



SAPIENTIA
HUNGARIAN UNIVERSITY
OF TRANSYLVANIA

International Student Guide



Miercurea Ciuc (Csíkszereda)



Cluj-Napoca (Kolozsvár)



Târgu-Mureș (Marosvásárhely)

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The Sapientia Hungarian University of Transylvania

The Sapientia Hungarian University of Transylvania (Sapientia University of Cluj-Napoca) was established in 2001 as an independent higher education institution in Romania, with the aim of providing tertiary education in Hungarian language. The accredited University is functioning in three different towns: Miercurea Ciuc, Târgu-Mureş and Cluj-Napoca. Each of the three study centres has a specific profile, yet they form together an organic university structure.

Sapientia University is an institution promoting high quality education and competitiveness, striving to meet international standards and aiming to prepare professionals able to assert themselves following their graduation, either at home or in any country of the European community.

In the academic year of 2012/2013, a total number of 1988 students are enrolled in 28 BSc programmes, within 4 faculties of the 3 study centres, under the guidance of 280 tutors from Romania and abroad.

Mission of the University

- To promote universal human and Christian values
- To offer competitive, quality education and research, and to ensure the continuation of the traditions of Hungarian education in Transylvania
- To maintain the transparent and consistent management of the university, and to enforce professionalism and the values of academic spirit
- To develop a modern, uniform institutional framework that is able to meet regional demands
- To develop a wide network of partnerships, based on openness, trustworthiness, dedication and reciprocity.

The Venues and Faculties of the Sapientia University

Cluj-Napoca

As historical and spiritual capital of Transylvania, Cluj-Napoca has been attracting thousands of students over the past decades. The higher education offer of the city grew wider in 2003, when the Cluj-Napoca study centre of the Sapientia University, the Faculty of Sciences and Arts started to function. Its most outstanding values lie in quality education tailored to students' needs, as well as in its spirit of openness and flexibility.

Faculty of Sciences and Arts (Cluj-Napoca)

Although, with respect to the number of study programmes, the number of students and teaching staff, the size of this faculty cannot be compared with the size of the other study centres, its structure is complete and its functioning is regulated similarly to the other two. The faculty offers high quality training in four different fields: Environmental Science, Cinematography, Photography, Media, International Relations and European Studies, Law

The Faculty is functioning in two buildings: a historic edifice in the centre of the city and a rented one. An additional dormitory provides accommodation for 30 students. The construction of a new Campus has started in 2012, to become the home of the faculty starting from next academic year.

Miercurea Ciuc

The Faculty in Miercurea Ciuc of the Sapientia University opened its gates in 2001 with 4 study programmes. Since 2004, education and research has been carried out within the framework of two faculties.

The campus in Miercurea Ciuc of the Sapientia University fulfills a strategic role as a higher education institution with specific regional functions. Therefore, the programmes offered aim to serve the primary necessities of the Székely-land: economics, bioengineering, social sciences and humanities.

The campus, a former hotel building located in the centre of the town, has been transformed accordingly to the requirements of its new educational function. In addition to lecture halls and auditoriums, modern laboratories, a spacious library and a cafeteria, the building includes a student dormitory providing accommodation for 370 students.

At the Miercurea Ciuc study centre the space intended for education purposes is used by both faculties. The common administration of the building that includes the students' canteen and the dormitories is managed by an economic and administrative service, coordinated by an economic director.

Faculty of Economic and Human Sciences (Miercurea Ciuc)

The Faculty of Economic and Human Sciences was established in 2004 and its structure contains the Department of Business Sciences, the Department of Economic Sciences (including the Mathematics and Information Group), and the Department of Human Sciences. The faculty offers four accredited study programmes: Accounting and Information Systems, General Economics, Agroalimentary Economics, Romanian Language and Literature – English Language and Literature, as well as three authorized ones: Marketing, Statistics and Economic Forecast and Universal and Compared Literature – English Language and Literature.

Faculty of Sciences (Miercurea Ciuc)

The Faculty of Sciences consists of three Departments: the Department of Social Sciences is responsible for the education and research activity of two study programmes, Sociology and Communication and Public Relations.

The Department of Food Sciences and the Department Bioengineering coordinate together four study programmes: Food Engineering, Environmental Engineering and Environmental Protection in Industry, Industrial Biotechnologies, Engineering and Management in Catering and Agrotourism. The Faculty has a modern system of laboratories consisting of nine laboratories for education, together with annexes for teaching purposes, as well as eight laboratories for research.

Târgu-Mureş

The Faculty of Technical and Human Sciences was established in 2001. The faculty is the most important centre of Hungarian language technical higher education in Romania, being unique in offering 7 engineering programmes in Hungarian.

As a result of the major investments started in the summer of 2003, in 2005 the Faculty took over a newly built campus at the outskirts of Târgu-Mureş, in the vicinity of the village Corunca. The building owning 3 large auditoriums, over 50 lecture halls and well-equipped laboratories and a cheerful cafeteria run by students, offers adequate space for all the challenges of modern education.

