



RĪGAS TEHNISKĀ UNIVERSITĀTE

Reģ.Nr.90000068977, Kipsalas iela 6A, Rīga, LV-1048, Latvija
Tālr.:67089999; Fakss:67089710, e-pasts:rtu@rtu.lv, www.rtu.lvwww.rtu.lv

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Study programme "Total Quality Management"

Main attributes

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| Title | Total Quality Management |
| Identification code | ICK0 |
| Education classification code | 42526 |
| Level and type | Professional Bachelor (First Cycle) Studies |
| Higher education study field | Management and Administration, Real Estate Management |
| Head of the study field | Inga Lapiņa |
| Department responsible | Faculty of Engineering Economics and Management |
| Head of the study programme | Inga Lapiņa |
| Professional classification code | 2423 |
| The type of study programme | Full time, Extramural |
| Language | Latvian |
| Accreditation | 26.05.2021 - 27.05.2027; Accreditation certificate No 2022/35 |
| Volume (credit points) | 160.0 |
| Duration of studies (years) | Full time studies - 4,0; Extramural - 5,0 |
| Degree or/and qualification to be obtained | Professional bachelor degree in quality management / engineer in process quality management |
| Qualification level to be obtained | The 6th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF); the 6th level of professional qualification |
| Programme prerequisites | General or vocational secondary education |

Description

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| Abstract | <p>Nowadays, Quality Management is an integral part of operations of any organization. Quality management and conformity assessment are the tools assisting to create such an organizational environment, where processes, products and services meet the needs and expectations of customers/ clients, are safe and reliable in use, as well as creating value both for the society and environment.</p> <p>Students of the professional bachelor study programme acquire the necessary knowledge, skills and competencies for comprehensive and effective work in the field of quality management. Study programme graduates are able to develop processes; to implement and monitor development activities; to develop, implement, manage and improve the quality management system; to analyse, evaluate, form, disseminate and put into practice quality management methods in order to facilitate the ongoing effectiveness and efficiency of business performance, and to be aware of the interests of organisation's stakeholders.</p> <p>Study programme graduates are able to work as quality managers, quality engineers, quality management system specialists at organizations and companies of various types and sizes in different branches of industry and areas of activity.</p> |
| Aim | <p>The aim of the study programme is to prepare Engineers in Process Quality Management - specialists in quality system engineering, quality assurance, conformity assessment and risk management, to develop students' understanding of professional ethics and socially responsible management, to broaden their vision, as well as form a basis for further studies to acquire a higher level of knowledge and competence.</p> |
| Tasks | <p>The general tasks of the study programme are as follows:</p> <ul style="list-style-type: none">- to ensure a competitive bachelor's level education corresponding to international standards in quality engineering and conformity assessment;- to provide students with a comprehensive knowledge, to develop special skills and competencies required in the labour market for quality managers or process quality engineers, to train students for practical work;- to ensure development and amendments to the content of the study programme, the study process and research work in line with the changes in the field of quality management and conformity assessment, international practice, science and didactic;- to develop students' interest in further professional development, further perfection of academic knowledge, as well as develop students' research skills and facilitate their application;- to stimulate students' interest in social processes, to enable them to develop into positive, modern, reliable, ethical and capable individuals, who can act independently and take autonomous decisions;- to encourage interaction between the academic staff and students in the development of research work and practical use of the research results in quality management and conformity assessment in various organisations, and promote international mobility and participation in projects. |

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| Learning outcomes | <p>The graduates of the study programme:</p> <ul style="list-style-type: none"> - are able to develop and implement an organization's quality management system taking into account stakeholder interests, quality risks, and normative acts, standards and other requirements applicable to systems, products and processes; - are able to identify, evaluate and monitor process quality, use process quality assessment methods and tools appropriate to the organization's needs, analyse and interpret the received data; - are able to identify the factors and risks influencing the quality, perform quality measurements and identification and assessment of related risks; - are able to plan and implement a conformity assessment program and to organise and participate in the internal and external quality assessment process; - are able to plan the resources needed to ensure and develop the quality of systems, processes and products, determine the competence and authority of the personnel involved, manage quality development, risk prevention and mitigation activities; - are able to evaluate and improve organizational processes and their interaction, understand the key performance indicators of an organisation and assess the costs associated with quality loss; - are able to ensure compliance with applicable standards, normative acts and other requirements applicable to systems, processes and products, within the scope of their authority; - are able to carry out research according to the bachelor's level studies with added value in the field of quality management and/or conformity assessment, use information and communication technologies, analyse, interpret and present the results; - are able to work individually and in a team, continue professional development, act ethically and responsibly to avoid harming society and the environment. |
| Final/state examination procedure, assessment | <p>Study programme is concluded with the state examination, where the elaboration and defence of a bachelor's thesis in a public session of the State Examination Commission (SEC) is a constituent part of this examination. At the same time, the acquisition of key fundamental, theoretical and field-specific professional knowledge is tested. The state examination demonstrates students' ability:</p> <ul style="list-style-type: none"> - to find, summarise and analyse academic and professional literature and information (including literature in the English language); - to use appropriate research methods and information processing technologies in order to analyse and evaluate major activities and progress indicators, data on the quality of products, processes and systems; - to carry out independent or group research on a specific problem in quality or quality management and/or conformity assessment of products, processes and systems, which is topical and significant for the organisation; - to draw conclusions and to formulate appropriate recommendations; - to present the prepared recommendations and to defend their personal professional opinion. <p>The SEC consists of at least five members. The chair and at least half of the panel is composed of representatives of professional organisations or employers from the industry. Students' knowledge, skills and competence are assessed collegially by the SEC on a 10-grade scale.</p> |
| Description of the future employment | <p>Process quality engineers arrange the development of recommendations for the use of technical, technological and organisational systems and process management methods, measurements, evaluation, conformity assessment and improvement techniques. They are familiar with the classification of basic operations, support and management processes, process identification, process efficiency and effectiveness measurement principles and process characteristics. They know and are able to use quality management and development methods to foster continuous improvement of the efficiency of the organization and the quality of its products. They identify and assess quality risks, and prepare recommendations for risk mitigation and prevention measures. They design and manage the implementation of quality management systems, plan and carry out quality system audits. They ensure that the organisation's systems, processes and products meet customer requirements and needs without harming society or the environment. They are aware of the interests of the organisation's management, customers, owners and society, and manage and realise the implementation and development of quality management systems in accordance with the organisation's aims and development strategy. They perform their duties in compliance with industry-specific normative acts, standards and other requirements that apply to processes and products; encourage learning from the experience of competitors and other organisations, and understanding of good management.</p> <p>Study programme graduates are able to work as process quality engineers, quality engineers, quality management system specialists, work as self-employed persons or sole proprietors, work in public administration or commercial organisations etc.</p> |
| Special enrollment requirements | No. |
| Opportunity to continue studies | Master studies. |

