ACADEMIC REQUIREMENTS FOR STUDENTS
FACULTY OF
MECHANICAL ENGINEERING AND INFORMATICS

UNIVERSITY OF MISKOLC

Miskolc, 2017

1.3.3. Academic Regulations

FACULTY OF MECHANICAL ENGINEERING AND INFORMATICS
UNIVERSITY OF MISKOLC
ACADEMIC REQUIREMENTS FOR STUDENTS

SENATE RESOLUTION 248/2017 OF THE UNIVERSITY OF MISKOLC

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Contents

Chapter 1
PREAMBLE

Pursuant to Volume III of the Organisational and Operational Regulations of the University of Miskolc, entitled Requirements for Students (henceforth HKR), the Faculty of Mechanical Engineering and Informatics of the University of Miskolc adopts provisions reflecting the particular provisions of the faculty with the following content.

Chapter 2
RULES OF ADMISSION

Add Section 1.3 of HKR

The following Academic Requirements for Students shall apply to the programmes offered by the Faculty of Mechanical Engineering and Informatics (henceforth the Faculty) as well as the fee-paying programmes in foreign languages for non-Hungarian citizens.

Professional Aptitude Test

Section 1

(1) Applicants and transfer students to the BSc programme in Industrial Design Engineering must take a drawing aptitude test. Applicants will be notified in writing of the date of the drawing aptitude test by the Faculty in due time.

a) Assignments of the drawing aptitude test:
Assignment 1 (Drawing): Reproduction
In the drawing room, an arranged set of geometric bodies must to be drawn in one point perspective in pencil. The aim of the assignment is to find the right pictorial representation of proportions, perspectives, views, foreshortening, curves, etc.
Assignment 2 (Drawing): Tonal drawing
In the drawing room, a still life of furniture, drapery must be created in a tonal drawing including any shadows and background elements.
Duration: 2 hours each.

b) The Faculty Admissions Board in agreement with the Programme Coordinator nominates the Examination Board, the members of which are invited by the Dean of the Faculty. The members of the board are responsible for assessing the assignments and communicating the result to the parties concerned in writing on the day of the aptitude test. The results are recorded by the Faculty Coordinator. The aptitude test is marked as "passed" or "failed". An applicant who fails the aptitude test cannot be accepted in the programme. The Faculty does not accept the result of an aptitude test taken at another institution. The Faculty will accept the results of an aptitude tests passed at the Faculty if the candidate presents the written certificate (notification letter).

(2) Procedural fee for the aptitude test: HUF 3,000.

Faculty Regulations for Master Programmes

Add Section 1.8 of HKR

Section 2

(1) Applicants for the master programmes must hold a degree.

Applicants shall be aware of the fact whether their previous higher education qualifications can be recognised with full credit or additional credit requirements. If additional credit requirements apply, they shall submit an application to the Preliminary Credit Transfer Committee for Master Programmes (Mechanical or Informatics) to determine what further credits are required to complete the chosen Master programme. The Preliminary Credit Transfer Request Form (downloadable from the Faculty website) shall be submitted together with a copy of the diploma and registration course book as well as the transcript of the subjects to be credited. The committees must assess the submitted requests within 15 working days. The applicant will be notified of the decision in writing.

(2) Professional and motivational interviews shall be conducted by the Examination Boards nominated by the Admission Board and invited by the Dean. The Examination Boards shall have four members: the chairperson, two members of the teaching staff and a Student Union representative.

(3) [1]Scoring: The maximum total score is 100, including a maximum of the 10 extra points.

Total score: 90

Classification of degree: maximum 45 points (mark on bachelor degree multiplied by 9) and

Professional and motivational interview: maximum 45 points or/OR

Doubling the score for the professional and motivational interview: maximum 90 points.

The **terms and conditions** as well as t**he process of granting** a maximum of 10 extra points are determined annually by the Admissions Board and available in the Admissions Guide.

The results are announced by the Examination Boards at the end of the professional and motivational interviews. The results are recorded by the Faculty Coordinator.

(4) Conditions for admission to master programmes taught in a language other than Hungarian:

a) a bachelor degree relevant to the master programme
b) passing a professional and motivational interview (via internet as an option);
c) application: free of charge; tuition fee: EUR 2,500 /semester.

[1]Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

Specialist post-graduate programmes

Add Section 1.9 of HKR

Section 3

(1) Admission procedures to specialist post-graduate programmes at the Faculty of Mechanical Engineering and Informatics are conducted by the Regional Centre of Adult Education.

(2) In case of competition for places ranking of the applicants is carried out by the programme coordinator and the Dean.

Thresholds for Admission

Section 4

(1) When setting the thresholds for admission to the Faculty programmes, the Dean of the Faculty is entitled to make possible modifications in cooperation with the programme coordinators.

Transfer Rules

Add Section 1.11 of HKR

Section 5

(1) Special features of transferring bachelor and master programmes (from the faculty or other institutions)

a) During his/her prior studies the transfer student must have
   aa) [2]completed at least two active semesters and earned at least 30 credits altogether during the last two active semesters in higher education; or
   ab) [3]completed exactly one active semester and earned a minimum of 20 credits in higher education.
b) The request shall be submitted to the Dean of the Faculty by filling in the form "Request for Transfer" downloadable from the faculty website.
c) Transfer students to the BSc in Industrial Design Engineering shall take a drawing aptitude test.
d) [4]Transfer is subject to a procedural fee of HUF 3,000 HUF, the payment of which shall be made upon submission.

(2) [5]Terms and conditions for change of study mode within the faculty.

a) During his/her prior studies
   aa) the transfer student wishing to change from full time to part time studies completed at least one active semester;
   ab) the transfer student wishing to change from part-time to full-time studies meets the conditions for transfer specified in Point (1).

[2]Amended by the Senate in Resolution No. 248/2017, effective as of 24 November 2017.

[3]Amended by the Senate in Resolution No. 248/2017, effective as of 24 November 2017.

[4]Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

[5]Amended by the Senate in Resolution No. 248/2017, effective as of 24 November 2017.

b) The request for change of study mode shall be submitted to the Dean of the Faculty by filling in the form "Request for Transfer" (downloadable from the faculty website).

Choosing a specialisation/branch/change of specialisation

Add Section 1.12 of HKR

Section 6[6]

(1) Taking several specialisations/branches simultaneously is not considered as parallel studies.

(2) The student of a specialisation may take an additional specialisations/branches in the same major under the fee-paying scheme. Final examinations in the specialisations of the same major may only be taken during the same final examination period.

(3) In proportion to the credits, the tuition fee is equal to the tuition fee without base fee determined annually by the Faculty Council. For fee-paying students the fee is 60% of the total amount of tuition fee.

(4) Specialisations/branches may only be changed in the semesters designated for choosing specialisation.

(5) After enrolment into specialisation/branch students may submit a request for change of specialisation/branch to the Dean's Office.

a) Before enrolment into specialisation/branch only those students may request a change whose GPA meets the entrance requirements and only if there are free places in the chosen specialisation/branch.

b) The student of a specialisation/branch with the intention of changing specialisation/branch shall undergo a new selection process pursuant to Section 10.

Partial Studies

Add Section 1.14 of HKR

Section 7

(1) Applicants without student status with the intention of pursuing partial studies may sign up for any subject advertised by the Faculty if they have a Bachelor or Master degree and a certificate of specialist qualification. Additional conditions:

a) Application fee: HUF 3,000 /semester.

b) Application process: each semester by submitting a written request including the title and code of subjects to be taken. Deadline for submitting applications: for the autumn semester 30 June, for the spring semester 15 January.

c) Tuition fee for the partial studies: HUF 6,000 /credit.

d) Duration of partial studies: maximum 2 semesters.

e) The Faculty issues a credit certificate for the completed subjects.