Faculty of Technical and Human Sciences (Târgu-Mureş)

The Faculty of Technical and Human Sciences in Târgu-Mureş co-ordinates the organisation of education and research within ten undergraduate study programmes: Computer Science, Automation and Applied Informatics, Computer Engineering, Mechatronics, Telecommunication Systems and Technologies, Machine Manufacturing Technology, Communication and Public Relations, Horticulture, Translation and Interpretation, and Public Health. These study programmes function within five departments: Department of Human Sciences, Department of Mathematics and Computer Science, Department of Electric Engineering, Department of Mechanic Engineering and the Department of Horticulture.

The functioning of the Faculty is based on current laws, the internal rules and regulations of the Sapientia University, as well as the Code of functioning of the faculty.

The faculty is run by the Faculty Council that consists of the representatives of the departments and students. The activity of the Council is supported by special committees of the faculty. The representatives of the students are elected by the Students' Association that functions according to its own statutes.

Study centre	Name of faculty	Year of founding	Website
Cluj-Napoca	Faculty of Sciences and Arts	2002	www.kv.sapientia.ro
Miercurea Ciuc	Faculty of Sciences	2001	http://www.csik.sapientia.ro/
	Faculty of Economic and Human Sciences	2004	http://www.csik.sapientia.ro/
Târgu-Mureş	Faculty of Technical and Human Sciences	2001	www.ms.sapientia.ro

Organization of the Educational Process

The professional activity of the students is organised according to the curricula of the accredited and authorised study programmes, and it is based on the European Credit Transfer System. At every faculty Study and Credit Councils have been set up in order to tackle with all the problems concerning the organisation and recognition of studies. Every study programme has a co-ordinator (tutor), who offers counselling for the students in all the matters regarding their studies.

Each course unit studied during a semester ends with a certain form of evaluation (written examination, oral examination, evaluations during the term or the qualification of Physical Education). Depending on the effort (level of attendance of courses and seminar/laboratory practice, individual study) each discipline or unit from the curriculum has a certain number of transferable credits. The allocated credit is the attribute of the discipline or unit and cannot be divided. Course unit descriptions define, beside the number of contact hours – divided into types of activity, the number of credits, previous conditions, information on the teaching personnel, the evaluation procedures, the proportion of grades obtained at different evaluations as well as the minimum bibliography accessible. The teaching, learning and evaluation process is carried out in accordance with the provisions of the ECTS based *Study and Examination Regulations* and according to the *Evaluation Procedures of the Acquired Knowledge* of students, approved by the Senate. The size of study groups depends on the dimensions and endowments of the course rooms and laboratories and is established by valid legal provisions.

The students have the opportunity to choose their individual study route, to obtain more than 60 credits in a year or to study at two different study programmes at the same time within the University. Passing from a study year to the following is conditioned by certain performance criteria.

Academic Calendar 2012/2013

SEPTEMBER						
M	T	W	Th	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCTOBER						
M	T	W	Th	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER						
M	T	W	Th	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DECEMBER						
M	T	W	Th	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JANUARY						
M	T	W	Th	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY						
M	T	W	Th	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

MARCH						
M	T	W	Th	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

APRIL						
M	T	W	Th	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

MAY						
M	T	W	Th	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JUNE						
M	T	W	Th	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY						
M	T	W	Th	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST						
M	T	W	Th	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SEPTEMBER						
M	T	W	Th	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Generally the semesters are 14 weeks long, excepting those specializations whose semesters are 11 or 12 weeks long (depending on the specializations' special requirements). In these cases the structure of the academic year is defined by the faculty.

May 27 – June 23, 2013: Bachelor thesis preparation period for final year students, and 4 weeks study period (of which 1 week supplementary exam period) for students of technical specializations.

Legend

	Odd week
	Even weeks
	Vacation
	Exam period
	Holidays
	Exam period for final year students

Holidays:

- 1 November (Thursday)
- 30 November (Friday)
- 1 December (Saturday)
- 25 and 26 December (Christmas: Tuesday, Wednesday)
- 1-2 January (Tuesday, Wednesday)
- 15 March (Friday)
- 1 April (Easter: Monday)
- 1 May (Wednesday)
- 20 May (Pentecost: Monday)
- 15 August (Thursday)
- 20 August (Tuesday)

Sapientia University and the EU Mobility Programmes

Sapientia University gained its final accreditation in February 2012, therefore it has just become entitled to issue diplomas, organize Master courses, and participate in EU Mobility Programmes (ERASMUS, CEEPUS etc.).

Efficient partnership with domestic and international higher education and research institutions create the conditions for joining the European Higher Education Area and represent further opportunities for the development of research and teaching, through student and teacher exchange programmes. In this respect the EU Mobility Programmes will also be available starting with academic year 2013/2014.

The Sapientia University envisages the following specific activities to be implemented within the framework of the EU Mobility Programmes: facilitating the mobility of outgoing students (for both study and practical training) and academic staff, receiving incoming students and academic staff, as well as taking part actively in projects and thematic networks initiated by partner institutions across the EU.

Starting with academic year 2013/2014, the Sapientia University aims to co-operate in two CEEPUS networks through its Faculty of Technical and Human Sciences in Târgu-Mureş.

