 213 Design of Educational Buildings, 5 Crs.

A project-based course; concerns the design of educational buildings through understanding functional requirements, spatial enclosures and exploration of movements and circulation. Emphases will be made on basic contextual behavioral, social, historical, cultural, economic, and environmental dimensions. Topics that may be covered include kindergartens, day care centres, elementary and secondary schools, colleges, etc.

ARC 214 Design of Commercial Buildings, 5 Crs.

A project-based course; concerns the design of commercial buildings through understanding functional requirements, spatial enclosures and exploration of movements and circulation. Emphases will be made on basic contextual behavioral, social, historical, cultural, economic, and environmental dimensions. Topics that may be covered include shopping malls, department stores, commercial outlets, restaurants, etc.

ARC 311 High-Rise Buildings Design and Planning, 5 Crs.

A project-based course; it introduces the complex nature of designing and planning high-rise buildings. Emphasis will be made on the complexity of the technical and engineering systems, utility planning design, parking, fire-fighting and vertical circulation codes, impacts on infrastructural networks, planning regulations, image and skyline, and the role, status, and impressions generated from such structures. Communication of design concepts and development will require advanced media and modes of presentations especially those of computer generated drawings and models.

ARC 312 Design of Large Span Buildings, 5 Crs.

A project-based course; it introduces the design process for large-span buildings of specialized functions, choice of appropriate structural systems such as, suspension structures, geodesic domes, folded plates, space frames, single and multi-layer systems; shells; folded plates; pneumatic systems. Topics that may be covered include indoor sport facilities, transportation terminals, industrial facilities, parking structures, etc. Communication of design concepts and development will require media and modes of presentations especially those of computer generated drawings and models.

ARC 313 Design of Cultural and Civic Buildings, 5 Crs.

A project-based course; concerns the design of cultural and civic buildings, with emphasis on the contextual dimensions the message that such buildings convey, while considering the spatial and formal qualities, and the structural, functional, and environmental aspects of the design process. Topics that may be covered include theatres, cinema houses, civic centres, libraries, museums and galleries, institutional buildings, religious buildings, etc. Techniques and processes of design solutions and presentations should reflect the individuality of the student.

ARCH 315 Furniture Design, 3 Crs.

A project-based course; it introduces specific furniture and product design components, materials, and fittings. The course is directed towards making students able to draw, develop, and build on small scale. It draws upon historical lineage by identifying the historical trajectories relevant to furniture and product design developments through predominant civilizations and their contribution, tracing the dominant furniture paradigms and historical shifts that have occurred from prehistory up to the 21st century. Specific emphasis is placed on theoretical, ideological, and technical developments which impacted contemporary furniture.

ARC 411 Healthcare Facilities Planning and Design, 5 Crs.

A project-based course; concerns the design of healthcare facility buildings through a comprehensive understanding of the complex nature of the functional, technical, and structural requirements, while considering the spatial and formal qualities as well as the message that such facilities convey. Topics that may be covered include hospitals, long-term care facilities, mental health facilities, ambulatory surgery centres, rehabilitation centres, fertility and genetics centres, and nursing homes for the elderly.

ARC 412 Tourist Facilities Design, 5 Crs.

A project-based course; concerns the design of tourist facility buildings through understanding the complex nature of the functional, technical, and structural requirements, while considering the spatial and formal qualities as well as the message that such facilities convey. Topics that may be covered include facilities for eco tourism, religious tourism, and treatment tourism, as well as hotels, resorts, visitor centres, restaurants, club houses, etc.

ARC 413 Design of Mixed-Use Buildings, 5 Crs.

A project-based course; it introduces the complex nature of designing and planning mixed-use buildings. Emphasis will be made on the complexity of the technical and engineering systems, utility planning design, parking, fire-fighting and vertical circulation codes, impacts on infrastructural networks, planning regulations, image, and the role, status, and impressions generated from such structures. Communication of design concepts and development will require media and modes of presentations especially those of computer generated drawings and models.

ARC 414 Advanced Architectural Design Project, 5 Crs.
A project-based course; it provides advanced design skills to meet the challenges of complex architectural projects. An integrated single in-depth design project will be introduced in order to gain developed and focused skills in analysis, programming, concept making, specification consideration and design development, while focusing on the integration of building systems, while providing architectural designs that utilize psychological approaches in understanding the impact of spatial meaning and place making. Communication of design concepts and development will require advanced media and modes of presentations especially those of computer generated drawings and models.

IARC 212 Principles of Interior Design, 3 Crs.
A project-based course; it introduces the fundamental elements and principles of interior design. Students work with concepts and methods for defining and organizing space and form in the interior environment. Communication of design concepts will require variety of media and modes of presentations.