Guest Student Status

Add Sections 15-16 of HKR

[6] Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

Section 8

(1) Conditions for establishing guest student status are set by Faculty Study Committee on an individual basis.

(2) The tuition fee: HUF 6,000/credit.

(3) The Faculty issues a credit certificate for the completed subjects.

Chapter 3
ACADEMIC AND EXAMINATION REGULATIONS

Curriculum

Add Section 33 of HKR

Section 9[7]

(1) The Faculty works out the recommended curricula (henceforth: curriculum) so that the workload for students following the curriculum should be balanced and achievable for diligent students during consecutive semesters. Students may deviate from the curriculum, but from many years of experience it is clear that progress according to the curriculum assures the greatest chance of successful progress. Because the Faculty phases in the necessary updates and changes to the curricula, students following a particular curriculum will not face extra assignments due to curricular changes compared to the requirements set on admission.

The Process of Choosing Specialisation

Section 10[8]

(1) Requests for entry to a specialisation/branch are made via Neptun. Allocation is based on the average of the grant GPA of the last two closed active semesters (in descending order) and the priorities indicated by the student (in ascending order). If a specialisation/branch has fewer than the specified minimum number of students, the specialisation/branch will be excluded and a new allocation will be made.

(2) Following the publication of the list of specialisations/branches expected to be offered, the student can modify his/her original preference and order via Neptun.

(3) Requirements for choosing a specialisation/branch may be different for each major. After meeting the requirements for specialisation/branch set in the curriculum, allocation is finalised at the end of the examination period following the semester designated for choosing a specialisation/branch. If at this time a specialisation/branch has fewer than the specified minimum number of students, the specialization/branch will be excluded and a new allocation will be made.

(4) Students are notified individually of the result of the allocation.

(5) Starting a specialisation/branch is only possible in the semester stated in the sample curriculum.

(6) An appeal may be submitted against the allocation to the Faculty Study Committee exclusively on the ground of procedural or formal errors.

[7] Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

[8] Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

Bodies Authorised to Act on Study and Exam Related Matters

Add Section 34 of HKR

Section 11

(1) The Faculty Study Committee consists of four members of the teaching staff and four student representatives. At its own discretion the Committee may invite additional members in a consultative capacity in individual cases.

(2) The Faculty Admissions Board consists of two members of the teaching staff and one student representative. The chairperson of the committee is the Vice Dean for Academic Affairs.

(3) There are two Credit Transfer Committees at the Faculty- one for Mechanical Engineering and one for Informatics. Each committee consists of three members of the teaching staff and two students. The chairperson of the committees is the Vice Dean for Academic Affairs.

Academic Calendar

Add Section 35 of HKR

Section 12

(1) Part-time education, according to its special features, is offered during the study period at designated weekends.

(2) In part-time education one class hour is 45 minutes.

Section 12/A[9]

(1) The Faculty launches all programmes in a dual study programme, as well, which meets industrial/corporate needs and is supported by contracts. The students participating in dual study programmes receive exactly the same training in respect to institutional training as the students of the traditional study mode. For dual study students the time spent with companies during the study period is incorporated in the Faculty timetable. The "university phase" consists of two study periods of four days for 14 weeks, while the "corporate phase" consists of the registration week, at least one day a week during the study period, a part of the examination period and the summer, which adds up to 26 weeks altogether including a four-week annual paid leave. Corporate partners provide dual study students with the opportunity to take examinations during the corporate phase.

Attendance

Add Section 39 of HKR

Section 13

[9]Numbering amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

(1) Failure to meet the obligation to attend a seminar as a condition for signature at the end of the semester may be justified in a special case by the Study Committee or the Dean of the Faculty to the educational organisational unit (department, institute, etc.).

Individual Study Schedule

Add Section 40 of HKR

Section 14[10]

(1) Upon his/her request a student is entitled to individual study schedule if he or she

a) pursues parallel studies provided in his/her major he/she had a GPA of minimum 3.0 in the semester prior to the application,
b) pursues partial studies,
c) is a member of the Student Union management,
d) is an intern, has completed at least 120 credits of his/her Bachelor programme, has a certificate issued by the employing company, and on whose case the Study Committee takes an decision individually,
e) is doing placement, has completed at least 120 credits of his/her master programme, has a certificate issued by the employing company, and on whose case the Study Committee takes an decision individually,
f) is a Master student required by the Preliminary Credit Transfer Committee to complete any missing Bachelor subjects,
g) a student of exceptional circumstances (medical reasons),
h) is studying and/or doing placement abroad,
i) is an outstanding athlete according to the Study Committee.

Improving the Grade of a Successful Exam

Add Section 56 of HKR

Section 15

(1) A successful examination grade can be improved - if all other conditions are met - before the start of the final examination at the latest.

Calculation and Registration of Grade Average

Add Section 58 of HKR

Section 16

(1) If a student has earned more than 30 credits (in a given semester), all earned credits shall be put in the denominator to calculate the credit index.

Theses

Add Section 64 of HKR

Section 17

(1) The following provisions shall be applied as a rule, supplemented by the order of business prepared by the educational organisational units of the Faculty.

[10] Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

(2) [11]Thesis topics and the supervisor's/supervisors' name(s) assigned to them shall be announced by the educational organisational units before the beginning of each examination period. The topics shall be announced on the website and the bulletin board of the educational organisational unit.

(3) [12]Based on their placement/work experience students select from the thesis topics announced by educational organisational units coordinating the specialisation. They may select a topic other than those on the list provided only if one of the academic staff undertakes the supervision of the thesis upon the student's request. The selected topic is submitted to relevant educational organisational unit.

(4) Deadline for announcing the thesis topics: the end of the first week of the study period of the semester recommended for thesis.

(5) [13]Students following phasing out Bachelor curricula may only enrol in a thesis-writing course if they have completed the course Project Work and the required comprehensive exam(s), and have earned a maximum of 15 credits fewer than required by the recommended curriculum for that semester. The requirements for enrolling in a thesis-writing course of Bachelor programmes phasing in from the academic year of 2014/2015 are set in the curricula.

(6) The relevant educational organisational units (department, institution) allocates the supervisor and the internal supervisor.

(7) An external supervisor must be a professional who is competent in the relevant field of research and possesses a higher education degree, who is requested by the head of the educational organisational unit.

(8) Consultation sessions on the research thesis take place according to the regulations set by the educational organisational unit and a time schedule agreed upon in advance by the research supervisor and the student.

(9) The thesis qualified for examination shall be submitted in the office of the educational organisational unit. The submitted thesis is given a unique identification customarily used by the educational organisational unit.

(10) The format requirements, organisation and preparation of theses are laid down in in special orders of business of the educational organisational units. The order of business includes the following:

a) general and format requirements,
b) requirements for a summary in a foreign language,
c) format and content requirements for references,
d) thesis evaluation form for external/internal assessors,
e) Declaration of Originality with an external supervisor
f) student's declaration form to upload thesis to MIDRA

[11]Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

[12]Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

[13]Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

(11) The completed Statement of Authenticity (Appendix 1) shall be bound after the thesis assignment form at the beginning of the thesis.

