



Faculty introduction to BSc students

Faculty of Electrical Engineering and Informatics
Budapest University of Technology and Economics

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Dr. Eszter Udvary
associate professor
BSc and MSc English program director



Highlights

- 1. Introduction to the faculty
- 2. Degree programs
- 3. Q&A











Faculties of the BME

















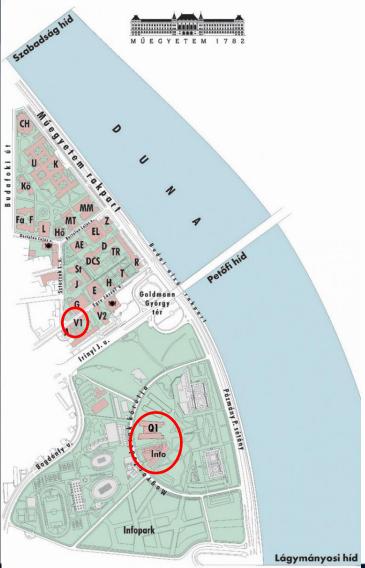


Departments at the faculty

- Department of Automation and Applied Informatics
- Department of Broadband Infocommunications and Electromagnetic Theory
- Department of Computer Science and Information Theory
- Department of Control Engineering and Information Technology
- Department of Electric Power Engineering
- Department of Electron Devices
- Department of Electronics Technology
- Department of Measurement and Information Systems
- Department of Networked Systems and Services
- Department of Telecommunications and Media Informatics