Curriculum of the study programmes involved in CEEPUS Network co-operation

Automation and Applied Informatics - 4 years, full-time

Automation or guidance technique means the combination of electronics, mechanical engineering, control systems and information technology. The computerized control and supervision of industrial processes and industrial application of computer science is the main aim of the training. Graduate students are able to design multilevel computerized industrial control systems, and able to choose, implement and operate the necessary guidance algorithms. At the same time, they will be acquainted with solving all computer technology problems.

Curriculum for Academic Year 2013/2014 - Automation and Applied Informatics

Semester 1

MBEM0011 Mathematical Analysis I	3+2+0 E 5 cr.
MBEM0081 Linear Algebra, Analytical and Differential Geometry	2+1+0 E 4 cr.
MBEF0011 Physics I	2+1+1 E 5 cr.
MBEI0101 Programming I	2+0+2 E 5 cr.
MBMM0111 Graphics on Computer	2+0+2 C 4 cr.
MBEM0131 Probability and Statistics	2+0+2 E 4 cr.

MBHX0011 English Language I	0+2+0 C 2 cr.
<i>Other Compulsory Courses:</i>	
MBSX0011 Physical Education I	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MBEM0181 Special Chapters of Mathematics	1+2+0 C 2 cr.
MBHM0011 History of Culture I	2+0+0 C 2 cr.

Semester 2

MBEM0101 Numerical Analysis	2+0+2 C 4 cr.
MBEI0102 Programming II	2+0+2 E 5 cr.
MBEF0012 Physics II	2+1+1 C 4 cr.
MBMV0011 Electrotechnics	2+1+1 E 5 cr.
MBME0051 Electronic Devices and Analogical Electronics	2+1+2 E 5 cr.
MBEI0341 Algorithm Design	2+0+2 E 4 cr.
MBHX0012 English Language II	0+2+0 C 2 cr.
<i>Other Compulsory Courses:</i>	
MBSX0012 Physical Education II	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MBEI0371 Special Chapters of Informatics	1+2+0 C 2 cr.
MBHM0012 History of Culture II	2+0+0 C 2 cr.

Semester 3

MBEM0111 Special Mathematics	2+2+0 E 4 cr.
MBME0021 Digital System Design	2+1+2 E 5 cr.
MBME0071 Linier Electronic Circuits	2+0+2 E 5 cr.
MBEI0131 Databases	2+0+2 C 4 cr.
MBEI0103 Programming III	2+0+2 E 5 cr.
MBMV0012 Electrotechnics II	2+1+1 E 4 cr.
MBHX0013 English Language III	0+2+0 C 2 cr.
<i>Other Compulsory Courses:</i>	
MBSX0013 Physical Education III	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MHM0013 The history of culture III.	2+0+0 C 2 cr.
MBHX0031 German Language I	0+2+0 C 2 cr.

Semester 4

MBEI0123 Operating Systems	2+0+2 E 4 cr.
MBME0041 Digital Electronics	3+0+2 E 5 cr.
MBMM0021 Mechanics	2+0+1 C 3 cr.
MBMS0031 Systems Theory I	2+1+1 E 5 cr.
MBMV0231 Measuring and Transducers	3+0+2 E 5 cr.

MBME0031 Power Electronics	2+0+1 E 4 cr.
MBHX0014 English Language IV	0+2+0 C 2 cr.
MBMS0012 Professional Practice I	0+6+0 C 2 cr.
<i>Facultative Courses:</i>	
MHM0014 The history of culture IV.	2+0+0 C 2 cr.
MBHX0032 German Language II	0+2+0 C 2 cr.

Semester 5

MBMS0091 Computer Networks	2+0+1 E 4 cr.
MBMV0071 Identification, Modelling and Simulation of Systems	2+0+2 E 4 cr.
MBMS0032 Systems Theory II	2+1+1 E 4 cr.
MBMS0041 Computer Architecture	2+0+2 E 5 cr.
MBMS0131 Optimization	2+0+2 E 5 cr.
MBMS0071 Software Engineering I	2+0+1 C 4 cr.
MBMV0111 Programable Logic Controllers	2+0+2 C 4 cr.
<i>Facultative Courses:</i>	
MBHX0015 English Language V	0+2+0 C 2 cr.
MBHX0033 German Language III	0+2+0 C 2 cr.
MBME0081 Telecommunication Networks	2+0+2 C 3 cr.

Semester 6

MBMS0111 Control Engineering	2+0+2 E 4 cr.
MBMV0041 Microprocessors	2+0+2 E 4 cr.
MBMV0031 Electrical Machines and Drives	2+0+2 E 4 cr.
MBMS0132 Optimization II	2+0+2 E 4 cr.
MBEI0211 Web Technology	2+0+2 C 4 cr.
MBEI0111 Artificial Intelligence	2+0+2 E 4 cr.
MBMS0013 Professional Practice II	0+6+0 C 2 cr.
MBAY0101 Optional Course 1	2+0+2 C 4 cr.
<i>Facultative Courses:</i>	
MBHX0016 English Language VI	0+2+0 C 2 cr.
MBHX0034 German Language IV	0+2+0 C 2 cr.
MBMV0211 IP Telephone Networks	2+0+2 C 3 cr.
Optional Discipline Packet 1	
MEI0201 Assembly Programming Languages	2+0+2 C 4 cr.
MBEI0241 Coding Theory	2+0+2 C 4 cr.