(12) Due to its commitment to transparency the Faculty of Mechanical Engineering and Informatics allows confidential treatment of the thesis only on duly justified grounds. An application for confidential treatment (Appendix 2) shall be submitted to the head of the educational organisational unit in writing on the day of issuing the thesis assignment. If the application is granted, the thesis is treated and the defence is carried out in accordance with the previously established practice of the educational organisational unit.

Theses submission

a) is open until the date of the academic calendar approved by the Senate,
b) may be extended until the last working day of the week after the deadline for submission within the scope of the educational organisational unit,
c) may be extended until the last working day of the second week after the deadline for submission with the Dean's permission,
d) is denied after the extended deadline. In this case the grade is 1 (Fail), and the student has to retake the course.

(14) At least one printed, bound copy of the thesis qualified for examination shall be submitted in the office of the educational organisational unit. This shall be stored in the educational organisational unit.

(15) [14]Students taking final examinations shall submit an electronic version of the complete thesis including the appendices by the deadline of submission to the office of the educational organisational unit. In accordance with the regulations of the educational organisational unit, the thesis may be submitted on a CD or in some other electronic form.

(16) [15]After passing the final examination students shall upload the electronic version of their thesis to the repository of MIDRA. A thesis may be uploaded after completing a Student's Declaration Form. Before uploading the students must declare that the content of the electronic and paper versions of the thesis is identical, and also indicate whether they request confidential treatment of the thesis and declare the level of publicity of the electronic version of the thesis. The Library issues a Certification of Thesis Acceptance once the thesis has been successfully uploaded. The students shall submit the Certification of Thesis Acceptance to the Faculty, as it is a condition for receiving the diploma.

(17) [16]The classification of degree is determined on the basis of the final examination results rounded to two decimals as follows:

a) excellent, if the final examination result is 4.51- 5.00
b) good, if the final examination result is 3.51- 4.50
c) satisfactory, if the final examination result is 2.51- 3.50
d) pass, if the final examination result is 2.00- 2.50.

[14]Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

[15]Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

[16]Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

The calculation of the final examination score grouped according to specialisation is found in Appendix 5.

Conditions for Awarding a Medallion of Merit for the Students of the Faculty of Mechanical Engineering and Informatics

Section 18

(1) The Council of the Faculty of Mechanical Engineering and Informatics of the University of Miskolc established the Medallion of Merit to award students of outstanding academic achievements.

Regulations for awarding the Medallion of Merit are included in the resolution of the Memorandum of Establishment.

The Faculty Council modified the regulations for awarding the Medallion of Merit on 25 February 2003, 14 December 2007 and 2 May 2017 as follows:

The Medallion of Merit is a round coin of 45 mm, the obverse of which depicts a worker rotating a hand press with the inscription „Artis monetariae studium praemiat" as a reference to rewarding the sciences of forming noble metal coins, the reverse of which shows the inscriptions „Miskolci Egyetem Gépészmérnöki Kar", 1735 and 1949 characteristic of the Faculty of Mechanical Engineering.

It has a gold plated, silver plated or bronze finish.

(2) The Medallion of Merit is presented together with a Certificate of Merit (Appendix 4).

(3) An award is given together with the Medallion of Merit by the Dean.

(4) A Medallion of Merit is awarded to students pursuing studies at the Faculty who meet the principles set in the Memorandum of Establishment and have earned at least 58 credits during the last two semesters prior to awarding the medallions as well as having reached the credit index required for the programme during both semesters.

(5) A Bronze Medallion of Merit is awarded by the Faculty Council to first-year students who earn 29 credits and reach a credit index of 4.50 in their first semester.

(6) [17]The list of students entitled to a Medallion of Merit is compiled by the Dean's Office according to the data of the Neptun system by 20 February of the current year.[18]Different levels of Medallion of Merit are awarded on the basis of the GPAs of two semesters:

- a gold level is awarded to students whose credit index rounded to two decimals reaches or exceeds 4.70 in both semesters,
- a silver level is awarded to students whose credit index rounded to two decimals reaches or exceeds 4.50 in both semesters,
- a bronze level is awarded to students whose credit index rounded to two decimals reaches or exceeds 4.30 in both semesters,

[17]Amended by the Senate in Resolution No. 135/2017, effective as of 1 June 2017.

[18]Amended by the Senate in Resolution No. 135/2017, effective as of 1 June 2017.

(7) Conduct unworthy of a university student and receiving disciplinary punishment exclude being awarded a Medallion of Merit.

(8) Nominations shall be submitted to the members of the Faculty Council at least a week before the meeting of the Faculty Council.

(9) Medallions of Merit are presented by the Dean at the March 15 ceremony of the University of Miskolc.

(10) Receipt of a Medallion of Merit is recorded in the student's registration course book.

In recognition of outstanding academic achievement a Gold/Silver/Bronze Medallion of Merit is awarded by the Faculty Council.
Miskolc, 15 March 20… *Head of the Dean's Office*

(11) The Dean's Office keeps a record of the Medallions of Merit issued.

(12) [19]The Faculty supports and favours students awarded Medallions of Merit during their studies within its power (e.g. teaching assistant positions, extra grants, etc.)

Degree with Distinction

Add Section 75 of HKR

Section 19

(1) The Faculty of Mechanical Engineering and Informatics places an A4 double-sided bilingual insert printed on art print paper in the diploma of the students meeting the requirements for a Degree with Distinction (see sample in Appendix 3).

Chapter 4
FEE AND GRANT REGULATIONS

Tuition Fee

Add Sections 117-118 of HKR

Section 20

(1) Calculation of tuition fee for students within the scope of the Act on Higher Education:

a) the base fee is 40% of the full tuition fee approved by the Faculty Council for the given academic year, moreover 2% of the base fee per credit point for each subject registered for.

b) if the fee-paying students sign up for an exam-only course (CV), they shall pay an extra 0.8% of the tuition fee beyond the base fee.

c) students shall pay an extra 1% of the full tuition fee per credit if they sign up for extra credits (credits exceeding the number of credits of the recommended curriculum for the given semester),

[19]Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

d) if the student is granted credit transfer he/she may request the amount allotted for those granted subjects to be credited from the tuition fee in the relevant semesters,

e) the tuition fee allocated on the above mentioned criteria shall be rounded to the nearest thousand forints according to the rules for rounding numbers.

(2) Students who are not financed through a state grant pursuant to Act CCIV of 2011 on National Higher Education shall pay the tuition fee.

(3) The tuition fee for students reclassified from state-financed to self-financed studies shall be equal to the tuition fee for those fee-paying students who started their studies at the same time.

Other Fees and Costs

Add Section 124 of HKR

Section 21[20]

(1) Every other procedural fee not specified in the Academic Requirements for Students is HUF 3,000.

(2) Other certificates: HUF 3,000.

[20] Amended by the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

CHAPTER5
CLOSING PROVISIONS

Section 22

(1) The present regulations are an appendix to Senate Resolution No. 302/2014 of Volume III (Academic Requirements for Students) of the Organisational and Operational Rules of the University of Miskolc regarding the Faculty of Mechanical Engineering and Informatics, which was approved by the Faculty Council Resolution No. 36/2014 on 14 October 2014 and by the Senate Resolution No. 359/2014 on 30 October 2014, effective as of 1 November 2014. The text of the regulations was modified and consolidated by the Faculty Council Resolutions No. 25/2016 on 10 May 2016 and 40/2017 on 2 May 2017. The regulations were approved by Senate Resolution No. 135/2017 and entered into force on 1 June 2017.