Faculty buildings





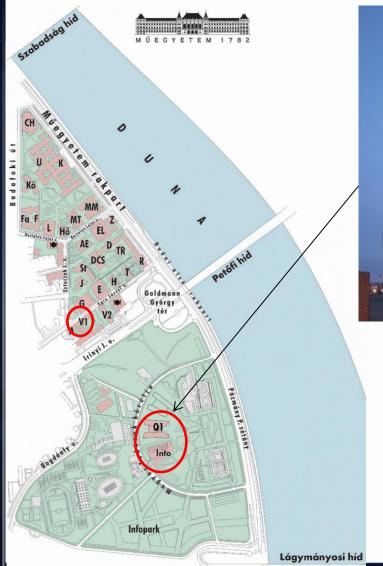
Faculty buildings: I







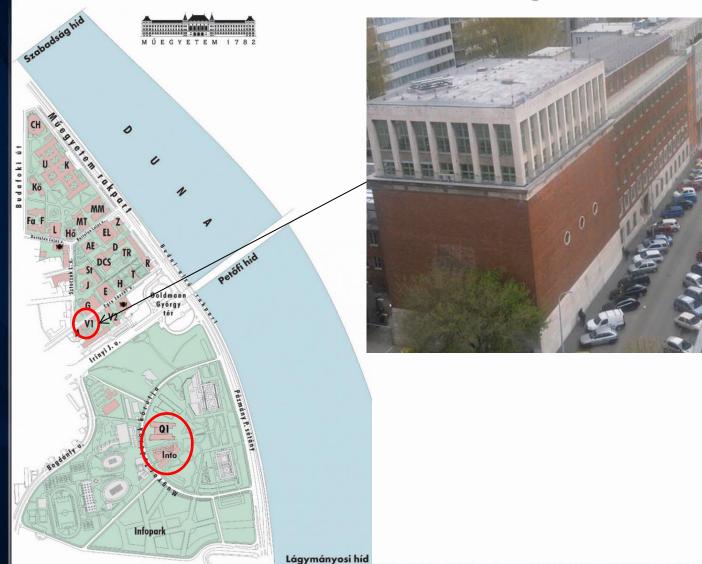
Faculty buildings: Q







Faculty buildings: V1



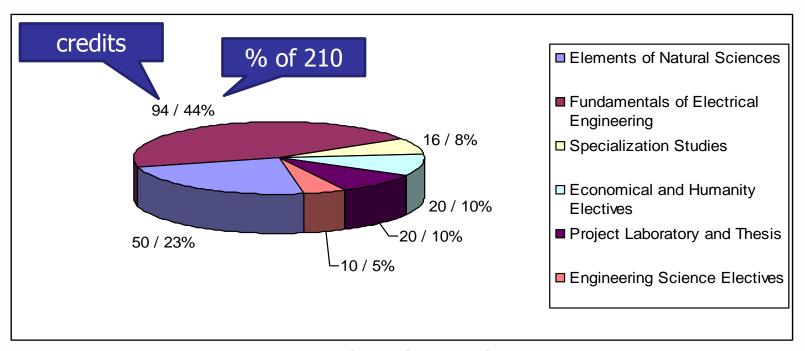


Degree programs in English

- Electrical Engineering (BSc) 7 semesters
- Computer Engineering (BSc) 7 semesters
- Electrical Engineering (MSc) 4 semesters
- Computer Engineering (MSc) 4 semesters
- Electrical Engineering (PhD) 8 semesters
- Computer Engineering (PhD) 8 semesters



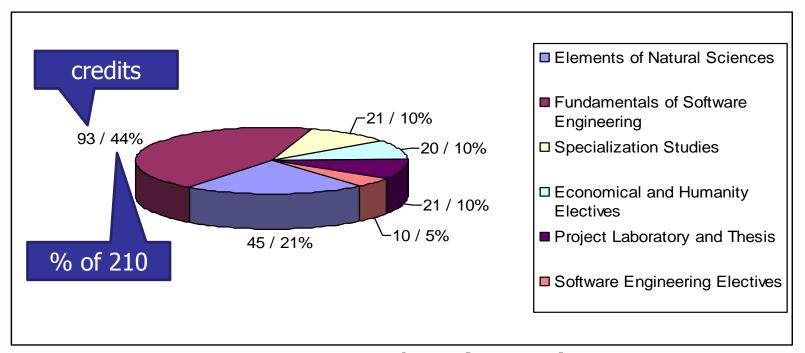
Curriculum - Electrical Engineering (BSc)



- 7 semesters, 210 credits (ECTS)
- Three study specialization blocks:
 - Embedded and Controller Systems
 - Infocommunication Systems
 - Sustainable Electric Energetics



Curriculum - Computer Engineering (BSc)



- 7 semesters, 210 credits (ECTS)
- Two study specialization blocks:
 - Infocommunications
 - Software Engineering



European Credit Transfer and Accumulation System (ECTS)

- It helps students to move between countries and to have their academic qualifications and study periods abroad recognised
- It enhances the flexibility of study programmes for students
- ECTS credits represent learning based on defined learning outcomes and their associated workload.
- 1 credit ≈ 30 workhours



Workload

- 1 semester = 20 weeks
 - 1 week registration period
 - 14 weeks study period
 - 1 week recap period
 - 4 weeks exam period
- 900 workhours / semester
 - 30 credits / semester
 - 30 workhours / credits
- 45 workhours / week (5 days)
 - => 9 hours / day => full time study
- 25-30 contact hours / week



Subjects

Subject Type	Mid-term Assessments	End of the study period	Exam period
Exam	Mid-semester test Mid-semester exam Homework	Signature	Exam
Mid-semester mark	Mid-semester test Mid-semester exam Homework Laboratory course	Grade (based on the mid-semester results)	-

- Subjects with few exceptions are only announced once a year, either in the spring or in the fall semester!
- Please handle the subject based on neptun ID (NOT title)



Courses

type	Attendance requirement	note
Theory	Max. 70%	If it is in the subject description
Practice	70%	
Laboratory	100%	Attendance is compulsory
exam	_	 a course without contact hours - comprehensive exam - If you have signature, but you did not get grade => you have to repeate the examination in the next exam period