IARC 213 Space Planning for Temporary Uses, 5 Crs.
A project-based course; it focuses on space planning for temporary uses, the problem solving discipline of the interior architectural design process and its application to temporary uses such as temporary conventions, sales of merchandise, exhibitions, etc. Develops concepts to achieve design goals and apply theoretical knowledge and technical skills to design solutions. Students work on a variety of professionally relevant projects. The course will introduce the importance of client contact and interviewing, program development, and design development. Communication of design concepts will require variety of media and modes of presentations.

IARC 214 Retail Design Studio, 5 Crs.
A project-based course; it focuses on retail spaces, the problem solving discipline of the interior architectural design process and its application to department stores, shops, boutiques, and other retail and mercantile settings. Develops concepts to achieve design goals and apply theoretical knowledge and technical skills to design solutions. Students work on a variety of professionally relevant projects. The course will introduce the importance of client contact and interviewing, program development, and design development. Communication of design concepts will require variety of media and modes of presentations.

IARC 215 Shopfront and Display Design, 5 Crs.
A project-based course; it concerns the design of the front side of a store facing the street that contains display windows. Students will be introduced to shopfront components, traditional shopfronts versus the new shopfronts, interactive shopfronts, shopfronts graphics and signage. The course also concerns the design of display cabinets and units. Projects will emphasize the understanding and incorporation of different interior design entities like lighting, colour, materials, use of technology, and the issue of security. Communication of design concepts will require variety of media and modes of presentations.

IARC 311 Domestic Environments Design Studio, 4 Crs.
A project-based course; it focuses on domestic environments, the problem solving discipline of interior architectural design process and its application to single and multi-family dwellings. Develops concepts to achieve design goals and apply theoretical knowledge and technical skills to design solutions. Students work on a variety of professionally relevant projects. The

course will introduce the importance of client contact and interviewing, program development, and design development. Communication of design concepts will require variety of media and modes of presentations.

IARC 312 Learning Environments Design Studio, 5 Crs.
A project-based course; it focuses on learning environments, the problem solving discipline of the interior architectural design process and its application to formal (schools) and informal (interpretive venues) learning settings. Develops concepts to achieve design goals and apply theoretical knowledge and technical skills to design solutions. Students work on a variety of professionally relevant projects. Communication of design concepts and development will require developed skills using different media and modes of presentations.

IARC 313 Workplace Design Studio, 5 Crs.
A project-based course; it focuses on workplace settings, the problem solving discipline of the interior architectural design process and its application to the many places people work. Develops concepts to achieve design goals and apply theoretical knowledge and technical skills to design solutions. Students work on a variety of professionally relevant. Communication of design concepts and development will require developed skills using different media and modes of presentations.

IARC 314 Cultural and Civic Environments Design Studio, 5 Crs.
A project-based course; it is based on practical application of interior architectural design process using various cultural and civic environments as cases to examine programming and code requirements, while focusing on human comfort. Projects will emphasize the understanding and incorporation of different interior design entities like lighting, colour, materials, use of technology, and structure. Projects will cover the various cultural and civic typologies such as theatres, libraries, religious buildings, civic centres, etc. Communication of design concepts and development will require developed skills using different media and modes of presentations.

IARC 315 Theatre Set Design, 5 Crs.
A project-based course; as set designers, students are to create the design ideas for the overall visual look of theatres. Key tasks involve studying scripts and discussing ideas with the director, communicating ideas about costume, make-up, props and lighting designers, overcoming any logistical problems, such as lighting or complex scene changes, researching the right historical, contemporary or futuristic details for production, creating effective designs within the available budget, sketching design ideas to produce a 'storyboard', showing what the sets will look like scene by scene, building and photographing scale models, estimating costs and preparing a production schedule, overseeing set building and decoration, and making any adjustments needed during rehearsals.

IARC 316 Color, Light, and Space, 3 Crs.
Colour is here specifically related to space and light. Students will research and experiment colour schemes, colour effects, colour trends, psychology and physiology of colour and light and its effect on space. The course will focus on colour in residential units and its contrast as well as its aesthetics in interior spaces.

IARC 317 Core and Shell Design, 5 Crs.
A project-based course; where the core and shell of a building are defined while the students will design the infills (what goes inside the core and shell). The core and shell elements are typically long-lead items. The CORE areas include the building structures (beams, columns

and slabs), vertical circulation systems (staircases, ramps, and elevators), and the electromechanical ducting system. The SHELL refers to the building facade (insulated exterior walls, exterior glazing, and roofs). Projects include green building measurements in core and shell developments, core and shell renovation projects, remodeling and face-lifting of existing buildings, etc. Communication of design concepts and development will require developed skills using different media and modes of presentations.