Semester 7

MBMV0081 Controlled Electrical Drives	2+0+2 E 5 cr.
MBMR0161 Robotics	2+0+2 E 4 cr.
MBMV0091 Digital Control Systems	2+0+1 E 5 cr.

MBEI0361 Artificial Intelligence	2+0+2 C 4 cr.
MBMS0211 Adaptive Control Systems	2+0+2 E 4 cr.
MBAY0102 Optional Course 2	2+0+2 E 4 cr.
MBAY0103 Optional Course 3	2+0+1 E 4 cr.
Optional Discipline Packet 2	
MBMS0051 Image Processing	2+0+2 E 4 cr.
MBMV0141 SCADA Systems and Industrial Communications	2+0+2 E 4 cr.
Optional Discipline Packet 3	
MBME0061 Digital Circuits	2+0+1 E 4 cr.
MBEI0201 Computer Graphics	2+0+1 E 4 cr.

Semester 8

MBMS0101 Digital Signal Processing	2+0+2 E 4 cr.
MBML0011 Practice for Graduation Project	0+0+5 C 7 cr.
MBGM0061 Project Management	0+0+0 C 3 cr.
MBAY0104 Optional Course 4	2+0+2 E 5 cr.
MBAY0105 Optional Course 5	2+1+0 C 3 cr.
MBAY0106 Optional Course 6	2+0+2 E 4 cr.
MBAY0107 Optional Course 7	2+0+2 E 4 cr.
<i>Optional Discipline Packet 4</i>	
MBMS0221 Expert Systems	2+0+2 E 5 cr.
MBMS0201 Testing of Computer Systems	2+0+2 E 5 cr.
<i>Optional Discipline Packet 5</i>	
MBGM0021 Quality Assurance Systems	2+1+0 C 3 cr.
MBGM0011 Management	2+1+0 C 3 cr.
<i>Optional Discipline Packet 6</i>	
MBMV0161 Model Predictive Control	2+0+2 E 4 cr.
MBMV0151 Reliability	2+0+2 E 4 cr.
<i>Optional Discipline Packet 7</i>	
MBMV0171 Computer Peripherals and Interfaces	2+0+2 E 4 cr.
MBMS0141 Distributed Systems	2+0+2 E 4 cr.

Computer Science (Computer Technology) - 4 years, full-time

The major aim is to train computer science engineers. The ability to deal with hardware and software design and management is a basic requirement to receive a degree. Graduates are able to design, operate and assist new computer applications.

Curriculum for Academic Year 2013/2014- Computer Science

Semester 1

MBEM0011 Mathematical Analysis I E 4 cr.	3+2+0
MBEM0081 Linear Algebra, Analytical and Differential Geometry	2+1+0 E 5 cr.
MBEF0011 Physics I	2+1+1 E 5 cr.
MBEI0401 Programming I	2+0+2 E 4 cr.
MBEI0391 Computer Aided Graphics	2+0+1 C 4 cr.
MBEM0131 Probability and Statistics	2+0+2 E 4 cr.
MBHX0011 English Language I	0+2+0 C 2 cr.
<i>Other Compulsory Courses:</i>	
MBSX0011 Physical Education I	0+1+0 A 2 cr.
<i>Facultative Courses:</i>	
MBHM0011 History of Culture I	2+0+0 C 2 cr.
MBEM0181 Special Chapters of Mathematics	1+2+0 C 2 cr.

Semester 2

MBEI0402 Programming II	2+0+2 E 5 cr.
MBEF0012 Physics II	2+1+1 C 4 cr.
MBME0131 Electronic Devices	2+1+2 E 5 cr.
MBEI0041 Data Structures and Algorithms	2+0+2 E 4 cr.
MBMV0011 Electrotechnics	2+1+1 E 5 cr.
MBEM0101 Numerical Analysis	2+0+2 E 4 cr.
MBHX0012 English Language II	0+2+0 C 2 cr.
<i>Other Compulsory Courses:</i>	
MBSX0012 Physical Education II	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MBEI0371 Special Chapters of Informatics	1+2+0 C 2 cr.
MBHM0012 History of Culture II	2+0+0 C 2 cr.

Semester 3

MBEM0111 Special Mathematics	2+2+0 E 4 cr.
MBME0101 Logical Design	2+1+2 E 5 cr.
MBEI0381 Shell programming and UNIX utilization	2+0+2 E 5 cr.
MBEI0131 Databases	2+0+2 E 4 cr.
MBEI0141 Object Oriented Programming	2+0+2 E 5 cr.
MBEI0151 Theory of Graphs	2+0+2 C 4 cr.