BME expects students to attend the lectures



Contacts

- For issues related to the administration of your studies you always have to turn Ms. Margit Nagy (Electrical Engineering) or Ms. Violetta Máté (Computer Engineering)
 - location: building R, ground floor
 - phone: +36-1- 463-1111 / ext. 4609
 - e-mail: <u>nagy.margit@kth.bme.hu</u> and <u>mate.violetta@kth.bme.hu</u>
- For issues related to your studies, scholarship, and personal life, you should turn to the international ccordinator in the first place (e-mail: english_program_info@vik-dh.bme.hu)
- The program director of BSc and MSc studies is Ms. Eszter Udvary (e-mail: udvary@hvt.bme.hu)



Basic rule of administration

It is strictly forbidden to bypass the chain of hierarchy detailed above and to directly communicate to the rector/dean or any other university personnel without notifying the persons listed above. The violation of this rule will entail disciplinary measures !!!

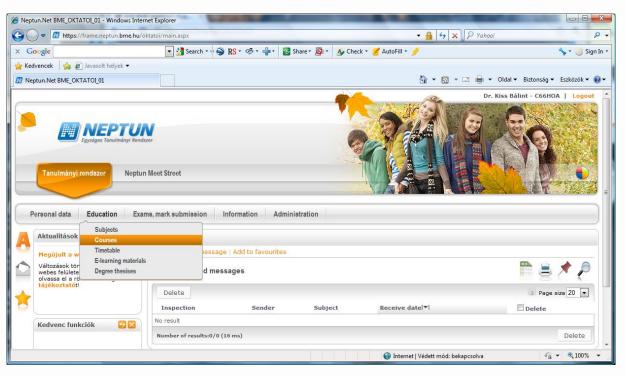


When you contact anyone...

- Please explain
 - Your name and your Neptun ID
 - Your program (BSc/MSc/PhD, Electrical Engineering/Computer Engineering)
 - Your semester
 - Details of your problem
 - Who, what subject, when, why, what did happen...
 - Print screen (if you have problem with Neptun or other electronic system)



On-line study system in English



- you must use the electronic study system NEPTUN to handle all of your administration
 - (https://frame.neptun.bme.hu/hallgatoi/login.aspx)
- All information can be found at the website vik.bme.hu/en



Webpage - vik.bme.hu/en



SITEMAP | ABOUT |



BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS Faculty of Electrical Engineering and Informatics

"Energy of Networks"



DEAN'S MESSAGE

DEPARTMENTS RESEARCH SCIENTOMETRIC DATA

EDUCATION FOR CURRENT STUDENTS ONTACT







The Faculty of Electrical Engineering and Informatics (VIK) of Budapest University of Technology and Economics (BME) carries on the traditions of the above 230 year old University. The proof thereof is the recognition of our degrees all around the world as well as the involvement and appreciation of our professors and researchers in the international scientific scene and organisations.

Almost all multinational electronics and IT corporations well-known in Asia have established R&D laboratories and centres attached to various departments of the faculty - Ericsson, Morgan Stanley, Nokia, Siemens, Samsung, Huawei, HP, IBM, just to name a few - where students can get hands-on information on the expectations of the partner companies.

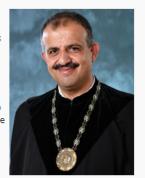
The 2001 January issue of Nature published an article with the title "The 20th century was created in Budapest".

It shows that Budapest irrevocably became part of history that determined the advancement of natural sciences in the last century. Many of the illustrious scientists either studied or taught at the University.

This constitutes such a responsibility for current education that - inter alia - resulted in a prominent place in the Webometrics ranking of universities.

Ancient Romans had a pertinent term "genius loci", meaning the spirit of the place.