IARC 318 Site-Specific Furniture Design, 5 Crs.
A project-based course; through a series of studio work, lectures, presentations, assignments and fieldtrips, students examine the role of furniture within the context of its surroundings, its intended function, and its relationship to human needs and the environment. Students are to apply the gained knowledge along with appropriate tools and technology to develop and implement site/building specific furniture. Communication of design concepts and development will require developed skills using different media and modes of presentations.

IARC 371 Sustainable Environments Design Studio, 5 Crs.
A project-based course; it examines commercial and residential interior spaces where students will create sustainable and healthy environments to live in. The course reviews case studies representing best practices in sustainable design of interiors for discussion and analysis, evaluating project success according to sustainable theories, application of LEED standards, and life-cycle assessments. Communication of design concepts and development will require developed skills using different media and modes of presentations.

IARC 411 Healthcare Design Studio, 5 Crs.
A project-based course; it focuses on healthcare spaces, the problem solving discipline of the interior architectural design process and its application to hospitals, clinics, assisted living communities, and related healthcare facilities. Develops concepts to achieve design goals and apply theoretical knowledge and technical skills to design solutions. Students work on a variety of professionally relevant projects. Communication of design concepts and development will require developed skills using different media and modes of presentations.

IARC 412 Hospitality Design Studio, 5 Crs.
A project-based course; it focuses on hospitality spaces, the problem solving discipline of the interior architectural design process and its application to hotel, resort, restaurant, entertainment, and related interior spaces. Develops concepts to achieve design goals and apply theoretical knowledge and technical skills to design solutions. Students work on a variety of professionally relevant projects. Communication of design concepts and development will require developed skills using different media and modes of presentations.

IARC 413 Museum and Exhibition Design, 5 Crs.
A project-based course; it will introduce an in-depth process of designing museums and exhibitions. The course will expose students to different staff positions in such building typology (museums) including curators, designers, educators, developers, conservators, preparators, collections managers, administrators and others. Communication of design concepts and development will require developed skills using different media and modes of presentations.

IARC 414 Advanced Interior Architecture Project, 5 Crs.

A project-based course; it provides advanced design skills to meet the challenges of complex interior architecture projects. An integrated single in-depth design project will be introduced in order to gain developed and focused skills in analysis, programming, concept making, specification consideration and design development. The course provides students with the freedom to select their design methods as a means of developing student individuality. Projects are oriented towards a more complex nature both spatially and detail-wise. Advanced techniques and processes of design solutions and presentations are required.

Field 2: History, Theory, and Society

AC 227 Comparative History of Architecture, 3 Crs.
This course presents architectural roots, contexts and settlement forms from the prehistoric beginnings to Middle Eastern and North African civilizations of the Nile Valley, Mesopotamia, Phoenicia, and Crete, and to the Classical civilizations of Greece and Rome, It also deals with Byzantine and Early Christian architecture; evolution of Western architecture and art: Romanesque, Gothic, Renaissance, the Classic Revival in Central Europe; Students gain an appreciation of these cultures and an understanding of their historic, socio-economic, political, religious, and scientific effects on the evolution of arts, architecture, and city form.

AC 228 Architecture in the Islamic Context, 3 Crs.
This course reviews the development of architecture in the Islamic context with focus on MENA. It discusses examples of works from the Umayyad, Abbasid, Mamluk, Ottoman periods; it also discusses the role of Islamic beliefs, ideas and myths, together with the great variety of the inhabitants in the evolution of city form, and architecture. The course also reviews the contemporary attempts to achieve identity in MENA.

AC 323 Heritage Conservation and Management, 3 Crs.
This course aims to introduce students to heritage conservation and management, with emphasis on restoration, rehabilitation and adaptive use of heritage buildings and sites. Students are introduced to the theory and history of preservation movement at the international and national levels. The course covers survey techniques for documentation of buildings and sites: short-listing, assessment and categorization of monumental buildings; preparation of documents and technical reports on conventional structural systems; preparation of case studies and critical analyses of the evaluation of selected local and regional examples of documentation and conservation; and the preparation of management plans.

ARCH 221 Modern Foundations of Architecture, 3 Crs.
This course covers modern architecture and city evolution from the mid-eighteenth century, i.e. from the Enlightenment and the Industrial Revolution to the 1960s. It focuses on comparative studies with Ottoman architecture; the imperial colonized image of the Middle Eastern and North African (MENA) cities; independence from colonization and search for national identity through architecture and art. Emphasis is on the physical, social, political, and religious forces and their effects on the evolution of city form and architecture.