Miskolc, 25 May 2017

Prof.Dr. Zoltán Siménfalvi
Acting Dean
Chairperson of the Faculty Council

Prof. Dr. András Torma
Rector
Chairperson of the Senate

DECLARATION OF ORIGINALITY

I, the undersigned ……; Neptun-code:…… graduate student of ..... of the Faculty of Mechanical Engineering and Informatics of the University of Miskolc in full awareness of my criminal and disciplinary liability declare and duly sign that the thesis
"……"
represents my own work; the referenced literature has been cited properly.

I understand that, in the case of a thesis, plagiarism is:

- using a word-by-word quotation without quotation marks and without citation;
- using content without proper referencing;
- using another person's published thoughts as my own.

I, the undersigned, state that I understand the concept of plagiarism and I understand that in case of plagiarism my thesis will be rejected.

Miskolc, (ddmmyyyy)

…….……..…
Student

REQUEST FOR CONFIDENTIALITY

The Faculty of Mechanical Engineering and Informatics
Head of Educational Organisational Unit

I, the undersigned,*(name)* ..... on behalf of*(company)* .....
..... request
that the thesis "……" written by *(name)* ..... (Neptun-code:) at our company is to be treated confidentially due to its confidential organisational data content, and is not to be used for external communication.

I request the thesis to be treated confidentially for …… year(s).[21]

Stamp

.....
name
position

Miskolc, (ddmmyyyy)

Application granted/refused[22]:

Stamp

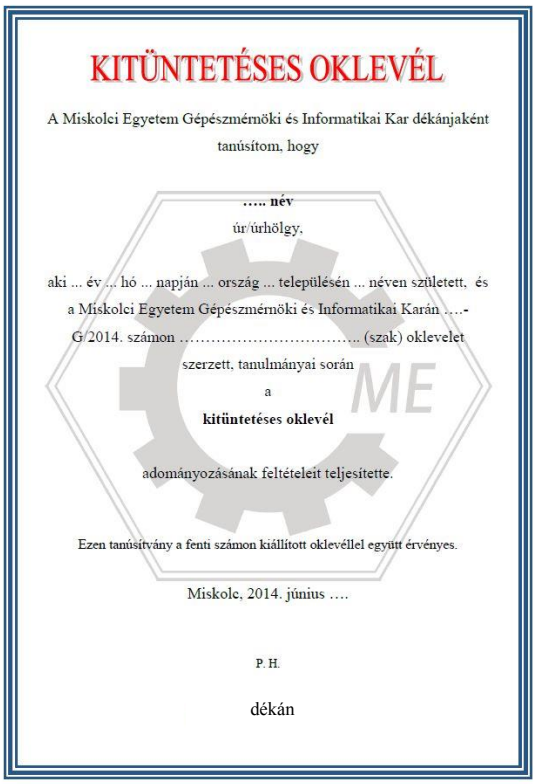
.....
Head
of Educational Organisational Unit

Miskolc, (ddmmyyyy)

[21] Maximum five years.

[22]Remove unwanted option.

SAMPLE DEGREE WITH DISTINCTION



KITÜNTETÉSES OKLEVÉL

A Miskolci Egyetem Gépészmérnöki és Informatikai Kar dékánjaként tanúsítom, hogy

….. név

úr/úrhölgy,

aki ... év ... hó ... napján ... ország ... településén ... néven született, és a Miskolci Egyetem Gépészmérnöki és Informatikai Karán ….-G/2014. számon …….. (szak) oklevelet szerzett, tanulmányai során a

kitüntetéses oklevél

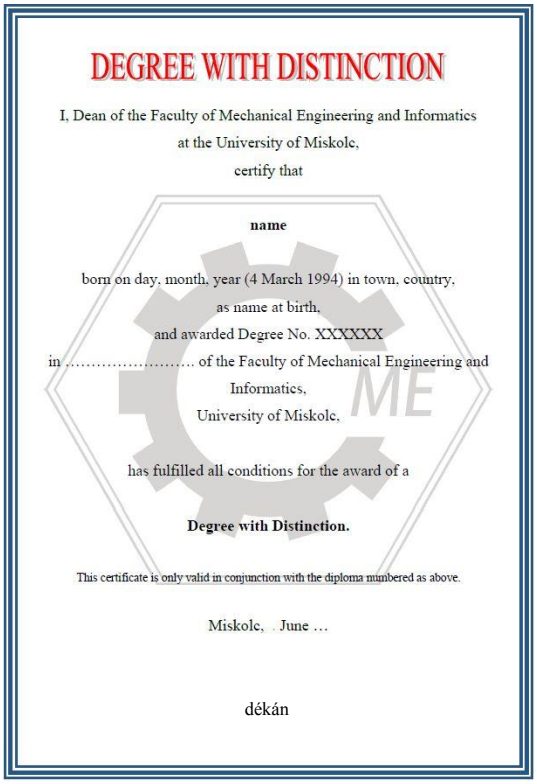
adományozásának feltételeit teljesítette.

Ezen tanúsítvány a fenti számon kiállított oklevéllel együtt érvényes.

Miskolc, 2014. június ….

P. H.

dékán



DEGREE WITH DISTINCTION

I, Dean of the Faculty of Mechanical Engineering and Informatics at the University of Miskolc, certify that

name

born on day, month, year (4 March 1994) in town, country, as name at birth, and awarded Degree No. XXXXXX in …….. of the Faculty of Mechanical Engineering and Informatics, University of Miskolc,

has fulfilled all conditions for the award of a

Degree with Distinction.

This certificate is only valid in conjunction with the diploma numbered as above.

Miskolc, June …

dékán

SAMPLE MEDALLION OF MERIT

DÍSZOKLEVÉL

A Miskolci Egyetem Gépészmérnöki és Informatikai Karának Tanácsa

«Nyomtatási_név»

«Szako» hallgatónak kiváló tanulmányi munkájáért a

TANULMÁNYI EMLÉKÉREM «érem» fokozatát adományozza.

Kívánjuk, hogy a jövőben is további sikereket érjen el, ezzel szerezzen elismerést és megbecsülést Egyetemünknek és Karunknak.

Miskolc, 20 . március 15.

<<dékán>>
dékán

CERTIFICATE Of MERIT

The Council of the Faculty of Mechanical Engineering and Informatics, University of Miskolc, awards

«Nyomtatási_név»

student in the <<szint>> Programme in «Szako»

«érem»

Medallion of Merit

in recognition of outstanding academic achievement.

This is conferred in hopes of continued success, also bringing recognition and honour to our Faculty and University.

Miskolc, 15th of March, 20.

<<dékán>>
dean

Final Examination Subjects and Calculation of Results at the Faculty of Mechanical Engineering and Informatics[23]

Phasing in Curricula for Bachelor Programmes

(Faculty Council Resolution No. 45/2014)

The formula for calculating the final exam grade excluding BSc in Electrical Engineering:

Z = 0.4*GPA of final examination subject grades + 0.4*thesis grade + 0.2*GPA of comprehensive exam(s)

BSc in Energy Management Engineering (according to the curriculum phasing in as of Semester 1 of academic year 2014/2015)

Specialisation	**Mechanical Engineering**
Final Examination 1:	**Power Plants**
Subject 1:	Power Plants
Subject 2:	Control of Power Plants
Subject 3:	Renewable Energy
Final Examination 2:	**Electronics**
Subject 1:	Electrical Engineering and Electronics I
Subject 2:	Electrical Engineering and Electronics II
Subject 3:	Automation

BSc in Mechanical Engineering (according to the curriculum phasing in as of Semester 1 of academic year 2014/2015)

Specialisation	**Materials Processing**
Final Examination 1:	**Materials Science**
Subject 1:	Fundamentals Materials Science
Subject 2:	Materials Testing
Subject 3:	Non-metallic Materials and Technologies
Final Examination 2:	**Materials Processing**
Subject 1:	Welding and Heat Treatment
Subject 2:	Metal Forming

Specialisation	**Production Engineering**
Final Examination 1:	**Production Engineering**
Subject 1:	Cutting
Subject 2:	Machine Industrial Measurements
Subject 3:	Machine Industrial Assembly
Final Examination 2:	**Technological Systems**
Subject 1:	Machining Procedures
Subject 2:	Technology Planning
Subject 3:	Design of Tools and Fixtures

Specialisation	**Machine Construction**
Final Examination 1:	**Theory of Machine Structures**
Subject 1:	Machine Elements I

[23] the Senate in Resolution No. 137/2016, effective as of 1 June 2016.

