Ministry of Higher Education and Scientific Research
Scientific supervision and evaluation
Department of Quality Assurance and Academic Accreditation
International Accreditation Section

The academic program description form for colleges and institutes

For the academic year 2020-2021

University Name: University of Technology

Name of Faculty: Department of Electrical Engineering

Number of sections and scientific branches in the college: (2) Two

Date of file filling: 2020

Director of the Division of Quality Assurance and University Performance:	Assistant Dean for Scientific Affairs:	Name of the Dean of the College:
Msc.Sarab Ali Mahmood	Dr. Raaed Thaaban Hammed	Dr. Montadher Sami Shaker
Date 1/10 / 2020	Date 1/10 / 2020	Date 1/10 / 2020
Signature	Signature	Signature

Check the file by:
Quality assurance and university performance
Name of the Director of the Department of Quality Assurance and University Performance: Ali Majeed Al-Dahawi
Date:- 1/10/2020
Signature

Model Description of Academic Program

Review of Performance of Higher Education Institutions(Academic Program Review)

Description of the academic program

This description of the academic program provides a brief summary of the main characteristics of the program and the expected learning outcomes of the students to demonstrate whether they have made the best use of the opportunities available. It is accompanied by a description of each course within the program

1. Educational institution	University Of Technology
2. University / Center	Electrical Engineering Department
3. Name of academic program	Electrical program
4. Name of the final certificate	B.Sc.
5. Study system	semester system
6. Accredited accreditation program	The department is preparing to obtain accreditation from an organization **ABET**
7. Other external influences	none
8. Date of description setting	2020-2021
9. Objectives of the academic program	9 (a) Preparing graduates in the field of understanding and design of electronic circuits and the use of computer skills and software development**.**

	9 (b) The ability to understand the problems to be solved and to find the target required representative of solving these problems through the collection of data for electronic circuits and scientific programs and analysis
	9 (c) Provide the educational process within the department teachers and researchers and provide public institutions with qualified engineers in the field of competence.
10 (a) - Knowledge and understanding	1- The ability to have knowledge in the fields of mathematics and specialized engineering sciences in the application of electrical engineering 2- Acquisition of the necessary sciences in the various disciplines of electrical engineering 3- Preparing the student to continue self-learning and the acquisition of new technologies and skills in the field of engineering 4- Building skills by following the right procedures.
10 (b) - Special skills	1- The ability to select and conduct the required examinations and collect, compare and analyze the results of the examinations 2- The ability to design, audit and supervise the implementation of systems related to electrical engineering 3- The ability to derive and approach engineering issues in a scientific manner and to determine the appropriate method to address emerging engineering problems.

Teaching and learning methods

Theory books and theoretical lectures

Scientific laboratories

small projects

Electronic References

Evaluation methods

Exam sudden and evaluation of homework in addition to the written exam quarterly

A quarterly exam

Exam quarterly "small projects

Preparing quarterly reports

Class discussions and discussions

Determine the grade for daily attendance

Emotional goals and values

1-Question: Search for new information and raise questions

2 - Conclusion and reasoning: think about what is beyond the information available to fill gaps in them

3 - Comparison: Note the proportions and differences between things

4- .Classification: Putting things into groups according to common characteristics

Teaching and learning methods

1. Practical labs that develop students' thinking architecture

2. Questions of intellectual tests

3. Interference with other disciplines (mathematical applications)

4. Preparing research and projects related to the subject matter

Evaluation methods

Prepare periodic reports on subjects related to the article

Implementation of small practical and applied projects

Giving the student real problems to find out the extent of his comprehension of the scientific material and linking the subjects with each other

Theoretical and practical tests

General and movable skills

1- Be able to solve any electronic problem

2 - Conducting experiments to develop any electronic circuit

3 - the ability to use the means of illustration to make polymers

4 - Identify the software ready and deal with it at a high degree that expands the base rule

5. Paying the application and encouraging them to participate in competitive forums between the branches of one college or a number of colleges

6. The use of theoretical and practical tools in the analysis and implementation of database systems

7- Use modern means of communication to interact with the team to solve a specific problem

Teaching and learning methods

by:-

1 - Presentation of exercises during the lectures and ask the student to solve at home and laboratory applications in the field of competence

2 - Monitoring the ways of learning the students and assess the growth of their learning throughout the academic year, knowledge of the needs of students and points

