Northern Technical University

الجامعة التقنية الشمالية

First Cycle – Bachelor's degree (B.Sc.) – Surveying Engineering

بكالوريوس هندسة تقنيات الهندسة المساحة

Table of Contents | جدول المحتويات

1. Mission & Vision Statement

Vision Statement

Excellence and quality in performance and achieving leadership and excellence in the field of surveying engineering to provide the community with highly qualified surveying engineers.

Mission Statement

Qualifying the graduates of the department and the human cadres in the field of surveying engineering, in a way that contributes to meeting the needs of the country in the various engineering projects (surveying and construction) of all sizes for the departments of the public and ..private sectors

2. Program Specification

Programme code:	BSc.- Survey Eng.	**ECTS**	240
Duration:	4 levels, 8 Semesters	**Method of Attendance:**	Full Time

The university degree (Bachelor's degree) is obtained after passing the four academic stages prepared for the implementation of the academic program by attending lectures, participating in the class, preparing scientific reports, etc., participating in summer training programs, and succeeding in the various tests that are conducted throughout the academy designed for each program and for each scientific material.

Weekly courses and lessons are offered on a yearly basis to allow students to focus on one area of study at a time.

There are at least 7 subjects per academic year for each stage and each subject is taught for 30 weeks, including the test week, and students must take all lessons in the subjects in the academic year to complete the credits required to obtain the certificate.

Most of the subjects are taught in English, but we have some subjects taught in Arabic, such as human rights.

The method of distance learning is used similarly to engineering departments in Iraq due to the Corona delinquency, by providing electronic courses and lectures to help students understand the basic concepts of the department, while including means for evaluation in all subjects such as mid-year exams and final exams with the preparation of reports.

3. Program Objectives

1. Graduating qualified staff to carry out ground and photographic survey work and remote sensing techniques, as well as ribbing and leveling works for natural and artificial land surface features using traditional and modern survey devices (Total Station devices) and global navigational and cadastral signature devices (GPS, DGPS) and the ability to Maintenance and maintenance of various surveying equipment. In addition to that, the preparation and drawing of topographical, cadastral, real estate,

thematic, and detailed maps. As well as the use of geographic information systems (GIS) in order to build a database and produce digital maps in various fields.

2. Developing the teaching staff in the department by creating the appropriate atmosphere and urging the faculty members of the department to do scientific research and interest in scientific promotion, and to complete their studies to obtain higher degrees and higher experiences.

3. Seek to develop the skillful and scientific capabilities of the engineers and technicians of the department and place them in developmental courses in a way that positively affects their practical performance.

4. Opening up to the community through the public and private sector departments and providing consulting and engineering studies in the field of specialization of the department.

4. Student Learning Outcomes

Outcome 1

Cognitive objectives

Introducing the student to the subject

Outcome 2

The program's skill objectives

Teaching the student to acquire practical skills

Outcome 3

Methods of teaching and learning

The use of modern devices legends

Outcome 4

Evaluation modalities

Discussion, homework, exams

Outcome 5

Emotional and moral goals.

1- Follow the instructions

2- Doing work with desire

3- Approval of performance

Outcome 6

Evaluation modalities

Support views

- Expressing different points of view on wrong ideas - Helping projects

- Protesting against out-of-topic actions, carrying out active campaigns

5. Academic Staff

S.	Full Name	Certificate and specialization	scientific title	E-mail	Mobile no.
1	Qahtan Ahmed mohamed	Dr. Biostratigraphy	Professor	Qahtaniraqi@ntu.edu.iq	07712895896
2	Ahmed Kader Izzet	PhD Astronomy and space	Professor	ahmed_izzet@ntu.edu.iq	07700947137
3	Qais Fadhil Hasan	Ph.D civil engineering	Professor	dr.qaishasan@ntu.edu.iq	07701321451
4	Nada S. Abdulmajeed	Ph.D architecture engineering	Assistant Professor	nst_architect@ntu.edu.iq	7702326661
5	Muntadher Aidi Shareef	Doctorate in Geomatics	Assisst professor	muntadher.a.shareef@ntu.edu.iq	07709351146
6	Nihad Davut Hassan	PH.D / SURVEYING ENGINEERING	Assistant Professor	nihadhassan@ntu.edu.iq	7702307140
7	Dler Abdullah Omar	Ph.d Of Transportation	Assistant professor	Dlieromer@ntu.edu.iq	07701313858
8	Abbas Mohammed Noori	Master of Remote Sensing and GIS	Assistant Professor	abbasnoori@ntu.edu.iq	07701314699
9	Inas Mahmood Ahmed	PhD in civil engineering	Lecturer	inas.mahmood@ntu.edu.iq	07701811647
10	Kamalaldin Fadhil Hasan	Ph.D. in Civil engineering.	Lecturer	dr_kamal@ntu.edu.iq	07709774336
11	Sumaya Falih Hasan	Master in survey/photogrammetry	Lecturer	Sumaya.h.falih@ntu.edu.iq	07709351147
12	Abed Tuama jasim	Master remote sensing and surveying	Lictuer	abedtuama@ntu.edu.iq	7708578193
13	Qayssar Mahmood Ajaj	Master in Remote sensing and GIS	Lecturer	qayssarajaj@ntu.edu.iq	07701062630
14	Banaz Adeeb Fattah Agha	Master in geology	Assistant lecturer	banaz.adeeb@ntu.edu.iq	07709332233
15	Alaa Omer Najim	master in computer networks	Assistant Lecturer	alaa.omer@ntu.edu.iq	07701275643
16	Ayshagul Shaheen NAJMULDEEN	Master ofSurveying Engineering	assistant lecturer	ayshagul91@ntu.edu.	07705126126
17	Farman galeb saed	Msc in Geographical information system and surveying engineering	Assistant lecturer	farmanghaleb@ntu.edu.iq	07701999358
18	Maha Adnan Meteab	Master, geotechnic	assistant teacher	mahaadnan3@ntu.edu.iq	07700321857
19	Arjan Fakhrulddin Abdullah	Master score /Civil Engineering / Structure Department	Asstent Lecture	arjan2006@ntu.edu.iq	07701260690
20	Arjan sharfuldden omar	Master degree in surveying engineering/urban planning	Assistant lecturer	arjan.bazirgan@ntu.edu.iq	07503016273
21	Aydin Adnan Rashid	MSc. Geomatics Engineering	Assistant Lecturer	aydin.adnan@ntu.edu.iq	07702328634
22	Nabaz Yaseen Ezuldin	Master.Civil engineering	Assistant lecturer	nabaz.shexani@ntu.edu.iq	07702378753