Subject 2:	Machine Elements II
Final Examination 2:	**Methods of Mechanical Engineering Design**
Subject 1:	Methods of Mechanical Engineering Design
Subject 2:	Computer Aided Design

Specialisation	**Engineering Modelling**
Final Examination 1:	**Mechanics of Elastic Bodies**
Subject 1:	Mechanics of Elastic Bodies
Subject 2:	Finite Element Method
Final Examination 2:	**Dynamics of Machines**
Subject 1:	Mechanisms and Robots
Subject 2:	Dynamics of Machines

Specialisation	**Quality Assurance**
Final Examination 1:	**Production Engineering**
Subject 1:	Cutting
Subject 2:	Machine Industrial Measurements
Subject 3:	Machine Industrial Assembly
Final Examination 2:	**Quality Assurance**
Subject 1:	Quality Control and Quality Assurance
Subject 2:	Quality Regulation
Subject 3:	Quality Assurance of Manufacturing Processes

Specialisation	**Machine Tools**
Final Examination 1:	**Design of Machine Tools**
Subject 1:	Machine Tools
Subject 2:	Design of Machine Tools
Subject 3:	Theory of Design
Final Examination 2:	**Operating and Programming Manufacturing Tools**
Subject 1:	Hydraulic and Pneumatic Systems
Subject 2:	Programing of CNC Machine Tools
Subject 3:	Single Purpose Machines

Specialisation	**Chemical Engineering**
Final Examination 1:	**Unit Operations**
Subject 1:	Unit Operations I
Subject 2:	Unit Operations II
Final Examination 2:	**Pressure Systems**
Subject 1:	Pressure Systems
Subject 2:	Stress Analysis of Pressure Vessels
Subject 3:	Safety Engineering in Pressure Systems

BSc in Industrial Design Engineering (according to the curriculum phasing in as of Semester 1 of academic year 2014/2015)

Specialisation	**-**
Final Examination 1:	**Design**
Subject 1:	Methodology of Product Design
Subject 2:	Machine Elements, Theory of Machine Structure
Final Examination 2:	**Ergonomics and Management**
Subject 1:	Innovation Management
Subject 2:	Product Ergonomics

BSc in Vehicle Engineering (according to the curriculum phasing in as of semester 1 of the academic year 2016/2017)

Specialisation	**Car Industry**
Final Examination 1:	**Vehicle Production and Technology**
Subject 1:	Materials Technologies in Vehicle Industry
Subject 2:	Vehicle Production and Assembly
Subject 3:	Machine Tools, Single-purpose Machines, Industrial Robots
Final Examination 2:	**Vehicle Structures**
Subject 1:	Powertrain Technology
Subject 2:	Vehicle Frame Structures II
Subject 3:	Internal Combustion Engines
Final Examination 3:	**Automotive Electronics**
Subject 1:	Automotive Electrics, Automotive Electronics
Subject 2:	Control Engineering
Subject 3:	Vehicle Communication Systems

BSc in Logistics Engineering (2014/2015/1 semester)

Specialisation	**Logistic Systems**
Final Examination 1:	**Logistic Systems and Machines**
Subject 1:	Logistic Systems
Subject 2:	Materials Handling Machines
Subject 3:	Materials Flow Systems
Final Examination 2:	**Logistics of Corporate Systems**
Subject 1:	Logistic Information Systems
Subject 2:	Quality Assurance in Logistics
Subject 3:	Computer Aided Production Planning and Design

BSc in Mechatronics Engineering (according to the curriculum phasing in as of Semester 1 of academic year 2014/2015)

Specialisation	**Engineering mechatronics**

Final Examination 1:	**Automation**
Subject 1:	Automation
Subject 2:	Industrial Data Communication
Final Examination 2:	**Mechatronics**
Subject 1:	Modelling and Simulation
Subject 2:	Programming of Robotics and CNC Machine Tools

BSc in Technical Management (according to the curriculum phasing in as of Semester 1 of academic year 2014/2015)

Specialisation	**Mechanical Engineering**
Final Examination 1:	**Mechanical Technologies**
Subject 1:	Welding and Heat Treatment
Subject 2:	Technological Systems
Subject 3:	Machine Tools
Final Examination 2:	**Product Management**
Subject 1:	Production Management
Subject 2:	Pressure Systems Design
Subject 3:	Product Innovation

BSc in Business Information Technology (according to the curriculum phasing in as of Semester 1 of academic year 2014/2015)

Track	**every track**
Title of final examination subject:	**Complex Subject**
	1. Design of Programming
	2. Basics of Programming
	3. Object Oriented Programming
	4. Software Technology
	5. Computer Graphics
	6. Computer Architectures
	7. Operating Systems
	8. Computer Networks
	9. Data Structures and Algorithms
	10. Database Systems I
	11. Database Systems II
	12. Programming Theory
	13. Data Storage Systems
	14. Enterprise Information Systems

	Development
	15. Artificial Intelligence
	16. Production Systems Management
	17. Production Management
	18. Human Resource Management

BSc in Engineering Information Technology (according to the curriculum phasing in as of Semester 1 of academic year 2014/2015)

Specialisation	**Infocommunication Systems**
Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**Web and Multimedia**
Subject 1:	Web Technologies I
Subject 2:	Introduction to Telecommunication
Subject 3:	Multimedia Systems

Specialisation	**Web Technologies**
Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**Web Technologies**
Subject 1:	Web Technologies I
Subject 2:	Web Technologies II

Specialisation	**Data Centre Architect**
Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**System Administration**
Subject 1:	System Administration I
Subject 2:	System Administration II

Specialisation	**Logistic Systems**
Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**Informatics in Logistics**
Subject 1:	Basics of Logistics
Subject 2:	Informatics of Logistics

Specialisation	**Production Information**

Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**Production Information**
Subject 1:	Computer Aided Process Control
Subject 2:	Computer Aided Production Planning and Control

BSc in Software Information Technology (according to the curriculum phasing in as of Semester 1 of academic year 2014/2015)

Track	**every track**
Title of final examination subject:	**Complex subjects:**
	1. Data Structures and Algorithms
	2. Theory of Algorithms
	3. Design of Programming
	4. Parallel Algorithms
	5. Programming of Parallel Devices
	6. Object Oriented Programming
	7. Operating Systems
	8. Database Systems I
	9. Computer Networks
	10. Software Technology

BSc in Electrical Engineering (according to the curriculum phasing in as of Semester 1 of academic year 2012/2013)

The formula for calculating the final exam grade: 1/3: GPA of basic specialised core subjects, 1/3: GPA of defence subjects, 1/3: GPA of thesis grade.