Weakness and strength and have the ability to assess reality

3- Adopting modern electronic means of illustration

4 -Adoption of modern books

Evaluation methods

Practical and theoretical exam
Daily tests
Homework
Work small projects
Class discussions

The contents of the Bachelor of Electrical Engineering program are listed below:

Electrical Engineering Program 2018-2019

First Year

First Year (Semester System)

Code	First Semester	Hours / Week			Units
	Subject	Lect.	Lab.	Disc.	
EE11 01	Fundamentals of Electrical Engineering I	2	-	1	2
EE11 02	Electronics Physics I	2	-	-	2
EE11 03	Mathematics I	4	-	1	4
EE11 04	Computer Science	2	2	-	3
EE11 05	Mechanical Engineering I	2	-	-	2
EE11 06	Technical English	2	-	-	3
EE1107	Workshops I	-	6	-	2
EE11 08	Electrical Engineering Lab. I	-	2	-	1
Total		**14**	**10**	**2**	**19**

Code	Second Semester	Hours / Week			Units
	Subject	Lect.	Lab.	Disc.	
EE12 09	Fundamentals of Electrical Engineering II	2	-	1	2
EE12 10	Electronics Physics II	2	-	-	2

EE12 11	Mathematics II	4	-	1	4
EE12 12	Digital Techniques	2	-	-	2
EE12 13	Mechanical Engineering II	2	-	-	2
EE12 14	Engineering Drawing & Auto CAD	-	4	-	2
EE12 15	Workshops II	-	6	-	3
EE12 16	Electrical Engineering Lab. II	-	2	-	1
Total		**12**	**12**	**2**	**18**

EE : Division of Electrical Engineering

	Hours/ Week	Units
First Semester	**26**	**19**
Second Semester	**26**	**18**

Electrical Engineering Program 2020-2021

Second Year (Semester System)

Code	First Semester / Subject	Hours / Week			Units
		Lect.	Lab.	Disc.	
EE21 01	Applied Physics I	3	-	-	3
EE21 02	Mathematics III	4	-	1	4
EE21 03	Computer Programming	2	2	-	3
EE21 04	Electronics I	2	-	1	2
EE21 05	Electromagnetic Fields I	2	-	1	2
EE21 06	Electric Networks I	2	-	1	2
EE21 07	DC Machines	2	-	1	2
EE21 08	Electrical Machines Lab.	-	2	-	1
Total		**17**	**4**	**5**	**19**

Code	Second Semester / Subject	Hours / Week			Units
		Lect.	Lab.	Disc.	
EE22 09	Applied Physics II	3	-	-	3
EE22 10	Mathematics IV	4	-	1	4

EE22 11	Instrumentation & Measurements	2	-	-	2
EE22 12	Electronics II	2	-	1	2
EE22 13	Electromagnetic Fields II	2	-	1	2
EE22 14	Electric Networks II	2	-	1	2
EE2215	AC Machines I	2	-	1	2
EE2216	Electronics Lab.	-	2	-	1
Total		**17**	**2**	**5**	**18**

EE : Division of Electrical Engineering

	Hours/ Week	Units
First Semester	**26**	**19**
Second Semester	**24**	**18**

2020-2021
Third Year (Semester System)

Code	First Semester	Hours / Week			Units
	Subject	Lec.	Lab.	Disc.	
EE31 01	Electrical Power Engineering	2	-	-	2
EE31 02	AC Machines II	2	-	1	2
EE31 03	Microprocessor Engineering I	2	-	-	2
EE31 04	Engineering Analysis I	4	-	1	4
EE31 05	Control Engineering I	2	-	1	2
EE31 06	Communication Engineering I	2	-	-	2
EE31 07	Human Rights & Engineering Skills and Ethics	2	-	-	2
EE31 08	Electrical Engineering Lab. III	-	4	-	2
EE31 09	Control Lab.	-	4	-	2
Total		**16**	**8**	**3**	**20**

Code	Second Semester	Hours / Week			Units
	Subject	Lec.	Lab.	Disc.	
EE32 10	High Voltage Engineering	2	-	-	2

EE32 11	AC Machines III	2	-	1	2
EE32 12	Microprocessor Engineering II	2	-	-	2
EE32 13	Engineering Analysis II	4	-	1	4
EE32 14	Control Engineering II	2	-	1	2
EE32 15	Communication Engineering II	2	-	-	2
EE32 16	Electronics III	2	-	-	2
EE32 17	Electrical Engineering Lab. IV	-	4	-	2
EE32 18	Communication Lab.	-	4	-	2
Total		**16**	**8**	**3**	**20**

