

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: **TEXTILE ENGINEERING AND TECHNOLOGIES**

Educational-qualification degree: **MASTER**

Field of higher education: **TECHNICAL SCIENCES**

Professional trend: **5.1 MACHINE ENGINEERING**

Professional qualification: **MASTER- ENGINEER**

ANNOTATION

This qualification reference specifies the vocational purpose of specialists who are Master's degree holders in Textile engineering and technologies; professional trend code 5.1 "Machine engineering" as well as the qualification requirements for their training.

VOCATIONAL PURPOSE

Successful graduates of the Master's degree course in Textile engineering and technologies are supposed to do well as professional researchers, designers, developers, managers, marketing analysts in companies and academic teachers in institutes of higher learning related with the design and production of textile and clothes making equipment and technologies as well as activities closely related with company management, marketing research of textile industry, participation in all spheres of national economy, science and education. Such specialists may compete for prospective careers on foreign labor markets.

TRAINING REQUIREMENTS

Candidates for Master's degree in Textile engineering and technologies TET should have a bachelor degree in the same course. The period of training is two semesters.

Training of specialists is focused predominantly on theory including comprehensive fundamental training and specialized disciplines. Studies complete with thesis defense.

Overall course training in TET provides:

- Theoretic and professional background for successful performance as design, research, maintenance and diagnostic specialists in the area of modern textile materials and technologies ,and pertaining research in textile and ready-made clothes machinery;
- Development of adaptability skills within the context of social, economic and technology changes in TET;
- Conditions for international comparability of acquired knowledge and skills for teamwork.

AREAS OF PROFESSIONAL REALIZATION

Successful course graduates take the professional qualification of Master-Engineer and are well fit to follow careers as:

- Research team leaders, heads of design and product engineering units, affiliations and centers for experimentation and introduction of modern TET;
- Company managers or heads of marketing and servicing departments;

- Coordinators of program teams;
- Experts attached to companies and affiliations or as auditors in quality management systems.

Likewise they are eligible to continue their studies in a doctoral degree course or join collegiate academic staff.

This qualification reference was endorsed by the Faculty Council with Record № 5 dated 23.06.2009.

Department Chair /s/

Dean /s/

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CURRICULUM

Degree course: **TEXTILE ENGINEERING AND TECHNOLOGIES**

Academic degree: **MASTER**

Higher education area: **TECHNICAL SCIENCES**

Professional trend: **MECHANICAL ENGINEERING**

Professional qualification: **MASTER- ENGINEER**

Form of training: **FULL-TIME**

Duration of training: **2 /TWO/ SEMESTERS**

| № | SUBJECTS TAUGHT | FORMS OF ASSESSMENT | | COURSE-WORK | WORKLOAD IN NUMBER OF ACADEMIC HOURS | | | | WEEKLY DISTRIBUTION | TYPE OF SUBJECT | ECTS CREDITS |
|------|--|---------------------|----------------------------|-------------|--------------------------------------|-------------------|--------------------|------------|----------------------------------|-----------------|--------------|
| | | E - EXAMINATION | CA – CONTINUOUS ASSESSMENT | | LECT-URES | SEMI-NAR CLASS-ES | LABORATORY CLASSES | TOTAL | L + SC + LC | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | <i>First Semester</i> | | | | | | | | | | |
| 1. | Modeling and Optimization of Processes in Textile Production | E | | CW | 30 | 0 | 30 | 60 | 2+0+2 | C | 5/2.3 |
| 2.1. | Quality Management Systems | | CA | | 30 | 0 | 15 | 45 | 2+0+1 | E | 5/1.7 |
| 2.2. | Theory and Practice of Entrepreneurship | | CA | | 30 | (15) | 0 | 45 | 2+1+0 | E | 5/1.7 |
| 3. | Modern Materials and Technologies, part 1 | E | | | 30 | 0 | 15 | 45 | 2+0+1 | C | 5/1.7 |
| 4. | Design of Technical Textile Articles | E | | | 30 | 0 | 30 | 60 | 2+0+2 | C | 5/2.3 |
| 5. | Modern Spinning Methods | E | | | 30 | 0 | 30 | 60 | 2+0+2 | C | 5/2.3 |
| 6. | Automated Systems in Textile Industry | E | | CW | 30 | 0 | 30 | 60 | 2+0+2 | C | 5/2.3 |
| 7. | Mechanical Vibrations | | | | 30 | 0 | 15 | 45 | 2+0+1 | O | |
| | <i>First semester</i> | 5 E | 1 CA | 2 CW | 180 | 0 (15) | 150 (135) | 330 | 14+0+8=22 (14+1+7=22) | | Σ 30 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----|---|------------|-------------|-------------|------------|---------------|------------------|------------|-------------------|----|-------------|
| | <i>Second Semester</i> | | | | | | | | | | |
| 8. | Computer-based Methods in Mechanics of Uninterrupted Continua | | CA | | 0 | 0 | 40 | 40 | 0+0+5 | C | 3/1.5 |
| 9. | Modern Materials and Technologies, part 2 | E | | | 24 | 0 | 16 | 40 | 3+0+2 | C | 3/1.5 |
| 10. | Machines and Processes for Non-Woven Textile Materials | E | | | 24 | 0 | 16 | 40 | 3+0+2 | C | 3/1.5 |
| 11. | Clothes Design | E | | | 32 | | 24 | 56 | 4+0+3 | C | 4/2 |
| 12. | Spatial Mechanisms in the Textile and Sewing Equipment | | | | 32 | 0 | 16 | 48 | 4+0+2 | O | 4/1.8 |
| 13. | Pre-graduation Apprenticeship | | | | | | | | | | 2/0 |
| 14. | Graduation Thesis Work | | | | | | | | | | 15/0 |
| | <i>Second semester</i> | 3 E | 1 CA | | 80 | 0 | 96 | 176 | 10+0+12=22 | | Σ 30 |
| | <i>Total for the entire course of study</i> | 8 E | 3 CA | 2 CW | 260 | 0 (15) | 246 (231) | 506 | | | Σ 60 |

ABBREVIATIONS USED

C – compulsory subjects

E – elective subjects

O – optional subjects

| SUBJECTS | | WORKLOAD | |
|---------------|-----------|------------|--------------|
| Type | Number | Periods | % |
| C | 9 | 461 | 91,11 |
| E | 1 | 45 | 8,89 |
| TOTAL: | 10 | 506 | 100,0 |
| O | 2 | 93 | |

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

The curriculum was endorsed by the Faculty Board resolution, Record No 5 dated 23.06.2009.

Department Chair /s/

Dean /s/