Northern Technical University
الجامعة التقنية الشمالية

Bachelor of Science (B.Sc.) – Architecture and Building techniques engineering

البكالوريوس التقني -هندسة تقنيات العمارة والبناء

جدول المحتويات | Table of Contents

1. Mission & Vision Statement

Vision Statement

Preparing technical architects who possess the knowledge to develop and new visions for a sustainable environment**.**

Mission Statement

A creative architectural engineer capable of design, analytical thinking and implementation...

2. Program Specification

Program code:	BSc-Arc	**ECTS**	300
Duration:	5 levels, 10 Semesters	**Method of Attendance:**	Full Time

Architecture and Building techniques engineering is committed to the study of natural and artificial systems primarily comprising cities and buildings. The faculty and its curricula are organized around two basic disciplines of design and planning. Problems ranging from the creation of architecture to landscapes and settlement systems are covered in lectures, field work and studios, where the aim is to bring together knowledge, methodology, theory and high levels of professional skills within the framework of projects.

3. Program Objectives

1. Giving importance to the technical and practical aspects of architectural culture.

2. Linking theoretical aspects with design aspects, making them a field of application and creativity.

3. Providing broad-based academic materials that enable students to delve into specific specializations or scientific research.

4. Providing students with sufficient hours in studios, enabling them to make independent decisions.

5. Connecting architecture to the cultural, historical, geographical, and social nature of the region.

6. Empowering students to use sustainable materials in design.

7. Empowering students to implement and manage engineering projects.

4. Student Learning Outcomes

Be able to apply creative problem-solving skills to architectural problem solving

Demonstrate a knowledge of architectural history, theory, and practice in the solution of architectural design problems in a global society

Be able to utilize freehand drawing, architectural graphics, and model building skills in the solution of design problems

Be able to utilize the computer as a tool in a wide range of documentation and presentation applications, using CADD, 3-D visualization and rendering, electronic image composition and editing software

Be able to identify, formulate, and effectively communicate the critical issues involved in the solution of architectural design problems

5. Academic Staff

Ali A. Kamal | Ph.D. in Civil engineering | Assistant Prof
ali.engi1992@ntu.edu.iq
Mobile no.:07723870085

Nada S. Abdulmajeed | Ph.D. in Architecture Engineering | Assistant Prof.
Email: nst_architect@ntu.edu.iq
Mobile no.:07702326661

Shawn H. said | Ph.D. in Civil engineering | Assistant Prof.
Email: shwan@ntu.edu.iq
Mobile no.: 07734344845

Qais Fadhil Hasan | Ph.D. in engineering | Prof.
Email: dr.qaishasan@ntu.edu.iq
Mobile no.:07701321451

Kamalaldin Fadhil Hasan
Ph. D. in civil engineering
Assistant Prof.
Email: dr_kamal@ntu.edu.iq
Mobil no:07709774336

Inas Mahmood Ahmed| Ph.D. in engineering | Assistant Prof.
Email: Inas. mahmood@ntu.edu.iq
Mobile no. :07701811647

Mohammed Nadhim Majeed | | M.Sc. in Architectural Engineering | Assistant Lecturer.
Email: Inas. mahmood@ntu.edu.iq
Mobile no. :07701811647

Mustafa Sabah Saleh | M.Sc. in Architectural Engineering | Assistant Lecturer
Email: mohammed.nadhim25@ntu.edu.iq
Mobile no.: 07701328999

Arjan Fakhreddin Abdullah| Ph.D. in Civil engineering | Assistant lecture

Email: arjan2006@ntu.edu.iq

Mobile no.:07701260690

Hussein Mudher Kareem | Ph.D. in Civil Engineering | Assistant lecture

Email: husseinmudher@ntu.edu.iq

Mobile no.:07706169682

Mohammed Abdulsalam Abdulkarem | M.Sc. in Civil engineering | Assistant lecture

Email: Mohammed.aziz25@ntu.edu.iq

Mobile no.: 07701315626

Mohammed Othman Hasan | | M.Sc. in Civil engineering | Assistant lecture

Email: mohammed.othman25@ntu.edu.iq

Mobile no.:07708509070

Mohammed Hamdan khudr | | M.Sc. in Civil engineering | Assistant lecture

Email: Mohammed.hamdan25@ntu.edu.iq

Mobil no:07706655105

Dunya Ali Zainalabdeen | | M.Sc. in Civil Engineering | Assistant Lecturer.