ARCH 323 Contemporary Architecture, Crs.
This course introduces architecture today: current trends and experimental studios as Post-Modernity, Deconstruction, Phenomenology, Figuration, Grotesque, Un-Volumetric, Sustainability, coming back to the city, and conservation movement as notions of cultural

change where architecture exceeds design. It presents contemporary schools of thoughts, criticism, and experimentation in architecture while emphasizing the physical, socio-political, and cultural forces and their impact on the evolution of architecture and city form.

ARC 421 Excursion: International Architecture, 0 Crs.
A fieldtrip-based course; includes assignments related to the developments of architecture and interior design in the world; study of selected projects covering the visual, functional, structural, and technological aspects.

ARCH 422 Contemporary Issues in Interior Architecture, 3 Crs.
In this course, students explore a variety of critical, aesthetic and practical issues relevant to the current practice of interior architectural design. The course employs readings, lectures and discussions to stimulate and refine critical thinking and practical design problem-solving abilities. Collaborative students conduct research as groups on current issues of interest and are responsible for both analysis and presentation.

ARCH 423 Contemporary Issues in Architectural Design, 3 Crs.
In this course, students explore a variety of critical, aesthetic and practical issues relevant to the current practice of architectural design. The course employs readings, lectures and discussions to stimulate and refine critical thinking and practical design problem-solving abilities. Collaborative students conduct research as groups on current issues of interest, and are responsible for both analysis and presentation.

ARCH 425 Regional and Vernacular Architecture, 3Crs.
This course examines the history, characteristics and meaning of regional and vernacular architecture from a global perspective with special emphasis on Bilad Al-Sham and Jordan. The primary focus of the course will be on domestic architecture and settlement forms. It will also include some vernacular religious and ceremonial structures. Through this course students will acquire an appreciation of the range of building traditions found around the world, and explore the connection between architectural forms and the societies that created them.

ARCH 426 Environmental Psychology and Sociology, 3 Crs.
The course emphasizes environmental psychology and sociology in architecture and design. It specifically addresses meaning of perception, Gestalt theory, principles of perception in visual arts, and criticism schools in architecture and arts. The course touches on psychological, behavioral, social, and cultural inputs using comparative analysis. It provides understanding of the different spatial typologies, order, relationships, and arrangement in relation to place making and preferences.

Field 3: Communication Skills and Techniques

ARC 131 Technical Graphics A, 3 Crs.
A project-based course; it is based on use of instruments and equipment necessary for accurate drafting of simple geometric constructions gradually evolved into orthogonal - isometric and axonometric - projections, planes, sections and elevations.

ARC 132 Technical Graphics B, 3 Crs.

A project-based course; it is based on learning of prespective projections: one-point and two-point projections, exterior and interior; casting shades and shadows on horizontal and vertical planes; axonometric and isometric, while using different rendering techniques: pencils, colored pencils, markers, pens, and ink.

ARC 231 Computer Visualizations I, 2 Crs.
This course provides students with hands-on experience using software packages in architectural media, graphics and representation. It teaches students to use computer applications in producing two and three-dimensional drawings, presentation techniques for producing rendered, modeled and visualized architectural drawings.

ARC 232 Computer Visualizations II, 2 Crs.
This course teaches students to assess computer as a totally integrated medium in the design process starting from data collection, sketch making, design alternatives proposing, design decision making and, finally, preparing drawings for comprehensive design projects. The course emphases the use of computers for simulating buildings, lighting (natural and artificial), materials, and textures, and the importance of presenting these simulations in animated models.

ARC 331 Parametric Architecture, 5 Crs.
A project-based course; it builds on the skills achieved in earlier computer visualization courses, will cover the advanced techniques of Parametric modeling and generative design including animating with controllers, expressions, multiple modifiers, cameras and character studio. Facial animation, compositing and editing with video post special effects are also to be covered. Student exploits advanced and customizable features of the CAAD software packages to build an efficient, integrated, and customized digital environment. The course explores in more detail several advanced concepts aiming at increasing drawing efficiency, including linking with external drawings and documents, creating, editing, and maintaining libraries of drawing components, and creating dimension styles and viewpoints.

ARCH 432 Geographic Information Systems, 3 Crs.
This course will cover methods of constructing a Geographical Information System (GIS) used by utility and governmental agencies. It is designed to develop skills necessary to prepare intelligent maps with spatial data bases for parcel mapping, planning, zoning, facility mapping, creating buffer zones, slope analysis, and neighborhood and zone analysis, using CAD map software packages.