Classification of degree (ZVM): $ZVM = \frac{TT+ZD+ZVÁ}{3}$

Legends:

TT: basic specialised core subjects: $TT = \frac{VSZ+EL2+DR3+AUT2}{4}$

VSZ: Electrical Engineering Comprehensive exam (semester 4)

EL2: Electronics II (semester 4)

DR3: Digital Systems III (semester 3)

AUT2: Automation II (semester 4)

ZD: Thesis grade approved by Final Examination Board

ZVÁ: GPA of final examination subjects: $ZVÁ = \frac{ZVT1+ZVT2}{2}$

ZVT1: 1. Final examination subjects (depending on specialisation)

ZVT2: 2. Final examination subjects (depending on specialisation)

GPA is calculated by rounding to two decimals.

Specialisation	**Industrial Automation and Communication**

	(VBA)
Final Examination 1:	**Industrial Data Communication**
Subject 1:	Industrial Communications and SCADA Systems I*
Subject 2:	Industrial Communications and SCADA Systems II*
Subject 3:	Control Engineering Software*
Final Examination 2:	**Industrial Automation**
Subject 1:	DCS-based Process Control**
Subject 2:	Field Instrumentation**
Subject 3:	Safety Control Systems**

Specialisation	**Electronic Design and Manufacturing (VBE)**
Final Examination 1:	**Electronic Design and Manufacturing**
Subject 1:	Computer Aided Electronic Design I*
Subject 2:	Computer Aided Electronic Design II*
Subject 3:	Electronic Technologies*
Final Examination 2:	**Design of Digital Systems**
Subject 1:	Complex Design of Digital Systems**
Subject 2:	Programmable Logic**
Subject 3:	Embedded Systems**

Specialisation	**Electric Energy Systems (VBC)**
Final Examination 1:	**Performance Electronics**
Subject 1:	Electric Machines*
Subject 2:	Electric Drives*
Subject 3:	Electronic Power Converters*
Final Examination 2:	**Electric Energy Systems**
Subject 1:	Electrical Power Supply**
Subject 2:	Power System Protection and Automation**
Subject 3:	Electrical Network Operation and Management**

Comments:

*Selected chapters having a worth of 7 credits

**Selected chapters having a worth of 8 credits

Master Programmes

Final Examination Subjects and Calculation of Final Examination Grade - MSc in Energetics Engineering

Classification of degree = 0.5*thesis grade + 0.3*GPA of final examination subjects + 0.2*GPA of science core subjects

Specialisation:	**Energy Performance of Buildings**
Final Examination 1:	Energetics
Subject 1:	Power Engineering Machinery
Subject 2:	Electric Energy Systems
Final Examination 2:	**Energy Performance of Buildings**
Subject 1:	Energy Performance of Buildings
Subject 2:	
Final Examination 3:	**Heating Technology and Air Conditioning**
Subject 1:	Heating Technology
Subject 2:	Air Conditioning

Specialisation:	**Energy Utilisation**
Final Examination 1:	Energetics
Subject 1:	Power Engineering Machinery
Subject 2:	Electric Energy Systems
Final Examination 2:	**High Temperature Equipment**
Subject 1:	High Temperature Equipment I and II
Subject 2:	
Final Examination 3:	**Energy Management and Environmental Protection**
Subject 1:	Energetical Environmental Protection
Subject 2:	Energy Management

Specialisation	**Energy and Power Plants**
Final Examination 1:	Energetics
Subject 1:	Power Engineering Machinery
Subject 2:	Electric Energy Systems
Final Examination 2:	**Heat Utilisation**
Subject 1:	Heat Utilisation
Subject 2:	Nuclear Power Plants
Final Examination 3:	**Heat Transfer**
Subject 1:	Firing Equipment
Subject 2:	Heat Transfer

Specialisation	**Electric Power Systems**
Final Examination 1:	Energetics
Subject 1:	Power Engineering Machinery
Subject 2:	Electric Energy Systems
Final Examination 2:	**Electrical Power Supply**
Subject 1:	Devices and Equipment in Energetics (selected chapters)
Subject 2:	Electric Power Supply and Power Quality (selected chapters)
Final Examination 3:	**Operation and Protection of Power Systems**
Subject 1:	Operation and Control of Power Systems (selected chapters)
Subject 2:	Power System Protection and Automation (selected chapters)

Final Examination Subjects and Calculation of Final Examination Grade -MSc in Mechanical Engineering

Classification of degree = 0.5*thesis grade + 0.3*GPA of final examination subjects + 0.2*GPA of science core subjects

Specialisation	**Applied Mechanics**
Final Examination 1:	**Continuum Mechanics**
Subject 1:	Continuum Mechanics I
Subject 2:	Continuum Mechanics II
Final Examination 2:	**Finite Element Method**
Subject 1:	Finite Element Modelling I
Subject 2:	Finite Element Modelling II
Final Examination 3:	**Dynamics of Structures**
Subject 1:	Dynamics of Structures
Subject 2:	Non-linear Vibration

Specialisation	**Machine Construction**
Final Examination 1:	**Machine Structures and Materials Processing**
Subject 1:	Machine Structures and Design
Subject 2:	Advanced Materials Processing
Final Examination 2:	**Drives and Methodology of Design**
Subject 1:	Special drives
Subject 2:	Methodology of Object-Independent Design

Specialisation	**CAD/CAM**
Final Examination 1:	**CAD/CAM**

Subject 1:	Integrated Design Systems I
Subject 2:	CNC programming
Final Examination 2:	**Computer Aided Design**
Subject 1:	Integrated Design Systems II
Subject 2:	Computer Aided Design

Specialisation	**Production Engineering and Manufacturing Systems**
Final Examination 1:	**Production Engineering**
Subject 1:	Production Engineering
Subject 2:	Machining by Chip Removal
Final Examination 2:	**Manufacturing Systems**
Subject 1:	Manufacturing Processes and Systems
Subject 2:	Assembly Planning

Specialisation	**Welding Engineering (phased out)**
Final Examination 1:	**Welding Engineering**
Subject 1:	Fusion Welding I and II
Subject 2:	Pressure Welding
Final Examination 2:	**Weldability**
Subject 1:	Materials Science
Subject 2:	Weldability
Subject 3:	Quality Assurance in Welding

Specialisation	**Materials Processing and Welding Technologies**
Final Examination 1:	**Materials Science**
Subject 1:	Materials Science
Subject 2:	Structural Integrity
Final Examination 2:	**Materials Processing**
Subject 1:	Advanced Materials Processing
Subject 2/a	Weldability
Subject 2/b	Material Forming

Specialisation	**Quality Assurance**
Final Examination 1:	**Quality Management**
Subject 1:	Reliability
Subject 2:	Quality Management
Final Examination 2:	**Quality Regulation of Manufacturing Processes**
Subject 1:	Quality Regulation
Subject 2:	Manufacturing Processes and Systems

Specialisation	**Machine Tools**
Final Examination 1:	**Machine Tools**
Subject 1:	Machine Tools I

Subject 2:	Machine Tools II
Final Examination 2:	**Design of Manufacturing Devices**
Subject 1:	Advanced Machine Tools
Subject 2:	Methodical Design

Specialisation	**Product Design**
Final Examination 1:	**Machine Structures and Materials Processing**
Subject 1:	Machine Structures and Design
Subject 2:	Advanced Materials Processing
Final Examination 2:	**Methodology of Design and Design**
Subject 1:	Methodology of Object-Independent Design
Subject 2:	Design