EE : Division of Electrical Engineering

	Hours/ Week	**Units**
First Semester	**27**	**20**
Second Semester	**27**	**20**

University of Technology
Department of Electrical Engineering
Division of Electrical Engineering
2020-2021
Fourth Year (Semester System)

Code	**First Semester**	**Hours / Week**			**Units**
	Subject	Lec.	Lab.	Disc.	
EE41 01	Final Year Project I	1	2	-	2
EE41 02	Power System Analysis I	3	-	-	3
EE41 03	Elective Subject I	2	-	1	2
EE41 04	AC Machines IV	2	-	1	2
EE41 05	Power Electronics I	2	-	1	2
EE41 06	Electronics IV	2	-	1	2
EE41 07	Industrial Management	2	-	-	2
EE41 08	Electrical Engineering Lab. V	-	4	-	2
Total		**14**	**6**	**4**	**17**

Code	Second Semester	Hours / Week			Units
	Subject	Lec.	Lab.	Disc.	
EE42 09	Final Year Project II	1	2	-	2
EE42 10	Power System Analysis II	3	-	-	3
EE42 11	Elective Subject II	2	-	1	2
EE42 12	Drives	2	-	1	2
EE4213	Power Electronics II	2	-	1	2
EE42 14	Communication Engineering III	2	-	1	2
EE42 15	Operations Research	2	-	-	2
EE42 16	Electrical Engineering Lab.VI	-	4	-	2
Total		**14**	**6**	**4**	**17**

EE : Division of Electrical Engineering

	Hours/ Week	Units
First Semester	**24**	**17**
Second Semester	**24**	**17**

Curriculum Skills Map																															
please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed																															
Year / Level	Course Code	Course Title	Core (C) Title or Option (O)	Programme Learning Outcomes																											
				Knowledge and understanding							Subject-specific skills					Thinking Skills						General and Transferable Skills (or) Other skills relevant to employability and personal development								
				A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	D7	D8		
First	EE11 01	Fundamentals of Electrical Engineering I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
	EE11 02	Electronics Physics I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
	EE11 03	Mathematics I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
	EE11 04	Computer Science	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
	EE11 05	English Language I	C	*	*						*	*				*	*					*	*								
	EE11 06	Workshops I	C	*	*	*					*	*	*			*	*	*				*	*	*							
	EE1107	Engineering Drawing & Auto CAD	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
	EE12 09	Fundamentals of Electrical Engineering II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		

	EE12 10	Electronic Physics II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE12 11	Mathematics II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE12 12	Digital Electronic I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE12 13	Engineering Mechanics	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE12 14	Technical Report	C	*	*	*					*	*	*			*	*	*				*	*	*						
	EE12 15	Workshops II	C	*	*	*					*	*	*			*	*	*				*	*	*						
Second	EE21 01	Applied Physics I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE21 02	Mathematics III	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE21 03	Computer Programming	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE21 04	Electronics I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE21 05	Electromagnetic Fields I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE21 06	Electric Networks I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE21 07	DC Machines	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

	EE22 09	Applied Physics II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE22 10	Mathematics IV	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE22 11	Instrumentation & Measurements	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE22 12	Electronics II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE22 13	Electromagnetic Fields II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE22 14	Electric Networks II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE2215	AC Machines I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Third	EE31 01	Electrical Power Engineering	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE31 02	AC Machines II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

EE31 03	Microprocessor Engineering I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EE31 04	Engineering Analysis I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EE31 05	Control Engineering I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EE31 06	Communication Engineering I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EE31 07	Human Rights & Engineering Skills and Ethics	C	*	*						*	*				*	*						*	*							
EE32 10	High Voltage Engineering	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EE32 11	AC Machines III	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EE32 12	Microprocessor Engineering II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EE32 13	Engineering Analysis II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EE32 14	Control Engineering II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EE32 15	Communication Engineering II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

	EE32 16	Electronics III	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	EE41 01	Final Year Project I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE41 02	Power System Analysis I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE41 03	Electrical distribution system	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE41 04	AC Machines IV	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE41 05	Power Electronics I	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE41 06	Electronics IV	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE41 07	Industrial Management	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE42 09	Final Year Project II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE42 10	Power System Analysis II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE42 11	Electrical Design	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE42 12	Drives	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE4213	Power Electronics II	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

	EE42 14	Communication Engineering III	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	EE42 15	Operations Research	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*