SABE 231 Computing Fundamentals for Architects and Designers, 4 Crs.
This course brings the students in contact with the latest developments of computational design tools. Today, many designers and researchers use digital tools and scripting languages associated with them to simulate, automate, generate processes and get hand on parametric, or generative relationships in geometry, materials, systems structures, programmatic elements, visual and compositional components, enabling the rise of more complex solutions for an already complex problems. Solutions that are not reachable using design tools in a conventional matter. The course will look into the syntax of an existing scripting language, as an example, programs plug-ins, and other necessary means. It will examine different case studies and focus on the way multiple programs communicate, in order to execute and automate and idea from conceptual general level to a mature detailed high level.

Field 4: Built Environment

ARC 341 Housing, 2 Crs.

This course reviews the theories of housing planning with emphasis on creating better housing environments and more efficient policies, programming, planning, and designing for housing. Case analysis includes formal and informal settlements. Approaches include post-occupancy evaluation for technical, spatial, socio-economic, socio-behavioral, and cultural analysis,

ARC 346 Urban Studies, 3 Crs.

The course provides an overview to the urban studies from a theoretical as well as from a technical perspective; infrastructure networks, facilities, land use, traffic networks, greeneries, and urban indicators. Students are expected to formulate proposals for urban growth. Impacts are expected to define spatial arrangements, structural types and use, densities and distributions, zoning and planning, development and adaptation as well as transportation and expansion.

ARC 343 Infill Architecture, 5 Crs.

A project-based course; it concerns the ongoing change of heritage areas and the new projects that are added either as new infill buildings in old settings or new additions on old buildings. Students will be introduced to the various approaches of designing new buildings in old settings so that they are sympathetic to their context. It also deals with methods of analysis of old settings in relation to cultural aspects, socio-economic impacts as well as market oriented trends. The course touches on psychological, behavioral, social, and cultural inputs and the perception of place identity, context, memory and meaning. Techniques and processes of design solutions and presentations should reflect the individuality of the student.

ARC 344 Housing Planning and Design, 5 Crs.

A project-based course; it concerns the planning and design of small scale housing estates in urban areas while investigating the behavioral, socio-cultural, environmental, technical, legal, and financial issues that impact the design and production.

ARC 441 Adaptive Re-Use of Buildings and Sites, 5 Crs.

A project-based course; it concerns the creating new uses for heritage and contemporary buildings and sites that are no longer suitable for the purpose for which they were originally intended to, with consideration of the entire life cycle of the building and its components in regard to economics, environmental impact, and performance. It also deals with methods of analysis of heritage buildings and sites in relation to cultural aspects, socio-economic impacts as well as market oriented trends. The course reviews the urban planning and design concepts and trends. It touches on psychological, behavioral, social, and cultural inputs and the perception of place identity, context, memory and meaning. Techniques and processes of design solutions and presentations should reflect the individuality of the student.

ARC 541 Urban Design, 5 Crs.

This is a project-oriented course supported by theoretical lectures; it covers presents principles of urban design, urban regeneration, urban infill and urban development. The course deals with history and principles of urban design as well as evolution of the urban space and the city as a comprehensive, functional, organic unit responding to social, political, economic and demographic forces of growing societies. Students explore methods of visual

analysis and understanding of the identity and image of urban space. The course focuses on socio-economic influence on the morphology and typology of the city.

ARCH 140 Understanding the Built Environment, 3 Crs.
A tutorial-based course; it introduces basic multidimensional understanding of the built environment at the levels of urban, architectural, landscape, building systems and material, design process and implementation in its relation to people. It provides understanding to the complex nature of place forming by synthesizing its basic ingredients that relate to perception of place identity and meaning, reflecting people needs, uses, context, and memory. The course touches on psychological, behavioral, social, and cultural inputs using comparative analysis. It provides understanding of the different spatial typologies, order, relationships, and arrangement in relation to place making and preferences.

ARCH 341 Landscape Architecture, 3 Crs.
A project-based course; it focuses on site analysis (topographic and climatic), treatment of land surfaces and levels, planting, water, lighting outdoor spaces, and external furniture. It emphasizes types of local and regional vegetation and criteria for their choice as well as the development of landscape design in Far Eastern, European and Islamic cultures. Focus is also on client needs and interior/exterior spatial and visual relationships. Projects should include site inventory, research, and analysis; program development; concept alternatives; master planning; and details design using a combination of computer, technical, and freehand presentation techniques.

ARCH 442 Human Response to the Built Environment, 3 Crs.
This course introduces the multidimensional understanding of the built environment at the levels of urban, architectural, landscape, building systems and material, design process and implementation in its relation to people. It provides understanding to the complex nature of place forming by synthesizing its basic ingredients that relate to perception of place identity and meaning, reflecting people needs, uses, context, and memory. The course touches on psychological, behavioral, social, and cultural inputs using comparative analysis. It provides understanding of the different spatial typologies, order, relationships, and arrangement in relation to place making and preferences. Issues of gender, health, age, and other are examined through the built environment.