MBHX0013 English Language III	0+2+0 C 2 cr.
<i>Other Compulsory Courses:</i>	
MBSX0013 Physical Education III	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MHM0013 The history of culture III.	2+0+0 C 2 cr.
MBHX0031 German Language I	0+2+0 C 2 cr.

Semester 4

MBEI0123 Operating Systems	2+0+2 E 4 cr.
MBME0041 Digital Electronics	3+0+2 E 4 cr.
MBMS0031 Systems Theory I	2+1+1 E 5 cr.
MBMV0021 Electric Measuring. Sensors and Transducers	3+0+2 E 4 cr.
MBEI0161 Advanced Programming Methods	2+0+2 E 5 cr.
MBME0171 Computer-Aided Analysis of Electronic Circuits	1+0+2 C 4 cr.
MBHX0014 English Language IV	0+2+0 C 2 cr.
MBMS0012 Professional Practice I	0+6+0 C 2 cr.
<i>Facultative Courses:</i>	
MHM0014 The history of culture IV.	2+0+0 C 2 cr.
MBHX0032 German Language II	0+2+0 C 2 cr.

Semester 5

MBEI0172 Formal Languages and Compilers	2+0+2 E 4 cr.
MBMS0191 Computer Architecture	2+0+2 E 4 cr.
MBMS0032 Systems Theory II	2+1+1 E 4 cr.
MBMS0151 Program Engineering	2+0+1 E 4 cr.
MBMS0091 Computer Networks	2+0+1 E 5 cr.
MBMV0061 Modelling and Simulation	2+0+2 C 4 cr.
MBMS0131 Optimization	2+0+2 C 5 cr.
<i>Facultative Courses:</i>	
MBHX0015 English Language V	0+2+0 C 2 cr.
MBHX0033 German Language III	0+2+0 C 2 cr.
MBMV0181 Telecommunication Networks	2+0+2 C 3 cr.

Semester 6

MBEI0132 Databases II	2+0+2 C 4 cr.
MBMS0161 Design with Microprocessors	2+0+2 E 4 cr.
MBEI0111 Artificial Intelligence	2+0+2 E 4 cr.
MBEI0211 Web Technology	2+0+1 E 4 cr.
MBMS0141 Distributed Systems	2+0+1 E 4 cr.
MBMS0013 Professional Practice II	0+6+0 C 2 cr.

MBSY0101 Optional Course 1	2+0+2 C 4 cr.
MBSY0102 Optional Course 2	2+0+1 E 4 cr.
<i>Facultative Courses:</i>	
MBHX0016 English Language VI	0+2+0 C 2 cr.
MBHX0034 German Language IV	0+2+0 C 2 cr.
MBMV0211 IP Telephone Networks	2+0+2 C 3 cr.
<i>Optional Discipline Packet 1</i>	
MBEI0221 Assembly Programming Languages	2+0+2 C 4 cr.
MBEI0261 Combinatorial Methods in Networks	2+0+2 C 4 cr.
<i>Optional Discipline Packet 2</i>	
MBEI0241 Coding Theory	2+0+1 E 4 cr.
MBMS0231 Computer Controlled Systems	2+0+1 E 4 cr.

Semester 7

MBEI0361 Artificial Intelligence	2+0+2 C 4 cr.
MBMS0051 Image Processing	2+0+2 E 5 cr.
MBEI0271 Java Technology	2+0+2 E 4 cr.
MBMV0201 Parallel and Distributed Algorithms	2+0+2 E 5 cr.
MBSY0103 Optional Course 3	2+0+1 E 4 cr.
MBSY0104 Optional Course 4	2+0+2 E 4 cr.
MBSY0105 Optional Course 5	2+0+2 C 4 cr.
<i>Optional Discipline Packet 3</i>	
MBME0061 Digital Circuits	2+0+1 E 4 cr.
MBMV0141 SCADA Systems and Industrial Communications	2+0+1 E 4 cr.
<i>Optional Discipline Packet 4</i>	
MBMV0111 Programable Logic Controllers	2+0+2 E 4 cr.
MBMR0161 Robotics	2+0+2 E 4 cr.
<i>Optional Discipline Packet 5</i>	
MBEI0191 Logical and Functional Programming	2+0+2 C 4 cr.
MBEI0201 Computer Graphics	2+0+2 C 4 cr.

Semester 8

MBEI0231 Cryptography and Information Security	2+0+2 E 4 cr.
MBMS0201 Testing of Computer Systems	2+0+2 E 5 cr.
MBML0011 Practice for Graduation Project	0+0+5 C 7 cr.
MBGM0061 Project Management	0+0+0 C 3 cr.
MBSY0106 Optional Course 6	2+0+2 E 4 cr.
MBSY0107 Optional Course 7	2+1+0 C 3 cr.
MBSY0108 Optional Course 8	2+0+2 E 4 cr.
<i>Optional Discipline Packet 6</i>	
MBMS0101 Digital Signal Processing	2+0+2 E 4 cr.
MBMS0081 Interface Desing	2+0+2 E 4 cr.
<i>Optional Discipline Packet 7</i>	

MBGM0021 Quality Assurance Systems	2+1+0 C 3 cr.
MBGM0011 Management	2+1+0 C 3 cr.
<i>Optional Discipline Packet 8</i>	
MBMV0171 Computer Peripherals and Interfaces	2+0+2 E 4 cr.
MBMV0151 Reliability	2+0+2 E 4 cr.

