Program Curriculum Form

University Name: Northern Technical University.....

Faculty/Institute: Technical Engineering College Mosul.....

Scientific Department: Unmanned Aerial Vehicle Engineering Techniques

Academic or Professional Program Name: Bachelor of Unmanned Aerial Vehicle Engineering Techniques

Final Certificate Name: Bachelor of Unmanned Aerial Vehicle Engineering Techniques

Academic System: Bologna Process.....

Description Preparation Date: 2/9/2025

File Completion Date: 2/9/2025

Signature:

Head of Department Name:

Prof. Dr. Amer F. Sheet

Date: 2/9/2025

الكلية التقنية الهندسية / الموصل
قسم تقنيات هندسة الطائرات المسيرة

Signature:

Scientific Associate Name:

Prof. Dr. Mohammed Sabah Jarjees

Date: 25/9/2025

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department: Assist. Lect. Warqaa Hashim Mahmood

Date:

Signature:

الجامعة التقنية الشمالية
الكلية التقنية الهندسية
الموصل

A.J

Approval of the Dean

Northern Technical University / Technical Engineering College – Mosul / Dept. of UAVs Engineering Tech.

First level/ First semester						
Type of requirement	Name of course	Theoretical Hours No.	Practical hours No.	Number of units	ECTS	Course symbol
	Topic in English					
University	Human Rights	2	0	2	2	NTU 100
	English Language1	2	0	2	2	NTU 101
College	Engineering drawing	0	4	6	6	UAV102
	Mathematics 1	4	0	6	6	UAV103
	Engineering Mechanics-Statics	4	2	6	6	UAV101
	DC Electrical circuits	4	2	6	8	UAV100
Total units for the semester		16	8	30	30	

First level/ Second semester						
Type of requirement	Name of course	Theoretical Hours No.	Practical hours No.	Number of units	The paved the way	Course symbol
	Topic in English					
University	Computer Principles 1	2	2	3	3	NTU 102
	Arabic Language	2	0	2	2	NTU 103
College	Theory of drones	3	0	6	6	UAV104
	Engineering workshop	0	3	6	6	UAV105
	AC Electrical circuits	4	3	8	8	UAV106
	Physics	3	2	5	5	UAV107
Total units for the semester		14	10	30	30	

Second level/ First semester						
Type of requirement	Name of course	Theoretical Hours No.	Practical hours No.	Number of units	ECTS	Course symbol
	Topic in English					
University	Crimes of Ba'ath Regime	2	0	2	2	NTU200
College	Mathematics 2	2	0	5	5	UAV204
	Fundamentals of communication	3	2	5	5	UAV200
	Fundamentals of Electronics	3	2	5	5	UAV201
	Introduction to Drone Technology	2	0	5	5	UAV202
	Control Basics	2	2	5	5	UAV203
	Modeling and simulation	2	2	3	3	UAV205
Total units for the semester		16	8	30	30	

Second level/ second semester						
Type of requirement	Name of course	Theoretical Hours No.	Practical hours No.	Number of units	ECTS	Course symbol
	Topic in English					
University	English Language	2	0	2	2	NTU 202
	Arabic Language	2	0	2	2	NTU 203
	Computer Principles 2	3	2	6	6	NTU 201
College	Thermodynamics	2	2	6	4	UAV208
	Smart Sensor Systems for UAV Applications	2	2	5	6	UAV209
	Fundamentals of Electrical Machines for Drones	3	2	5	5	UAV210
	Engineering materials for UAVs	2	0	5	5	UAV211
Total units for the semester		14	8	30	30	

Third level/ First semester						
Type of requirement	Name of course	Theoretical Hours No.	Practical hours No.	Number of units	ECTS	Course symbol
	Topic in English					
College	Digital electronic circuits	2	2	5	5	UAV300
	Communication Systems	2	2	5	5	UAV301
	Design of UAV by CAD/CAM	3	2	5	5	UAV302
	Aerodynamics 1	4	2	5	5	UAV303
	Microprocessor	2	2	5	5	UAV304
	Numerical analysis	2	0	5	5	UAV305
Total units for the semester		15	10	30	30	

Third level/ Second semester						
Type of requirement	Name of course	Theoretical Hours No.	Practical hours No.	Number of units	The paved the way	Course symbol
	Topic in English					
College	Fundamentals of UAVs Systems	2	2	5	5	UAV306
	Digital Signal processing	2	2	5	5	UAV307
	Artificial Intelligence systems	2	2	5	5	UAV308
	UAV Electronics and special machines	3	2	6	6	UAV309
	Aircraft vibrations	2	2	5	5	UAV310
	Drone systems laboratory	3	2	4	4	UAV311
Total units for the semester		14	12	30	30	

Fourth level/ First semester						
Type of requirement	Name of course	Theoretical Hours No.	Practical hours No.	Number of units	ECTS	Course symbol
	Topic in English					
College	Digital Communications	4	2	5	5	UAV400
	Aerodynamics 2	4	2	5	5	UAV401
	Remote radio control	4	2	5	5	UAV402
	Image processing and UAV camera systems	3	2	5	5	UAV403
	Smart sensors and actuators	3	2	5	5	UAV404
	Project	0	1	5	5	UAV405
Total units for the semester		18	11	30	30	

Fourth level/ Second semester						
Type of requirement	Name of course	Theoretical Hours No.	Practical hours No.	Number of units	ECTS	Course symbol
	Topic in English					
College	Communication Protocols and WIFI Standard	2	2	4	4	UAV406
	Aircraft Structures	2	2	5	5	UAV407
	Avionic Systems	2	2	5	5	UAV408
	Aircraft stability	3	2	5	5	UAV409
	Advanced Aerial systems and applications	0	1	6	6	UAV410
	Project	0	1	5	5	UAV411
Total units for the semester		12	11	30	30	