Field 4: Building Sciences and Technology

ARCH 150 Physics for Architects, 3 Crs.
A basic course for a number of programs related to structural, electrical, and mechanical engineering systems. It covers mechanics and dynamics, electrostatics and electricity, light, geometric optics, and sound; heat transfer; climatology; gases and vapor. The course is structured based on soft-numerical teaching methods where emphasis is given to morphology and behavior rather than on detailed calculations.

ARCH 151 Building Construction Material and Processes I, 3 Crs.
The course presents building technologies; structural logic and behavior; choice of building system: conventional load bearing walls, and skeletal and composite systems; the construction process: site preparation, excavations, foundations, walls (masonry, brickwork, and concrete), columns, beams, floor structures, slabs, roofs, stairs, openings, expansion and settlement joints, thermal insulation and damp proofing.

ARCH 251 Building Construction Materials and Processes II, 3 Crs.
The course is a study of building finishing materials: tiling, flooring, carpet construction and quality, plastering, wood paneling, metal grills, partitions, paints, wall and ceiling materials, and other components such as moldings, door hardware and door materials, as well as lighting fixtures, air conditioning outlets and chimneys.

ARCH 255 Interior Construction Works I, 3 Crs.
The course is a study of interior construction materials and processes: nature, properties, characteristics, and capabilities, choice of interior construction materials.

ARCH 350 Local Internship, 0 Crs.
The course aligns students' educational outcomes with the requirements of skill set and professions. Students must complete 160 hours of training in approved locations in Jordan by the end of the third academic year. This includes office and field training to prepare the students for the job market in architecture and interior architecture. Emphasis is on standard business practices and formats, as well as consolidating a body of work in a manner that best expresses student abilities and meets the expectations of the situation at hand. Special attention is given to codes of professional practice: technical, administrative and financial responsibilities of the architect in dealing with clients, colleagues, consultants and building contractors; contract negotiation; usage information; and planning and building legislations.

ARCH 351 Working Designs, 3 Crs.
This course provides students with the knowledge and skills for understanding and producing the working designs in the form of building information models: integration of structures, environmental systems, construction materials and architectural detailing, and the relationship between different types of architectural drawings, specifications, and construction techniques.

ARCH 353 Land Surveying, 2 Crs.
The course presents surveying principles and techniques: measurement of distances, triangulation, taping errors, corrections, differential and cross sectional leveling, compass use, measuring heights, elevations, computing angles (amplitude, azimuth), construction and topographic surveys, using traditional and advanced techniques.

ARCH 354 Project Management and Site Organization I, 3 Crs.
The course concerns the basic concepts of the professional practice in architecture. It also concerns the planning and operation of construction projects by the architect, in addition to the coordination and control of personnel, materials and machines, scheduling, estimation, pricing and analysis, purchasing cost control, and other topics. The influence of construction procedures on design processes, the common and civil laws as applied to engineering contracts.

ARCH 355 Interior Construction Works II, 3 Crs.
The course concerns the finishing materials and techniques: tiling, flooring, carpet construction and quality, plastering, wood paneling, metal grills, partitions, paints, wall and ceiling materials, and other components such as moldings, door hardware and door materials, as well as lighting fixtures, air conditioning outlets and chimneys.

ARCH 451 Design and Build, 3 Crs.
This course presents an option for students who want to design and build from their own ideas of architecture. The course starts as a three-week design project of the students' choosing, with directions from the professor with regard to scope and feasibility of construction. During this first phase, students design and produce detailed drawings of a

conceived piece of architecture that they later build together. For the remaining seven weeks, the students engage in material selection and acquisition, and construction of their design. They team out to learn the construction process of buildings.

ARCH 454 Interior Textiles, Accessories, and Resources, 3 Crs.
The course introduces properties and applications for textiles, accessories and various other recourses that can be selected, specified, installed, and maintained in an interior environment. Topics include soft and hard materials for flooring, walls, ceilings, and upholstery, as well as equipment, applications, millwork, and cabinetry. Product sources and specifications are covered along with how to measure, correctly install and maintain the various materials.

ARCH 457 Advanced Construction Systems, 3 Crs.
This course presents advanced building construction systems: suspension structures, geodesic domes, folded plates, space frames, single and multi-layer systems; shells; folded plates; pneumatic systems; choice of structural systems and construction materials; assessment of their potentials and limitations; and basic principles of structural design.

ARCH 458 Contracts, Specifications and Quantity Surveying, 3 Crs.
This course concerns the preparation of feasibility studies and tender documents for architectural projects; specification writing; preparation of bills of quantities; measurement systems, cost estimating; and legal and management issues.