Join us to create the 21st century here, in the middle of Europe, Hungary, Budapest, a liveable and safe city with a colourful multicultural spirit, spicy dishes and Asian roots still retained in music providing an academic student











For Current Students



BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS
Faculty of Electrical Engineering and Informatics

"Energy of Networks"



DEAN'S MESSAGE DEPARTMENTS

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Project laboratory and thesis topics · Project laboratory requirements

Thesis portal

BSc Thesis regulations · BSc final comprehensive exam

MSC thesis regulations

PROGRAM DESCRIPTIONS

BSc Electrical Engineering

· Program description, simplified roadmap, prerequisites

BSc Computer Engineering

Program description, simplified roadmap, prerequisites



SEARCH

SEARCH







B.SC. PROGRAMS (CURRENT)

Electrical Engineering (program description, simplified roadmap, prerequisites)

Computer Engineering (program description, simplified roadmap, prerequisites)

work.

Main training areas (210 credits)

Natural science fundamentals	40-50 credits
Economics and humanities	14-30 credits
Professional core material	70-105 credits
Specific professional knowledge	min. 40 credits
Free electives	min. 10 credits

BSc Electrical Engineering curriculum

1 st semester						
Credits	Course code	Course name	Con	tact	hours	Requirement
			L	S	Lab	
6	BMETE90AX00	Mathematics A1	4	2		exam
4	BMETE11AX21	Physics 1	3	1		exam
5	BMEVISZAA05	Foundation of computer science	2	2		exam
6	BMEVIIIAA04	Digital design 1	3	1	1	exam
7	BMEVIHIAA01	Basics of programming 1	2	2	2	mid-semester mark
3	BMEGT63EEI1*	English for Electrical Engineering and Informatics 1.		4		mid-semester mark

-	2 Semester						
	Credits	Course code	Course name	Con	Contact hours		Requirement
				L	\mathbf{s}	Lab	
	6	BMETE90AX26	Mathematics A2	4	2		mid-semester mark
	4	BMETE11AX22	Physics 1	3	1		exam
	6	BMEVIHVAA00	Signals and systems 1	3	2		exam
	5	BMEVIIIAA02	Digital design 2	3	1		exam
	6	BMEVIALIA A01	Basics of programming 2	2		2	mid-semester mark



B.SC. PROGRAMS (CURRENT)

BSc degree program roadmap. See www.vik.bme.hu/en for more details and regulations.

Electrical Engineering (program description, simplified roadmap, prerequisites)

Computer Engineering (program description, simplified roadmap, prerequisites)