Mechatronics - 4 years, full-time

The major aim of the programme is to train mechatronics engineers. The scientific field of mechatronics originates from Japan, and it is the combination of the knowledge accrued from three other scientific fields – mechanical engineering, electronic engineering and control engineering. In fact, mechatronics means the design and operation of “intelligent” machines. Computerized tools, robots, printers, DVD players, automatic washing machines, for example, can be considered such intelligent machines.

Curriculum for Academic Year 2013/2014- Mechatronics

Semester 1

MBEM0011 Mathematical Analysis I	2+2+0 E 5 cr.
MBEM0081 Linear Algebra, Analytical and Differential Geometry	3+1+0 E 5 cr.
MBMM0011 Descriptive Geometry and Technical Drawing	2+0+2 C 4 cr.
MBEK0011 Chemistry	1+0+1 C 2 cr.
MBEF0021 Physics I	2+1+1 E 4 cr.
MBMT0031 Material Science and Engineering	2+0+1 E 3 cr.
MBEI0101 Programming I	2+0+2 E 4 cr.
MBHX0011 English Language I	0+2+0 C 2 cr.
<i>Other Compulsory Courses:</i>	
MBSX0011 Physical Education I	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MBHM0011 History of Culture I	2+0+0 C 2 cr.
MBEM0031 Mathematical Basics of Computer Science	2+1+1 C 4 cr.
MBEM0181 Special Chapters of Mathematics	1+2+0 C 2 cr.
MBHP0321 Applied Psychology	1+0+0 C 1 cr.

Semester 2

MBEM0012 Mathematical Analysis II	2+2+0 E 5 cr.
MBEI0391 Computer Aided Graphics	1+0+2 C 4 cr.
MBEF0022 Physics II	2+1+1 C 5 cr.
MBMM0021 Mechanics	3+2+0 E 5 cr.
MBMV0011 Electrotechnics	2+1+1 E 4 cr.
MBEI0102 Programming II	2+1+2 E 4 cr.
MBHX0012 English Language II	0+2+0 C 2 cr.
<i>Other Compulsory Courses:</i>	

MBSX0012 Physical Education II	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MBMX0011 History of Science and Technique	2+0+0 C 2 cr.
MBHM0012 History of Culture II	2+0+0 C 2 cr.
MBEI0371 Special Chapters of Informatics	1+2+0 C 2 cr.
MBHP0321 Applied Psychology	1+0+0 C 1 cr.

Semester 3

MBMS0021 Computer Aided Design	2+0+2 C 4 cr.
MBEM0091 Special Mathematics	2+2+0 E 4 cr.
MBMT0032 Material Science and Engineering II	2+0+1 E 4 cr.
MBMM0031 Strength of Materials	4+2+0 E 6 cr.
MBME0051 Electronic Devices and Analogical Electronics	2+0+2 E 4 cr.
MBMM0161 Fundamental Elements of Processing and Form Generation	3+0+1 V 5 cr.
MBHX0013 English Language III	0+2+0 C 2 cr.
<i>Other Compulsory Courses:</i>	
MBSX0013 Physical Education III	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MHM0013 The history of culture III.	2+0+0 C 2 cr.
MBHX0031 German Language I	0+2+0 C 2 cr.
MBHX0021 French Language I	0+2+0 C 2 cr.

Semester 4

MBEM0101 Numerical Analysis	2+0+2 C 4 cr.
MBMM0051 Mechanisms	3+0+1 E 4 cr.
MBMV0021 Electric Measuring. Sensors and Transducers	3+0+1 E 4 cr.
MBME0031 Power Electronics	2+0+1 C 3 cr.
MBMR0061 Fundamentals of Mechatronical Systems	2+0+1 C 3 cr.
MBMS0031 Systems Theory I	2+1+1 E 4 cr.
MBME0041 Digital Electronics	2+0+2 C 4 cr.
MBHX0014 English Language IV	0+2+0 E 2 cr.
MBMR0011 Practice in Mechatronics I	0+0+6 C 2 cr.
<i>Facultative Courses:</i>	
MHM0014 The history of culture IV.	2+0+0 C 2 cr.
MBHX0032 German Language II	0+2+0 C 2 cr.
MBHX0022 French Language II	0+2+0 C 2 cr.

Semester 5

MBMM0181 Kinematics and Dynamics of Robots	2+0+2 E 5 cr.
MBMR0041 Termotechnics and Termic Machines	2+1+1 E 4 cr.
MBMM0071 Machine Elements I	2+0+1 E 5 cr.

MBMS0032 Systems Theory II	2+1+1 E 4 cr.
MBMM0061 Theory of Tolerances and Dimensional Control	2+0+2 C 4 cr.
MBMR0131 Technical Optics and Optical Devices	2+0+2 C 4 cr.
MBMS0041 Computer Architecture	2+0+2 E 4 cr.
<i>Facultative Courses:</i>	
MBHX0033 German Language III	0+2+0 C 2 cr.
MBHX0023 French Language III	0+2+0 C 2 cr.
MBHX0015 English Language V	0+2+0 C 2 cr.

