

TECHNICAL UNIVERSITY OF GABROVO
FACULTY OF MECHANICAL AND PRECISION ENGINEERING

Endorsed with Academic Council resolution
Record № 1 dated 06.10.2009

Approved by
Rector /s/

QUALIFICATION REFERENCE

Degree course: **INDUSTRIAL ENGINEERING**

Educational-qualification degree: **MASTER**

Field of higher education: **TECHNICAL SCIENCES**

Professional trend: **5.13 GENERAL ENGINEERING**

Professional qualification: **MASTER-ENGINEER**

ANNOTATION

The degree course in Industrial Engineering offers a broad profile engineering major. Master's degree holders acquire inter-disciplinary knowledge in general engineering, modern technology and equipment. Training is carried out in compliance with approved curriculum which meets the requirements for Master's degree in higher education as well as the European standards in this field.

- possess the ability and knowledge for developing their own business whereby they can perform both in the managerial and executive aspect of business work.

TRAINING REQUIREMENTS

The course is structured as an extension of the bachelor degree course in Industrial Engineering.

VOCATIONAL PURPOSE

Successful graduates of the Master's degree course in Industrial Engineering are well able to successfully perform the following activities:

- utilize modern industrial technology in the field of mechanical engineering, electrical equipment and electronics.
- operate as managers or heads of engineering departments, development centers, as experts, coordinators, etc. на

All bachelor degree holders in Industrial engineering are eligible to continue their studies in the course.

Bachelor degree holders ,who have graduated degree courses in other majors and are enrolled in the Master's degree course in Industrial engineering, receive training in accordance with a supplemented

Academic objectives of the Master's degree course are attained through in-depth theoretic and specialized training in the subjects: "Modelling and simulation of dynamic processes", "Power engineering", "Marketing and management", "Electric equipment of industrial enterprises", "Automated systems' dynamics", "Non-traditional energy sources", "Fluidized systems in industry", "Computerized methods in continuous media", "Ventilation and air-conditioning equipment". Training is full-time and is carried out in two semesters.

curriculum and in compliance with the acquired professional qualification.

AREAS OF PROFESSIONAL REALIZATION

- Designers and product engineers of products in the field of mechanical engineering, electrical engineering and equipment, electronics, etc.

- Managers of manufacturing companies or industrial units, centers for design and development of modern systems and technologies;

- Experts in companies and affiliations;

Diagnostic experts in centers for machine service as well as devices and equipment in mechanical engineering, electrical engineering and electronics

They can follow prospective career in academic teaching or as researchers by continuing their studies in a doctoral degree course.

This qualification reference was endorsed by the Faculty Council on 23.06.2009 and registered in Record № 5

Department Chair /s/

Dean /s/

TECHNICAL UNIVERSITY OF GABROVO
FACULTY OF MECHANICAL AND PRECISION ENGINEERING

Endorsed with Academic Council resolution
Record № 1 dated 06.10.2009

Approved by
Rector /s/

Updated with Academic Council resolution
Record № 2 dated 30.09.2014

CURRICULUM

Degree course: **INDUSTRIAL ENGINEERING**

Academic degree: **MASTER**

Higher education area: **TECHNICAL SCIENCES**

Professional trend: **GENERAL ENGINEERING**

Professional qualification: **MASTER-ENGINEER**

Form of training: **FULL-TIME**

Duration of training: **TWO SEMESTERS**

No	SUBJECTS TAUGHT	FORMS OF ASSESSMENT		COURSE-WORK	WORKLOAD ON NUMBER OF ACADEMIC HOURS				WEEKLY DISTRIBUTION	TYPE OF SUBJECT	ECTS CREDITS T / C
		E - EXAMINATION	CA – CONTINUOUS ASSESSMENT		LEC-TURES	SEMINAR CLASSES	LABORATORY CLASS-ES	TOTAL	L + SC + LC		
1	2	3	4	5	6	7	8	9	10	11	12
	<i>First Semester</i>										
1.	Dynamics of Automated Systems	E			45	15	15	75	3+1+1	C	6/2.8
2.	Modeling and Simulation of Dynamic Processes	E		CW	30	15	30	75	2+1+2	C	6/2.8
3.	Power Engineering	E			30	0	15	45	2+0+1	C	4/1.7
4.	Computer-based Methods in Mechanics of Uninterrupted Continuum	E			30	0	15	45	2+0+1	C	4/1.7
5.1	Electrical Equipment of Enterprises	E			30	0	15	45	2+0+1	E	4/1.7
5.2	Heat and Gas Supply	E			30	0	15	45	2+0+1	E	4/1.7
6.1	Reliability and Diagnostics	E			30	15	0	45	2+1+0	E	4/1.7
6.2.	Theory of Experiment	E			30	15	0	45	2+1+0	E	4/1.7

1	2	3	4	5	6	7	8	9	10	11	12
7.	Dynamics of Automated Systems - project									C	2/0
8.	Theory and Practice of Entrepreneurship	E			30	15	0	45	2+1+0	O	4/1.7
	First semester	6 E		CW	195	45	90	330	13+3+6		Σ 30
	Second Semester										
9.1	Proportional Servo Equipment	E			48	0	16	64	6+0+2	E	5/2.4
9.2	Hydro-Electric Power Plants and Pump Stations	E			48	0	16	64	6+0+2	E	5/2.4
10.	Synthesis of Robots and Manipulators	E			24	0	16	40	3+0+2	C	3/1.5
11.1	Hydro and Pneumatic Conveying Systems	E			32	16	16	64	4+2+2	E	5/2.4
11.2	Ventilation and Air-Conditioning Equipment	E			32	16	16	64	4+2+2	E	5/2.4
12.	Pre-graduation Apprenticeship										2/0
13.	Graduation Thesis Work										15
	Second semester	3 E			104	16	48	168	13+2+6		Σ 30
	Total for the entire course of study	9 E		KP	299	61	138	498			Σ 60

ABBREVIATIONS USED

C – compulsory subjects according to the curriculum

E – elective subjects

O – optional subjects

SUBJECTS		WORKLOAD	
Type	Number	Hours	%
C	6	280	57
E	4	218	43
TOTAL:	10	498	
O	1	45	100

Note: The numbers quoted in column 11 under the abbreviations T / C refer to: T – total number of credits, C – credits from contact hours.

Endorsed with Faculty Board resolution, Record № 5 dated 23.06. 2009

Updated with Faculty Board resolution, Record № 8 dated 04.12.2013 and № 6 dated 24.09.2014

Department Chair /s/

Dean /s/