Email: Dunya.ali25@ntu.edu.iq

Mobile no. :07721907785

Rand Mohammed Aziz | M.Sc. in Civil Engineering | Assistant Lecturer

Email: rand.aziz@ntu.edu.iq

Mobile no.: 07701320053

6. Credits, Grading and GPA

Credits

(NTU) University is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is300, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs. student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب - قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

Calculation of the Cumulative Grade Point Average (CGPA)

1. The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

   CGPA of a 5-year B.Sc. degree:

   CGPA = [(1st ^{m}odule score x ECTS) + (2nd ^{m}odule score x ECTS) + ……] / 300

7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Arc 101	االرسم والتصميم المعماري architectural drawing and design	150	72	9.00	C	
Arc 103	الرسم الحر 2d, 3d freehand drawing 2d 3d	90	57	6.00	C	
TECK102	مبادئ تفاضل وتكامل Principles of calculus	60	87	6.00	C	
Arc 102	مبادي الفن والعمارة Principles of art and architecture	60	62	5.00	C	
NTU100	الديمقراطية وحقوق الانسان democracy & Human Right	30	17	2.00	B	
NTU101	اللغة الانكليزية English language	30	17	2.00	B	

Semester 2 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
NTU103	اللغة االعربية Aric Language	30	17	2	B	
Arc 104	التصميم المعماري principles of architectural design	150	72	8	C	
NTU102	الحاسوب Computer Fundamentals	45	27	3	B	
TECK103	(الورش) Workshop	45	55	4	C	
Arc 105	مواد البناء Building materials	60	12	3	C	
TECK102	الرسم الهندسي Engineering Drawings	45	77	5	c	

Semester 3 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Arc 201	التصميم المعماري architectural design	150	75	9.00	C	
TECK200	معادلات تفاضلية differential equations	60	62	5	S	
Arc 203	ميكانيك ومقاومة مواد Mechanics and materials resistance	90	57	6.00	C	
Arc 202	تركيب وانشاء المباني Buildings Construction	75	72	6.00	C	
NTU200	جرائم البعث Baath crimes	30	17	2	S	
Arc 204	تاريخ العمارة في العالم Architecture History	45	2	2	C	

Semester 4 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Arc 206	الاظهار المعماري بالحاسبة architectural drawing	90	57	6.00	C	
NTU 202	الحاسوب computer applications	30	17	3	B	
Arc 205	تصميم معماري architectural design	150	75	9.00	C	
TSCK2001	الاحصاء Statistics	45	77	5.00	S	
Arc 207	المنطق ومنهجية التصميم Logic and design methodology	45	27	3.00	C	
NTU201	اللغة الانكليزية English Language	30	17	2	B	
NTU203	اللغة العربية Arbic Language	30	17	2	B	

Semester 5 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Arc 302	تصميم معماري متقدم architectural design	153	72	9.00	C	
Arc 303	التصميم الانشائي Structural design	63	87	6.00	C	
Arc 304	تركيب المباني السلالم والارضيات stairs and floors	63	87	6.00	C	
Arc 305	اساسيات التخطيط Planning basics	63	87	6.00	C	
Arc 306	خدمات صحية sanitary service	33	42	3.00	C	

Semester 6 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Arc 307	التصميم المعماري architectural design	153	72	9.00	C	
Arc 308	مسح هندسي Engineering Surveying	63	87	6.00	C	
Arc 309	تصميم الطرق highway design	63	87	6.00	C	
Arc 310	خدمات انارة وصوتيات العمارة Building lighting and acoustics services	63	87	6.00	C	
Arc 311	خدمات كهربائية Electrical services	33	42	3.00	C	

Semester 7 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Arc 401	التصميم المعماري architectural design	153	72	9.00	C	
Arc 402	تصميم الفضاءات الداخلية Interior design	78	72	6.00	C	
Arc 403	تقنيات بناء متقدمة Advanced construction techniques	63	87	6.00	C	
Arc 404	مسح الكمي والمواصفات Quantitative Surveying specification	33	42	3.00	C	
Arc 405	تخطيط اسكاني housing planning	63	87	6.00	C	

Semester 8 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Arc 406	التصميم المعماري architectural design	153	72	9.00	C	
Arc 407	تصميم الفضاءات الخارجية Outdoor design	63	87	6.00	C	
Arc 408	الانشاء التقني technical construction	63	87	6.00	C	
Arc 409	العمارة والمناخ Architecture and climate	33	42	3.00	C	
Arc 410	نظريات العمارة architecture theories	63	87	6.00	C	

Semester 9 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Arc 501	التصميم المعماري architectural design	153	72	9.00	C	
Arc 502	ادارة المشاريع والاقتصاد الهندسي Project Management and Engineering	63	87	6.00	C	
Arc 503	منهجية البحث العلمي Scientific research methodology	33	42	3.00	C	
Arc 504	العمارة المستدامة sustainable architecture	63	87	6.00	C	
Arc 505	مشروع التخرج الاولي First project	78	72	6.00	C	

Semester 10 | 30 ECTS | 1 ECTS = 25 hr.

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Arc 506	نظريات التصميم المعماري architectural design theories	63	87	6.00	C	
Arc 507	عمارة عربية وعراقية Arabic and Iraqi architecture	63	87	6.00	C	
Arc 508	فلسفة العمارة Architecture philosophy	63	87	6.00	C	
Arc 509	نظريات النفد المعماري Architectural Criticism Theories	33	42	3.00	C	
Arc 510	مشروع التخرج النهائي Final project	153	72	9.00	C	

8. Contact

Program Manager:
Ali Abdulkhaliq Kamal | Ph.D. in Civil engineering | Assistant Prof.
Email: ali.engi1992@ntu.edu.iq
Mobile no.:07723870085

Program Coordinator:
Maha Adnan | master. In Civil engineering | Assistant Lecturer.
Email: mahaadnan3@ntu.edu.iq
Mobile no.: 07700321857