Semester 6

MBMS0111 Control Engineering	2+0+2 E 4 cr.
MBMM0072 Machine Elements II	2+0+1 E 4 cr.
MBMV0031 Electrical Machines and Drives	2+0+2 E 4 cr.
MBMM0191 Fundamentals of Hydraulic Drive of Robots	2+0+1 E 3 cr.
MBMR0181 Finite Element Analysis of Mechatronical Systems	2+0+1 C 3 cr.
MBMR0012 Practice in Mechatronics II	0+0+6 C 2 cr.
MBMY0101 Optional Course 1	2+0+1 C 3 cr.
MBMY0102 Optional Course 2	2+0+2 E 4 cr.
MBMY0103 Optional Course 3	2+0+1 C 3 cr.
<i>Optional Discipline Packet 1</i>	
MBMR0191 Aquisition and Processing of Experimental Data	2+0+1 C 3 cr.
MBEI0311 Transmission of Data	2+0+1 C 3 cr.
<i>Optional Discipline Packet 2</i>	
MBMV0041 Microprocessors	2+0+2 E 4 cr.
MBMR0051 Micromechanics	2+0+2 E 4 cr.
<i>Optional Discipline Packet 3</i>	
MBEI0111 Artificial Intelligence	2+0+1 C 3 cr.
MBMS0051 Image Processing	2+0+1 C 3 cr.

Semester 7

MBMR0111 CNC Driving	2+0+2 E 4 cr.
MBMM0121 Hidraulic and Pneumatic Machines	2+0+1 E 4 cr.
MBMR0121 Robot Control Systems	2+0+2 E 4 cr.
MBMR0131 Technical Optics and Optical Devices	2+0+1 C 4 cr.
MBMM0131 Manufacturing Technologies	2+0+1 E 4 cr.
MBMY0104 Optional Course 4	2+1+0 C 3 cr.
MBMY0105 Optional Course 5	3+0+1 E 5 cr.
MBMY0106 Optional Course 6	2+0+0 C 2 cr.
<i>Optional Discipline Packet 4</i>	
MBJJ0061 Commercial Law	2+1+0 C 3 cr.
MBJJ0051 Labour Law	2+1+0 C 3 cr.
<i>Optional Discipline Packet 5</i>	
MBMM0151 Metal Cutting Tools	3+0+1 E 5 cr.

MBMM0141 Cutting Tools for Fine Mechanics <i>Optional Discipline Packet 6</i>	3+0+1 E 5 cr.
MBMT0041 Engineering of Modern Materials	2+0+0 C 2 cr.
MBMT0051 Surface Engineering	2+0+0 C 2 cr.

Semester 8

MBMR0151 Mecatronic Systems	3+0+0 E 5 cr.
MBGM0011 Management	2+1+0 C 2 cr.
MBMS0111 Control Engineering	2+0+2 E 3 cr.
MBML0011 Practice for Graduation Project	0+0+5 C 7 cr.
MBML0012 Editing of the Graduation Project	0+0+5 E 11 cr.
MBMY0107 Optional Course 7 <i>Optional Discipline Packet 7</i>	2+0+1 C 2 cr.
MBMV0121 Computer Peripherals and Interfaces	2+0+1 C 2 cr.
MBMV0131 Microprocessors	2+0+1 C 2 cr.

Computer Science (Informatics) - 3 years, full-time

The acquisition of the logic of information technologies, a close observation of their line of development, developing algorithmic thinking and creative application of the basics can help the computer scientist solve real-life problems. In order to become competitive professionals and meet the requirements of the job market, we lay stress on web technologies and databases, to name but two among the subjects taught.

Curriculum for Academic Year 2013/2014- Computer Science

Semester 1

MBEM0021 Linear Algebra	2+2+0 E 5 cr.
MBEM0011 Mathematical Analysis I	2+2+0 E 5 cr.
MBEI0091 Computer Architecture	2+0+2 E 6 cr.
MBEM0151 Discrete Mathematics	2+2+0 E 5 cr.
MBHX0011 English Language I	0+2+0 C 2 cr.
MBEI0011 Computer programming and programming languages	2+1+2 E 6 cr.
<i>Other Compulsory Courses:</i>	
MBSX0011 Physical Education I	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MBEM0181 Special Chapters of Mathematics	1+2+0 C 2 cr.
MBHM0011 History of Culture I	2+0+0 C 2 cr.
MBHP0321 Applied Psychology	0+0+1 C 1 cr.