Specialisation	**Chemical Engineering**
Final Examination 1:	**Unit Operations**
Subject 1:	Unit Operations I
Subject 2:	Unit Operations II
Subject 3:	Unit Operations III
Final Examination 2:	**Pressure Systems Design**
Subject 1:	Pressure Systems Design I
Subject 2:	Pressure Systems Design II

Final Examination Subjects and Calculation of Final Examination Grade - MSc in Logistics Engineering

Classification of degree = 0.5*thesis grade + 0.3*GPA of final examination subjects + 0.2*GPA of science core subjects

Specialisation	**Logistics Processes**
Final Examination 1:	**Theory of Logistics Systems**
Subject 1:	Decision-making Theory and Methods
Subject 2:	Information Flow of Logistics Systems
Subject 3:	Logistics Machines and Equipment
Final Examination 2:	**Logistics Processes**
Subject 1:	Production and Service Logistics Processes
Subject 2:	Purchase and Distribution Logistics Processes
Subject 3:	Recycling Logistics Processes

Specialisation	**Mechanical Logistics**
Final Examination 1:	**Theory of Logistics Systems**
Subject 1:	Decision-making Theory and Methods
Subject 2:	Information Flow of Logistics Systems
Subject 3:	Logistics Machines and Equipment
Final Examination 2:	**Mechanical Logistics**
Subject 1:	Reliability of Logistics Systems
Subject 2:	Logistics of Flexible Manufacturing and Assembly Systems
Subject 3:	Intelligent Machines

Final Examination Subjects and Calculation of Final Examination Grade -MSc in Engineering Information Technology

Full-time and Part-time Study Mode

Classification of degree = 0.5*thesis grade + 0.3*GPA of final examination subjects + 0.2*GPA of science core subjects

Specialisation	**Application Development**
Final Examination 1:	**Information Theory and Modelling**
Subject 1:	Theory of Information and Coding
Subject 2:	Integration of Information Systems
Final Examination 2:	**Application Development**
Subject 1:	Integrated Software Systems and Quality Assurance
Subject 2:	Data Analysis and Data Mining

Specialisation	**Communication Technologies**
Final Examination 1:	**Theory of Information, Coding and Modelling**
Subject 1:	Theory of Information and Coding
Subject 2:	Integration of Information Systems
Final Examination 2:	**Communication Technologies**
Subject 1:	Theory of Signals and Systems
Subject 2:	Mobile Telecommunications

Specialisation	**Production Informatics**
Final Examination 1:	**Információelmélet és kódelmélet, modellezés**
Subject 1:	Theory of Information and Coding
Subject 2:	Integration of Information Systems
Final Examination 2:	**Production Informatics**
Subject 1:	Modelling of Production Processes
Subject 2:	Production Planning and Corporate Management

Final Examination Subjects and Calculation of Final Examination Grade - MSc in Engineering Mechatronics

Classification of degree = 0.5*thesis grade + 0.3*GPA of final examination subjects + 0.2*GPA of science core subjects

Specialisation	**Machine Tool Systems Mechatronics**
Final Examination 1:	**Electrotechnics and Electronics**
Subject 1:	Embedded Systems
Subject 2:	Electrical Servo Drives
Final Examination 2:	**Mechatronics**
Subject 1:	Automated Machine Tool Systems
Subject 2:	Mechatronic Systems

Final Examination Subjects and Calculation of Final Examination Grade -MSc in Electrical Engineering

Classification of degree (M): M=0.2*TTA+0.4*ZV+0.4*DT

TTA: GPA of Discrete Mathematics and Physical Foundations of from among science core subjects

ZV: GPA of final examination subject grades

DT: thesis grade

Specialisation	**Process Control and Industrial Communication**
Final Examination 1:	**Signals, Systems, Measurement**
Subject 1:	Signals and Systems Theories
Subject 2:	Electric Modelling and Simulation
Subject 3:	Measurement Theory and Measurement Systems
Final Examination 2:	**Industrial Communication Systems**
Subject 1:	Industrial Communication Systems
Subject 2:	Control Systems Engineering
Subject 3:	Distributed Control Systems

Curricula for Bachelor Programmes Phasing out

Final Examination Subjects and Calculation of Final Examination Grade - MSc in Energetics Engineering (Faculty Council Resolutions No. 27/2008 and 20/2012)

Z = 0.4*GPA of final examination subject grades + 0.4*thesis grade+ 0.2*GPA of comprehensive exams

Specialisation:	**Mechanical Engineering**
Final Examination 1:	Power Plants
Subject 1:	Power Plants
Subject 2:	Renewable Energy
Final Examination 2:	**Electronics**
Subject 1:	Electrical Engineering and Electronics II and III
Subject 2:	Automation I and II

Specialisation:	**Maintenance and Operation**
Final Examination 1:	Maintenance and Operation
Subject 1:	Creep Resistant Materials
Subject 2:	Repair Engineering
Final Examination 2:	**Electronics**
Subject 1:	Electrical Engineering and Electronics II and III
Subject 2:	Automation I and II

Final Examination Subjects and Calculation of Final Examination Grade -BSc in Mechanical Engineering

(Faculty Council Resolutions No. 30/2008 and 31/2008)

Z = 0.4*GPA of final examination subject grades + 0.4*thesis grade+ 0.2*GPA of comprehensive exams

Specialisation:	**Materials Processing**
Final Examination 1:	**Materials Science**
Subject 1:	Materials Science
Subject 2:	Materials
Final Examination 2:	**Materials Processing**
Subject 1:	Welding and Heat Treatment
Subject 2:	Metal Forming

Specialisation:	**Logistics and Production Control**
Final Examination 1:	**Mechanical and Business Knowledge**
Subject 1:	Materials Handling Machines
Subject 2:	Corporate Management
Final Examination 2:	**Logistics and Production Control**
Subject 1:	Logistic Systems
Subject 2:	Computer Aided Manufacturing and Management

Specialisation:	**Machine Construction**
Final Examination 1:	**Theory of Machine Structures**
Subject 1:	Machine Elements I
Subject 2:	Machine Elements II
Final Examination 2:	**Methods of Mechanical Engineering Design**
Subject 1:	Methods of Mechanical Engineering Design
Subject 2:	Computer Aided Design

Specialisation:	**Plant Assembly and Operation**
Final Examination 1:	**Pressure Systems**
Subject 1:	Pressure Systems I
Subject 2:	Pressure Systems II
Final Examination 2:	**Plant Design and Local Plant Assembly**
Subject 1:	Plant Assembly I
Subject 2:	Plant Construction

Specialisation:	**Chemical and Power Engineering**
Final Examination 1:	**Power Plants**
Subject 1:	Power Plants I
Subject 2:	Power Plants II
Final Examination 2:	**Unit Operations and Pressure Vessels**
Subject 1:	Unit Operations
Subject 2:	Pressure Vessels

Specialisation:	**Engineering Modelling**
Final Examination 1:	**Mechanics of Elastic Bodies**
Subject 1:	Theory of Elasticity
Subject 2:	Finite Element Method
Final Examination 2:	**Dynamics of Machines**
Subject 1:	Dynamics of Machines
Subject 2:	Kinematics of Mechanisms and Robots

Specialisation:	**Machine Tools and Mechatronics**
Final Examination 1:	**Design and Operation of Manufacturing Devices**
Subject 1:	Machine Tools
Subject 2:	Machine Tools I
Subject 3:	Theory of Design
Final Examination 2:	**Mechatronic Equipment and Systems**

Subject 1:	Mechatronics I
Subject 2:	Hydraulic and Pneumatic Systems
Subject 3:	Power Electronics for Mechanical Engineers