Budapest University of Technology and Economics 7 semesters, 210 credits BSc degree program in Electrical Engineering Faculty of Electrical Engineering and Informatics valid from 2017 Fall credits Nweek Foundation of Basics of English 1 Digital design 1 Mathematics A1 Physics 1 computer science 0/4/0/m/3 3/1/1/e/6 programming 1 4/2/0/e/6 3/1/0/e/4 Semester structure: 2/2/0/e/5 2/2/2/m/7 31 31 27 l registration (1w) BASETESOAXOO BMFTF11AX21 **BMEVISZAAOS** BMEGT63EEI1 classes (14w) 2" semester 30 credits 26 h/week Mathematics A1 Signals and Basics of English 2 Mathematics A2 Physics 2 Digital design 2 classroom practi 0/4/0/m/3 Mathematics A2 systems 1 4/2/0/m/6 2/1/0/e/4 3/1/0/e/5 programming 2 lab. practices Comprehensive exam 3/2/0/e/6 2/0/2/m/6 quizzes TE90AX16 midterms BASETEROAX26 BASETE 11AV22 BMEGT63EEI2 homework assignments DISCLAIMER Mathematics A3 Mathematics A4 Electrotechnics Electronics 1 resits (1w) nology and materials systems 2 midterm retakes 2/1/0/e/4 2/2/0/e/4 3/0/1/m/5 2/2/0/e/5 information purposes late homework 3/0/2/m/6 3/3/0/e/6 submission BMETE 90AX09 BMETE90AXS1 BMEVIETABOO · early exams RESTRICTIONS APPLY 1th semester 29 credits 25 h/week Informatics 2 Measurement exams (20d) Informatics 1 Infocommunication Power engineering 2/1/1/e/5 hange without notice. RESTRICTIONS APPLY 3/0/1/e/5 4/0/0/m/4 technology 2/2/0/e/S 2/1/1/e/5 3/2/0/m/5 BMEVIAUABO THESIS DEFENSE Organized during the last exam period in front of a committee. Includes presentation of thesis work, its Introduction to Training Project Management and Laboratory 1 Electronics 2 Study specialization Laboratory discussion and oral exam in one specialization lectromagnetic fields business economics 0/0/3/m/4 4/1/0/m/5 4/0/0/m/4 subject. Written comprehensive final exam is 2/1/0/e/4 2/1/0/e/4 BMEGT20A001 equired in advance Microelectronics Project laboratory Micro- and Study specialization Study specialization **Rusiness law** Laboratory 2 Free elective 0/0/4/m/5 0/0/4/m/5 2/0/0/m/2 2/0/0/e/2 2/0/2/e/5 4/0/0/e/4 2/1/0/e/4 0/0/3/m/4 BMEGTSSA001 BMEGT30A001 PROJECT subjects THESIS WORK enrollment conditions Human & economic BSc thesis project Topics of the project subjects must be related the study at least 174 credits are completed (up to 10 credits free elective) Free elective 0/10/0/m/15 science elective specialization block. Training laboratory, Project Laboratory all courses of the first four semesters are completed 2/0/0/m/2 2/0/0/m/2 and BSc Thesis project can only be taken in a fixed order. all specialization courses are completed (up to the 6th semester) SUSTAINABLE ELECTRIC ENERGETICS (SUBJECT LEGEND SPECIALIZATION Control of electric Electric power Electrical machines Sustainable electric credit value Enrollment conditions: weekly contact hours Subject title according to and applications drives energetics laboratory at least 90 credits are complete lectures/ 3/1/1/m/5 BCTS - 1 credit 2/1/0/e/4 2/1/0/e/4 2/1/0/e/4 2/1/0/e/4 0/0/3/m/4 · all courses of the first and represents 30 laboratory practices second semesters are completed work hours EMBEDDED AND CONTROL SYSTEMS (pren rse: Control Enginer number of similar · at least 20 credits of the third subjects OR Embedded and Embedded and subject code semester are completed study specialization as in the Neptun ambient systems control systems block (if applicable) Mathematics comprehensive course management C 2/1/0/e/4 2/1/0/e/4 Capps, 2/1/0/e/4 lab. 0/0/3/m/4 exam is completed SUBJECT TYPES Specialization prerequisite INFOCOMMUNIATION SYSTEMS (Fundamentals in Fconomics & humanities subject is completed natural sciences letwork Technologies Radio Systems and Core engineering Space Technology Free electives and Applications Systems System Techniques Applications lab. knowledge The number of students must 2/1/0/e/4 2/1/0/e/4 2/1/0/e/4 2/1/0/e/4 0/0/3/m/4 Prerequisite for exceed a certain threshold. Specialization studies specialization.

Last updated: 6 February, 2019

Copyright BME VIK, 2017



Electrical Engineering

1" semester 31 credits 27 h/week

Mathematics A1 4/2/0/e/6 BMETE90AX00 Physics 1 3/1/0/e/4 BMETE11AX21 Foundation of computer science 2/2/0/e/5
BMEVISZAA05

Digital design 1 3/1/1/e/6 BMEVIIIAA04 Basics of programming 1 2/2/2/m/7 BMEVIHIAA01

English 1 0/4/0/m/3

Mandatory course list!

- TE90AX00 Mathematics A1 => "VIK" courses!
 EN0-VIK and EN1-VIK
- TE11AX21 Physics 1
- VISZAA05 Foundation of computer science
- VIIIAA04 Digital design 1
- VIHIAA01 Basics of programming 1
- GT63EEI1 English for Electrical Engineering and Informatics 1 => you are already registered

Please register based on the neptun ID of the subject!