ARCH 459 International Internship, 12 Crs.
This course is oriented towards partnerships and co-operation programs between the University and professional firms, studios and agencies in Germany. Students will attend a six-month internship program in Germany to align their educational outcomes with the requirements of skill set and professions in Jordan and the region.

ARCH 554 Project Management and Site Organization II, 3 Crs.
The course focuses on the project management processes, organizational structure, construction project participants, organizing and leading the construction project, project delivery methods, project chronology, construction services during design, bidding and procurement, construction closeout, project planning and scheduling, project cost estimate, controlling project time, cost and quality, job site administration, principles of programming office and field works; linear planning; network planning; critical path in supervision and follow-up; pinpointing and controlling critical points; revising and updating the network through checking operations, time schedules, cost, management of workers and working systems, contractual documents, general and special conditions, and safety issues on the construction sites .

ARC 453 Building and Site Documentation, 3 Crs.
This course aims to provide the students with the skills and abilities to document buildings and sites including the physical documentation as well as the narrative stories that reflect the history, significance and meaning of a specific building or site. It is a field-project oriented using conventional and advanced technologies, different types of thematic surveys, inventories, fieldwork, and research.

IARC 355 Interior Working Designs, 3 Crs.

This course focuses on the products and legal contracts related to interior architecture, i.e., the construction documents. A wide range of skills and knowledge are required to complete the construction document. Topics include drawing types, drawing format, processes, building codes, accessibility, materials and timelines. Students develop a thorough understanding of the knowledge required, the processes undertaken, the scope of services normally provided, and the groups involved.

Field 6: Engineering Systems

ARCH 261 Structural Systems I, 3 Crs.
The course covers behavior of building structural systems; moment distribution, forces, stability, and mechanical properties of structural materials; analysis of stress, reactions, shear and bending; structural classifications: linear, planar, volumetric; choice of structural systems: column and beam, truss and frame systems, arch and barrel vault systems; choice of construction materials: reinforced concrete and steel. The course is structured on soft-numerical teaching methods where emphasis is given to morphology and behavior rather than to detailed calculations.

ARCH 262 Utility Planning and Design I, 3 Crs.
The course introduces the operation and design of building systems for climate control, water and drainage, life safety. It also highlights the design of heating, ventilating, and air conditioning (HVAC) systems for buildings. Systems are analyzed for their effect on building form, construction cost and operating efficiency.

ARCH 361 Structural Systems II, 3 Crs.
The course concerns the basic principles of structural design, with particular emphasis on the design of reinforced concrete structures and steel. The course aims to provide the student with the essential knowledge of structural systems behavior, choice of structural systems and choice of construction materials. The course is structured on soft-numerical teaching methods where emphases are given to the morphology and behavior rather than on detailed calculations.

ARCH 362 Utility Planning and Design II, 3 Crs.
The course introduces the operation and design of building systems for electrical supply, illumination, transportation (elevators and escalators), and noise control. Systems are analyzed for their effect on building form, construction cost and operating efficiency.

ARCH 363 Lighting Design, 2 Crs.
The course introduces lighting design for interior environments. Students explore human visual perception, properties of natural and artificial light, lighting devices and controls, energy issues, and visual communication of lighting designs including applications to specific design problems.

Field 7: Environment

ARC 371 Design of Sustainable Buildings, 5 Crs.
A project-based course; concerns the design of sustainable buildings through the understanding of the physical environment with a focus on climate: the atmosphere and its related phenomena, e.g., the greenhouse effect, air pollution and acid rains; energy sources (renewable and non–renewable); environmental controls at the levels of the building, neighborhood, city and region; natural and mechanical environmental controls; sustainable ecological design: open and closed systems; the development of "hi-tech" and "eco-tech" and their introduction into architectural expression; and studies of model cases.

ARCH 571 Architectural Environmental Systems, 3 Crs.
The course provides an analysis of the physical environment with a focus on climate: the atmosphere and its related phenomena, e.g., the greenhouse effect, air pollution and acid rains; energy sources (renewable and non–renewable); environmental controls at the levels of the building, neighborhood, city and region; natural and mechanical environmental controls; sustainable ecological design: open and closed systems; the development of "hi-tech" and "eco-tech" and their introduction into architectural expression; and studies of model cases.

Field 9: Graduation Project

ARCH 591 Graduation Project I, 1 Crs.
The course is oriented towards systematic analysis of the graduation project dealing with nature of project, functional and spatial relationships, location and setting, physical and human environments, use of case studies, and provision of synthesis and alternative concepts as design solutions. The outcome will be presented in both written report and visual presentation.