6. Credits, Grading and GPA

Credits

(Northern Technical University) is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 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 4-year B.Sc. degree:

CGPA = [(1st module score x ECTS) + (2nd module score x ECTS) + ……] / 240

7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
SUE100	Surveying Fundementals	126	99	9.00	C	
TECK104	Workshop	94	6	4.00	S	
SUE102	Geology of Matirail and Rocks	66	84	6.00	B	
NTU102	Computer Fundementals	66	84	6.00	B	
NTU101	English Language	64	61	5.00	S	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
SUE101	Plane Surveying	126	99	9.00	C	
SUE103	Geological Engineering	66	84	6.00	C	
TECK103	Engineering Drawing	81	69	6.00	B	
TECK102	Principles of calculus	66	84	6.00	C	
NTU100	democracy & Human Right	34	42	3.00	S	

Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
SUE200	Survey Methods	126	99	9.00	C	
TECK201	differential equations	66	84	6.00	B	
SUE203	Engineering Surveying	96	54	6.00	C	
SUE202	principle of Photogrammetry	81	69	6.00	C	
TECK203	Physics	48	27	3.00	S	

Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
SUE201	Control Surveys	126	99	9.00	C	
SUE207	Digital Photogrammetry	81	69	6.00	C	
SUE206	Cartography	81	69	6.00	C	
SUE205	Statistic Engineering	66	34	4.00	B	
SUE204	Principle of civil Engineering	81	44	5.00	B	
TECK204	Summer Training 1					

Semester 5 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
SUE300	Dijital Maps	81	69	6.00	C	
TECK300	Engineering and Numerical Analysis	81	69	6.00	C	
SUE304	Cadastral Surveying	81	69	6.00	C	
SUE305	Programming with Python	81	69	6.00	C	
SUE301	Theory of the error and Adjustments	66	84	6.00	C	

Semester 6 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
SUE303	Transportation and Design Engineering	66	84	6.00	C	
SUE308	Image processing and Intelligent systems	81	69	6.00	C	
SUE306	Geographic information systems	81	69	6.00	C	
SUE302	Quantitative Surveying specification	66	84	6.00	C	
SUE407	Applications of Programing	66	84	6.00	C	
TECK302	Summer Training 2					

Semester 7 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
TECK401	Eelementary Gradution Project	62	38	4.00	C	
SUE404	Instruments Calibiration	81	69	6.00	C	
SUE403	Geodetic survey	81	94	7.00	C	
SUE402	optical Remote Sensing	81	94	7.00	C	
TECK400	Engineering project management	81	69	6.00	C	

Semester 8 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
TECK403	final Gradution project	62	38	4.00	C	
SUE401	Global Nivigation satalite system	81	69	6.00	C	
SUE405	Surveying Apparatus Maintains	81	69	6.00	C	
SUE406	radar Remotsensing	81	94	7.00	C	
SUE400	Town Planning & Trafic	81	94	7.00	C	

Contact .8

Full Name	Certificate and specialization	scientific title	E-mail	Mobile no.
Qahtan Ahmed mohamed	Dr. Biostratigraphy	Professor	Qahtaniraqi@ntu.edu.iq	07712895896
Qais Fadhil Hasan	Ph.D civil engineering	Professor	dr.qaishasan@ntu.edu.iq	07701321451
Nada S. Abdulmajeed	Ph.D architecture engineering	Assistant Professor	nst_architect@ntu.edu.iq	7702326661
Muntadher Aidi Shareef	Doctorate in Geomatics	Assisst professor	muntadher.a.shareef@ntu.edu.iq	07709351146
Nihad Davut Hassan	PH.D / SURVEYING ENGINEERING	Assistant Professor	nihadhassan@ntu.edu.iq	7702307140