Computer Engineering

1s semester 31 credits 28 h/week Calculus 1 for informaticians 4/2/0/e/6
BMETE90AX21

Physics 1i 2/1/0/e/4 BMETE11AX23 Introduction to the theory of computing 1 2/2/0/e/5

Digital design 2/1/2/e/6 BMEVIMIAA02 Basics of programming 1 2/2/2/m/7 BMEVIEEAADO

English 1

0/4/0/m/3

BMEGT63EE11

Mandatory course list!

- TE90AX21 Calculus 1 for informaticians
- TE11AX23 Physics 1i
- VISZAA03 Introduction to the theory of computing 1
- VIMIAA02 Digital design
- VIEEAA00 Basics of programming 1
- GT63EEI1 English for Electrical Engineering and Informatics 1 => you are already registered

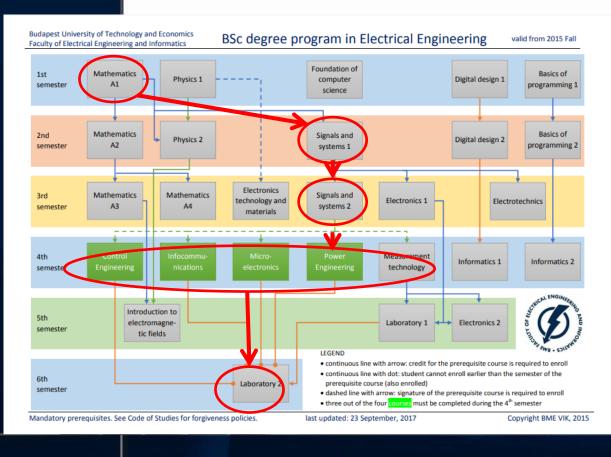
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B.SC. PROGRAMS (CURRENT)

Electrical Engineering (program description, simplified roadmap, prerequisites)

Computer Engineering (program description, simplified roadmap, prerequisites)



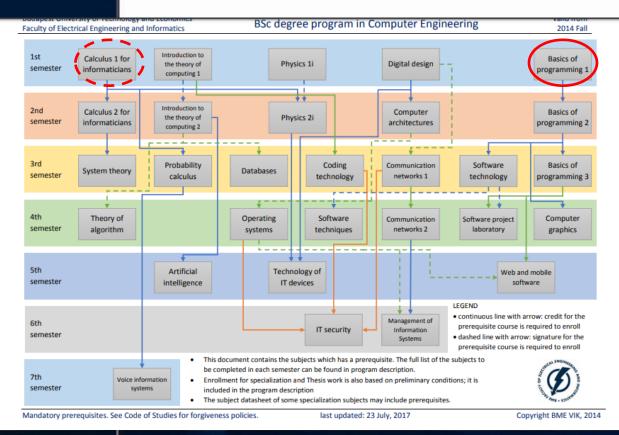
Prerequisites: to make sure that each course provides you with knowledge which have sound foundations established by previous courses



B.SC. PROGRAMS (CURRENT)

Electrical Engineering (program description, simplified roadmap, prerequisites)

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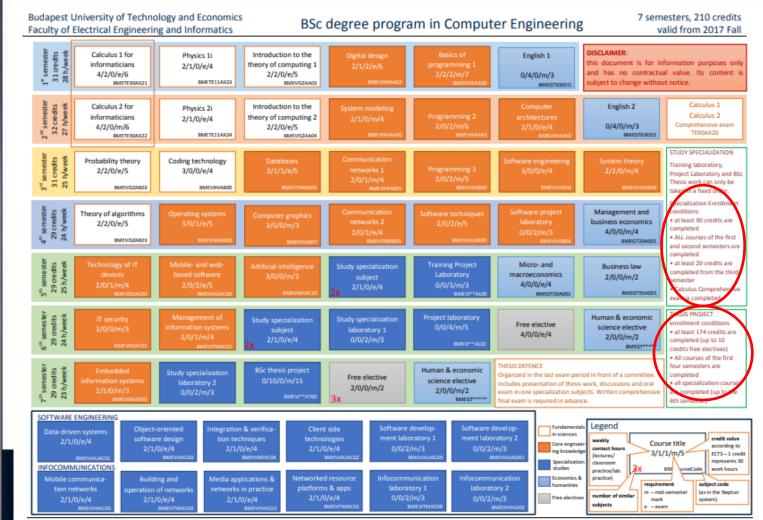