Specialisation:	**Production Engineering**
Final Examination 1:	**Production Engineering**
Subject 1:	Basics of Production Engineering
Subject 2:	Theory of Cutting
Final Examination 2:	**Technological Systems**
Subject 1:	Technology Planning
Subject 2:	Planning of Production and Production Systems

Specialisation:	**Quality Assurance**
Final Examination 1:	**Production Engineering**
Subject 1:	Basics of Production Engineering
Subject 2:	Theory of Cutting
Final Examination 2:	**Quality Assurance**
Subject 1:	Engineering Measurement
Subject 2:	Quality Assurance and Control

Final Examination Subjects and Calculation of Final Examination Grade -BSc in Industrial Design Engineering

(Faculty Council Resolution No. 29/2008)

Z = 0.4*GPA of final examination subject grades + 0.4*thesis grade+ 0.2*GPA of comprehensive exams

Specialisation:	**-**
Final Examination 1:	**Design**
Subject 1:	Methodology of Product Design
Subject 2:	Machine Elements
Final Examination 2:	**Ergonomics and Management**
Subject 1:	Innovation Management
Subject 2:	Product Ergonomics

Final Examination Subjects and Calculation of Final Examination Grade -BSc in Engineering Information Technology

(Faculty Council Resolution No. 24/2008)

Z = 0.4*GPA of final examination subject grades + 0.4*thesis grade+ 0.2*GPA of comprehensive exams

Specialisation:	**Infocommunication Systems**
Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**Web and Multimedia**
Subject 1:	Web Services and Technologies

Subject 2:	Telecommunication Networks
Subject 3:	Multimedia Systems

Specialisation:	**Web Technologies**
Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**Web Technologies**
Subject 1:	Web Services and Technologies
Subject 2:	Web Based Applications

Specialisation:	**Logistic Systems**
Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**Informatics in Logistics**
Subject 1:	Logistic Systems
Subject 2:	Informatics of Logistics

Specialisation:	**Telecommunication Systems**
Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**Telecommunication Systems**
Subject 1:	Basics of Telecommunication
Subject 2:	Mobile Telecommunication
Subject 3:	Digital Signal Processors

Specialisation:	**Production Information**
Final Examination 1:	**Informatics**
Subject 1:	Database Systems I
Subject 2:	Database Systems II
Subject 3:	Artificial Intelligence
Final Examination 2:	**Production Information**
Subject 1:	Computer Aided Process Control
Subject 2:	Computer Aided Production Planning and Control

BSc in Technical Management

Final Examination Subjects and Calculation of Final Examination Grade

Z = 0.4*GPA of final examination subject grades + 0.4*thesis grade+ 0.2*GPA of comprehensive exams

Mechanical Engineering	
Branch:	**Technology**
Final Examination 1:	Management
Subject 1:	Production Management
Subject 2:	Quality Management
Final Examination 2:	Technology
Subject 1:	Technological Systems
Subject 2:	Mechanical Technologies

Mechanical Engineering	
Branch:	**System Engineering**
Final Examination 1:	Management
Subject 1:	Production Management
Subject 2:	Quality Management
Final Examination 2:	Power Engineering and Pressure Systems
Subject 1:	Power Engineering Processes
Subject 2:	Pressure Systems

Mechanical Engineering	
Branch:	**Product Manager**
Final Examination 1:	Management
Subject 1:	Production Management
Subject 2:	Quality Management
Final Examination 2:	Product Development
Subject 1:	Design and Product Innovation
Subject 2:	Machining

Economics	
Branch:	**(independent of branch)**
Final Examination 1:	Management
Subject 1:	Production Management
Subject 2:	Quality Management
Final Examination 2:	Logistics and Production Control
Subject 1:	Logistics
Subject 2:	Production Planning and Control

Final Examination Subjects and Calculation of Final Examination Grade - BSc in Mechatronics

(Faculty Council Resolution No. 28/2008)

Z = 0.4*GPA of final examination subject grades + 0.4*thesis grade+ 0.2*GPA of comprehensive exams

Specialisation:	**Engineering Mechatronics**

Final Examination 1:	**Automation**
Subject 1:	Automation
Subject 2:	Industrial Data Communication
Final Examination 2:	**Mechatronics**
Subject 1:	Modelling and Simulation
Subject 2:	Programming of Robotics and CNC Machine Tools

Final Examination Subjects and Calculation of Final Examination Grade -BSc in Engineering Information Technology and Software Information Technology

(Faculty Council Resolutions No. 26/2008 and 25/2008)

Z = 0.4*GPA of final examination subject grades + 0.4*thesis grade+ 0.2*GPA of comprehensive exams

The final examination is an oral exam, its topic includes the specialised core subjects complemented with question on the field of the thesis. The relevant departments set questions for the final examination in the two majors based on the specialised core subjects, consulting the course coordinators.

Final Examination Subjects and Calculation of Final Examination Grade - BSc in Electrical Engineering

(Faculty Council Resolution No. 23/2008)

Classification of degree (ZVM):

$$ZVM = \frac{TT + ZD + ZV\acute{A}}{3}$$

Legends:

TT: GPA of core subjects:

$$TT = \frac{VSZ + EL2 + DR2 + AUT2}{4}$$

VSZ: Electrical Engineering Comprehensive exam (semester 4)
EL2: Electronics II (semester 3)
DR2: Digital Systems II (semester 2)
AUT2: Automation II (semester 5)

ZD: Grade of thesis

ZVA: GPA of final examination subjects:

$$ZV\acute{A} = \frac{ZVT1 + ZVT2}{2}$$

ZVT1: 1. Final examination subjects (depending on specialisation, of 10 credits)
ZVT2: 2. Final examination subjects (depending on specialisation, of 10 credits)

GPA is calculated by rounding to two decimals.

Final examination subjects depending on specialisation

VBA final examination subjects:

a) Industrial Data Communication
subjects: Selected chapters of Industrial Data Communication, SCADA System I and II

b) Industrial Automation
subjects: Field Instrumentation, Control Engineering

VBB final examination subjects:

a) Digital Signal Processing
subjects: Digital Signal and Speech Processing, Digital Signal Processors

b) *For the students of Telecommunication*:
Telecommunication Systems
subjects: Basics of Telecommunication, Telecommunication Systems

c) *For the students of Multimedia*:
Image Processing, Multimedia Systems
subjects: Image Processing, Multimedia Systems

VBC Final examination subjects:

a) Electric Machines and Drives
subjects: Selected chapters of Electric Machines and Drives I, II and III

b) Electrical Power Supply
subjects: Selected chapters of Electrical Power Supply I, II and III

VBD Final examination subjects:

a) Automotive Electronics and Diagnostics
subjects: Selected chapters of Automotive Electric Systems, Automotive Electronics, Automotive Diagnostics

b) Microelectronics and Devices
subjects: Microcontrollers, Programmable Logic

VBE final examination subjects:

a) Electronic Design and Technology
subjects: Selected chapters of Computer Aided Electronic Design I and II, Electronic Technologies

b) *For the students of Electronics*: Digital Design and Electric Circuits
subjects: Embedded Systems, Computer Aided Digital Design

c) *For the students of Electronics:* Electronic Manufacturing and Diagnostics
subjects: Test and Diagnostics, Quality Assurance of Electronic Manufacturing

VBF Final examination subjects:

a) Measurement Theory
subjects: Measurement Theory, Signals and Systems

b) Control Theory and AI Methods
subjects: Control Theory, Artificial Intelligence Methods