ARCH 592 Graduation Project II, 6 Crs.
A project-based course continuation of ARCH 591. It deals with thesis preparation and research outcomes and synthesis, it proceeds to develop preliminary architectural design concepts, assesses alternative design approaches, development of design through systematic process of evaluation of spatial, functional, social, structural, environmental, and aesthetic aspects, and, finally, presents the complete design project. This includes the preparation of a full set of working design drawings.

ARCH 593 Graduation Project I, 1 Crs.
The course is oriented towards systematic analysis of the graduation project dealing with nature of project, functional and spatial relationships, location and setting, physical and human environments, use of case studies, and provision of synthesis and alternative concepts as design solutions. The outcome will be presented in both written report and visual presentation.

ARCH 594 Graduation Project II, 6 Crs.
A project-based course continuation of ARCH 593. It deals with thesis preparation and research outcomes and synthesis, it proceeds to develop preliminary architectural design concepts, assesses alternative design approaches, development of design through systematic process of evaluation of spatial, functional, social, structural, environmental, and aesthetic

aspects, and, finally, presents the complete design project. This includes the preparation of a full set of working design drawings.

Courses offered by the Department of Design and Visual Communication:

DES 130 Freehand Sketching I, 2 Crs.
This course teaches students perspectives of observation; perception of solids and voids in space; objective recording of three-dimensional form onto flat surface representing a two-dimensional visual frame; drawing in various media: pencil, ink, water color, etc; and textural and tonal qualities introduced and enhanced through freehand sketching. Students will produce sketchbooks as a device used sketch, draw and record existing events and visualize concepts.

DES 133 Calligraphy and Ornaments, 3 Crs.
The course will teach development of lettering and ornaments throughout history: Arabic and Latin letters, their proportions, structure, characteristics and different styles as well as ornamentations inspired by vegetation, animals, stars, and geometry. It also studies use of ink pen and brush in the creation and execution of various lettering styles, works of calligraphy and ornaments, with a focus on esthetic quality of single forms and details. Exploring applications under contemporary communicative aspects is further included.

DES 135 Freehand Sketching II, 2 Crs.
This course is a continuation of DES 130; aims to acquire methods and develop skills of sketching as a means of visualization in the design-process; to further develop acquired skills and knowledge in analytical freehand sketching; to acquire an understanding about various modes of representation within architecture and design; their specific potential and limitations in visual communication; to develop awareness about representation as symbolic form. Students will produce sketchbooks as a device used sketch, draw and record existing events and visualize concepts.

DES 136 Rendering and Presentation Techniques, 2 Crs.
Rendering and presentation techniques concern both the art of mastering the available means of persuasion and the study of how oral, written, and visual communication projects the intentions of individuals and groups, makes meanings, and affects audiences. The purpose of this course therefore is two-fold: to help students become more effective communicators by learning the various presentational situations and techniques; and to help them understand how various forms of communication work by learning some of the strategies of presentation techniques analysis.

DES 151 Principles of Photography, 2 Crs.
The course discusses the significance of medium photography within communication processes and the difference between human perception and photographic image, reflecting such aspects as subjectivity and objectivity. Through creative assignments that emphasize conceptual development and technical skills, students will explore the nature of two-dimensional medium photography and learn to use the creative effects of display window, aperture, exposure time, camera movement, manipulation of perspective, light and illumination. The course also includes an introduction to basic digital image manipulation, input and output strategies using digital cameras and creative camera controls. Masking techniques, paths, panoramas, photo retouching, and stereoscopic imaging are also included.

The course focuses finally on proficiency in working with equipment and software combined with creativity to produce a quality portfolio.

DES 152 Model-Making Techniques, 2 Cr

A practical course covering model-making skills and techniques for theatre, film, animation, and graphic and product design. Emphasis is made on accessible techniques of building, modeling, surfacing and finishing relevant to designers in various disciplines. There is a focus on 'realism' in representation, geared more to theatre and film work. Areas covered include methods of constructing or shaping with card, plastics and foams; methods of casting; modeling with soft materials; figures; techniques of soldering and etching metals; scenic, such as plants and trees; various surface/texture treatments and paint finishes.

DES 250 Photography Studio, 2 Crs.

This advance level course emphasizes theoretical knowledge, which is needed for the development of professionalism in photography. Beside advance technical knowledge of equipment and digital image processing, students will also get to know the various principles and concepts concerning artistic expressions, design elements and graphical presentation. The knowledge will widen the students' scope for creative imaging.

DES 253 Workshop Technology, 2 Crs.

This course is concerned with product design production methods. It engages the students in building three dimensional physical models of their design, material, selection and acquisition, and construction of models using woodwork, metalwork, welding, casting, and the like. The course includes excursions to industrial design production units.