Prerequisites: to make sure that each course provides you with knowledge which have sound foundations established by previous courses



BSc - Milestones

- Conditions for admission to the study specialization block
- Conditions for admission to the thesis defense session





Specializations

- Specializations start every fall semester
- The selection of specialization is always at the end of the 4th semester
- The number of students must exceed a certain threshold
- The decision on the type of specialization and the placement of students depends on the number and the results of applying students
- Not all specializations start every year



General informations



BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS

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"Energy of Ne

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2020 09 03

BME Villamosmérnöki és Informatikai Kar

PROGRAM DESCRIPTIONS

30

RSc Flectrical Engineering



Academic Calendar

ACADEMIC CALENDAR for 2019/2020 BME Faculty of Electrical Engineering and Informatics (VIK)

Autumn semester					
Registration period	2 – 6 September 2019				
Study period	9 September – 13 December 2019				
Grace period to fulfil course requirements	16 – 20 December 2019				
Exam period	2 – 29 January 2020				
Final exam period	2 – 31 January 2020				
Graduation ceremony for international students	TBD (early February)				
days off (no classes, tests or exams):					
University Sports Day	12 September 2019 (Thu)				
Faculty Days (Schönherz Cup)	30 September – 1 October 2019 (Mon-Tue)				
National holiday (commemoration of the Revolution of 1956)	23 October 2019 (Wed)				
National holiday (All Saints' Day)	1 November 2019 (Fri)				
Students' Scientific Conference ("TDK")	12 November 2019 (Tue)				
Open Day for secondary-school students	29 November 2019 (Fri)				
Winter holidays (incl. Christmas & New Year's Eve)	23 December 2019 – 1 January 2020				
make-up Saturdays (for national, non-holiday days off):					
regular classes with even-week Friday schedule	7 December 2019				
extra day of grace period (for in-class test retakes)	14 December 2019				



Weekly schedule

2019/2020 1ST SEMESTER

Electrical Engineering BSc 1st Semester

Electrical Engineering BSc 3rd Semester

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							All		E403
lactiliy ^{al E} i	าซูเกร	คะเง	RSc 5th Semester Infoco	mmunications, ^s	MSCS16_VI4	Practice	All		E404
Monday	08:15	10:00		BMEGT63EEI1	H8Cs16_VI1	Practice	All	Sikiné Kozma Katalin	E401
Monday	08:15	10:00		BMEGT63EEI1	H8Cs16_VI2	Practice	All	Dr. Kiszely Zoltán,	E402
								Sakamoto Liliane Mayun	ni
Monday	10:15	12:00	Calculus 1 for Informaticians	BMETE90AX21	EN0	Theory	All	Nagy Ilona, Stubnya Gusztávné dr.	QBF13
Monday	12:15	14:00	Digital Design	BMEVIMIAA02	LA	Labor	All	Dr. Pálfi Vilmos	IE226
Monday	14:15	16:00	Physics 1i	BMETE11AX23	IT0	Theory	All	Dobos Gábor, Dr. Hárs	IB026
								György	
Monday	14:15	16:00	Physics 1i	BMETE11AX23	IE0	Theory	All	Dobos Gábor, Dr. Hárs	IB026
								György	
Tuesday	08:15	10:00	Calculus 1 for Informaticians	BMETE90AX21	EN0	Theory	All	Nagy Ilona, Stubnya	QBF13
								Gusztávné dr.	
Tuesday	10:15	12:00	Digital Design	BMEVIMIAA02	EA	Theory	All	Dr. Pálfi Vilmos, Dr.	IE224
								Fehér Béla	
Tuesday	13:15	14:00	Digital Design	BMEVIMIAA02	GA	Practice	All	Dr. Pálfi Vilmos	IE226
Tuesday	15:15	16:00	Physics 1i	BMETE11AX23	IE1	Practice	All	Dobos Gábor, Dr. Hárs	IB026
								György	
Tuesday	15:15	16:00	Physics 1i	BMETE11AX23	IT1	Practice	All	Dobos Gábor, Dr. Hárs	IB026
								György	
Tuesday	18:15	20:00	Midterm Test	BMEVIDHZH00	VIMI BSc 1. félév	Theory	All		
Wednesday	08:15	10:00	Basics of Programming 1	BMEVIEEAA00	AE	Theory	All	Dr. Horváth Gábor,	IB026
								Kohári Zsolt	
Wednesday	08:15	10:00	Basics of Programming 1	BMEVIHIAA01	EA	Theory	All	Dr. Horváth Gábor,	IB026
								Kohári Zsolt	
Wednesday	12:15	14:00	Calculus 1 for Informaticians	BMETE90AX21	EN1	Practice	All	Nagy Ilona, Stubnya	QBF10