Courses

| No | Code | Name | Credit points |
|------------|------------------------|--|---------------|
| A | | Compulsory Study Courses | 82.0 |
| A1 | | General Education Study Courses | 12.0 |
| 1 | MKI115 | Quality Profession - Information Course | 1.0 |
| 2 | ICA301 | Civil Defence | 1.0 |
| 3 | IVZ771 | Work Environment and Ergonomics | 2.0 |
| 4 | IKI863 | Introduction to research | 4.0 |
| 5 | IVZ746 | New Product Design and Development Methodology | 4.0 |
| A.2 | | Field-Specific Theoretical Basic and IT Study Courses | 36.0 |
| 1 | DMF101 | Mathematics | 9.0 |
| 2 | DMS201 | Mathematics (specialized course) | 4.0 |
| 3 | MFB105 | Physics | 6.0 |
| 4 | ITA704 | Economics | 4.0 |
| 5 | MKI317 | CAQ Computer Aided Quality Control | 4.0 |
| 6 | IVZ749 | Business Intelligence Technologies I | 3.0 |
| 7 | IVZ752 | Business Intelligence Technologies II | 2.0 |
| 0 | MKI335 | Process Analysis and Control | 2.0 |
| 1 | MKI320 | Process Management (study project) | 2.0 |
| A.3 | | Field-Specific Professional Study Courses | 34.0 |
| 3 | MKI469 | Environmental Compatibility and Risk Analysis | 3.0 |
| 4 | MKI321 | Market Surveillance | 4.0 |
| 5 | MKI470 | Basics of Quality Metrics | 2.0 |
| 6 | IKI864 | Conformity Assessment | 4.0 |
| 7 | MKI326 | Conformity Assessment (study project) | 2.0 |
| 8 | IKI862 | Quality Costs and Resource Analysis | 4.0 |
| 9 | IKI860 | Quality audit | 4.0 |
| 10 | IKI859 | Quality Management (study project) | 2.0 |
| 11 | IUV413 | Business and Labor Law | 3.0 |
| 12 | IKI869 | Quality Management | 6.0 |
| B | | Compulsory Elective Study Courses | 34.0 |
| B1 | | Field-Specific Study Courses | 26.0 |
| | | | <i>16.0</i> |
| 1 | IKI861 | Quality Improvement Methods | 4.0 |
| 2 | IKI866 | Metrology and Industrial Measurements | 4.0 |
| 3 | IKI865 | Standardization | 2.0 |
| 4 | IUV322 | Principles of Finances | 2.0 |
| 5 | IVZ796 | Social Responsibility and Business Ethics | 2.0 |
| 6 | ICD721 | Ergonomics and Work Psychology | 2.0 |
| 7 | ICD717 | Working Environment Risk Prevention Methods | 4.0 |
| | | <i>Mechanical Engineering and Transport</i> | <i>10.0</i> |
| 1 | ITE326 | Transport and Organization of Transportation | 4.0 |
| 2 | MAT123 | LEAN manufacturing technologies | 2.0 |
| 3 | ITE330 | Risks and Insurence in Transport | 2.0 |
| 4 | IÄS727 | Fundamentals of Logistics | 2.0 |
| 5 | ITE328 | Supply Chain Management and Freight Forwarding | 2.0 |
| 6 | ITE331 | Organisation of Traffic and Envinonment Protection | 2.0 |
| | | <i>Civil Engineering</i> | <i>10.0</i> |
| 1 | IBO743 | Practical Aspects of Construction and Basics of Planning | 6.0 |
| 2 | IBO744 | Building Information Systems and Technologies | 4.0 |
| 3 | BBR223 | Construction Technology and Safety | 4.0 |
| 4 | IBO497 | Energy Efficiency in House and Building Management | 3.0 |
| 5 | IBO522 | Innovations in Building Construction | 3.0 |
| B2 | | Humanities and Social Sciences Study Courses | 4.0 |
| 1 | HSP489 | Organizational Psychology | 2.0 |
| 2 | IUV321 | Business Management | 2.0 |
| 3 | IÄS720 | Intercultural Communication | 2.0 |
| B6 | | Languages | 4.0 |
| 1 | HDG405 | English | 4.0 |
| 2 | HDG404 | German | 4.0 |

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| C | | Free Elective Study Courses | 6.0 |
| D | | Practical Placement | 26.0 |
| 1 | IKI867 | Internship | 26.0 |
| E | | Final Examination | 12.0 |
| 1 | IKI855 | Bachelor Thesis | 12.0 |