These documents are for information purposes only!



Subject description

Subjects

L	List filter: All units	in EE ▼	Subjects with data sheet	in English ▼ BSc	▼
L	Listed: 107 subjec	ts			
	<u>Code</u>	Name		<u>Department</u>	Credits
	VIAUA008	Electromechanics		AUT	4 credits
	VIAUA116	Basics of Programming 2		AUT	4 credits
	VIAUA203	Informatics 2		AUT	5 credits
ľ	1/1/11/1/240	Coffwara Tachaiguae	angol nyelvű adatlap	ALIT	4 credits

Foundation of Computer Science

A tantárgy neve magyarul / Name of the subject in Hungarian: A számítástudomány alapjai

Last updated: 2017. június 22.

Budapest University of Technology and Economics Faculty of Electrical Engineering and Informatics Electrical Engineering BSc

Course ID	Semester	Assessment	Credit	Tantárgyfélév
VISZAA05		2/2/0/v	5	

—3. Course coordinator and department

Dr. Katona Gyula, Számítástudományi és Információelméleti Tanszék

-Web page of the course

http://www.cs.bme.hu/sza

-4. Instructors

Dr. Attila Sali, associate professor, Department of Computer Science and Information Theory

6. Pre-requisites

Title
Lecturers
Pre-requisites
Objectives
Synopsis
Assessment
Recaps

. . .



Your life is changed Be careful

- New city, new country, new classmates, without family...
- You have to manage your life (accommodation, residence permit, offices, living cost, ...)
- Secondary school => university
 - Difficult subject, hard assessments
 - There is no continuous monitoring
 - misunderstood freedom

If you do not start learning at the beginning

- ⇒ You will have too much tasks at the end of the semester
- ⇒ You can not fulfil the subjects
- ⇒ You can not register for further subjects in the next semester (because of the pre-requisits)

 \Rightarrow ...



Focus on your study!

- There is no way to grant exemptions from the
 - pre-requisite rules
 - conditions for admission to the BSc specializations
 - conditions for admission to thesis defense session
- The number of credit points to be accumulated, the grade point average to achieve, the number of recaps are controlled. Failing to satisfy those rules, you are dismissed from your studies.
 - twice the programme duration
 - min. 20 credits / the latest 3 active semesters
 - BSc: cumulated GPA of min. 2.25 at the end of the 4th active semester
 - max. 6 exams/subject
- Plagiarism and cheating: zero tolerance!
 - At least fail of the subject in the given semester (both copying and copied students)



Tuition fee

If you have no scholarship...

	For non-EU citizens	For EU citizens
BSc program	3200EUR/semester	2250EUR/semester

- Stipendium Hungaricum Scholarship
 - max. 2 semesters extension
 - min. 36 credits / the latest 2 active semesters (decision of the Tempus foundation)
- Delay in the study program
 - Time, money, etc.
 - Residence permit...



Student life ⇔ Study















Thank you for your attention!