Semester 2

MBEI0041 Data Structures and Algorithms	2+0+2 E 5 cr.
MBEM0012 Mathematical Analysis II	2+2+0 E 4 cr.
MBEM0041 Analytic and Differential Geometry	2+2+0 E 4 cr.
MBEM0051 Computational Logics	2+1+0 E 4 cr.
MBEI0012 Procedural Programming	2+0+2 E 5 cr.
MBHX0012 English Language II	0+2+0 C 2 cr.
MBIY0101 Optional Course 1	3+1+1 C 5 cr.
<i>Other Compulsory Courses:</i>	
MBSX0012 Physical Education II	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MBHM0012 History of Culture II	2+0+0 C 2 cr.
MBEI0371 Special Chapters of Informatics	1+0+2 C 2 cr.
MBHP0321 Applied Psychology	0+0+1 C 1 cr.
<i>Optional Discipline Packet 1</i>	
MBEM0061 Algorithmic Number Theory	3+1+1 C 5 cr.
MBEM0071 Number Theory in Computer Sciences	3+1+1 C 5 cr.

Semester 3

MBEI0131 Databases	2+0+2 E 4 cr.
MBEM0121 Differential Equations and Dynamic Systems	2+2+0 E 4 cr.
MBEI0191 Logical and Functional Programming	2+0+2 C 4 cr.
MBEI0141 Object Oriented Programming	2+0+2 E 5 cr.
MBEI0121 Operating Systems I	2+0+2 E 5 cr.
MBHX0013 English Language III	0+2+0 C 2 cr.
MBIY0102 Optional Course 2	3+0+2 C 5 cr.
<i>Other Compulsory Courses:</i>	
MBSX0013 Physical Education III	0+1+0 A 1 cr.
<i>Facultative Courses:</i>	
MBEI0751 Scientific Documents in LATEX	2+0+1 C 2 cr.
MBHX0021 French Language I	0+2+0 C 2 cr.
MBHX0031 German Language I	0+2+0 C 2 cr.
MBHM0013 History of Culture III	2+0+0 C 2 cr.
<i>Optional Discipline Packet 2</i>	
MBEM0141 Algebraic Basic Notions of Computer Sciences	3+2+0 C 5 cr.
MBEI0201 Computer Graphics	3+0+2 C 5 cr.

Semester 4

MBEI0132 Databases II	2+0+2 C 4 cr.
MBEM0101 Numerical Analysis	2+0+2 E 4 cr.
MBEI0032 Practice in Computer Science	0+6+0 C 2 cr.
MBEM0131 Probability and Statistics	2+0+2 E 3 cr.
MBEI0331 Graphical User Interface Design	1+0+1 E 3 cr.
MBEI0122 Operating Systems II	2+0+2 E 4 cr.

MBEI0161 Advanced Programming Methods	2+0+2 C 4 cr.
MBEI0211 Web Technology	2+0+2 E 4 cr.
MBHX0014 English Language IV	0+2+0 E 2 cr.
<i>Facultative Courses:</i>	
MBHX0022 French Language II	0+2+0 C 2 cr.
MBHX0032 German Language II	0+2+0 C 2 cr.
MBHM0014 History of Culture IV	2+0+0 C 2 cr.

Semester 5

MBEI0204 Graph Theory	2+0+2 E 4 cr.
MBMS0071 Software Engineering I	2+0+2 E 4 cr.
MBEI0171 Formal Languages and Compilers	2+0+2 E 4 cr.
MBEI0332 Graphical User Interface Design II	1+0+1 E 3 cr.
MBMS0091 Computer Networks	2+0+2 E 4 cr.
MBMS0061 Optimization Methods	2+0+2 C 3 cr.
MBEI0271 Java Technology	2+0+2 C 4 cr.
MBIY0103 Optional Course 3	2+0+2 E 4 cr.
<i>Facultative Courses:</i>	
MBHX0015 English Language V	0+2+0 C 2 cr.
MBHX0033 German Language III	0+2+0 C 2 cr.
MBHX0023 French Language III	0+2+0 C 2 cr.
<i>Optional Discipline Packet 3</i>	
MBEI0241 Coding Theory	2+0+2 E 4 cr.
MBMS0051 Image Processing	2+0+2 E 4 cr.

Semester 6

MBEI0232 Cryptography	2+0+2 C 4 cr.
MBEI0111 Artificial Intelligence	2+0+2 E 4 cr.
MBLI0011 Elaboration of Diploma Paper	0+0+3 C 7 cr.
MBIY0104 Optional Course 4	3+0+2 C 5 cr.
MBIY0105 Optional Course 5	2+0+2 C 5 cr.
MBIY0106 Optional Course 6	2+0+2 C 5 cr.
<i>Facultative Courses:</i>	
MBHX0016 English Language VI	0+2+0 C 2 cr.
MBHX0034 German Language IV	0+2+0 C 2 cr.
MBHX0024 French Language IV	0+2+0 C 2 cr.
<i>Optional Discipline Packet 4</i>	
MBEM0161 Differential Equations and Discrete Dynamic Systems	3+2+0 C 5 cr.
MBEI0261 Combinatorial Methods in Networks	3+0+2 C 5 cr.
<i>Optional Discipline Packet 5</i>	
MBEI0251 Computational Algebra	2+0+2 C 5 cr.
MBEI0221 Assembly Programming Languages	2+0+2 C 5 cr.
MBEI0351 Signal Processing	2+0+2 C 5 cr.

Optional Discipline Packet 6
MBEI0281 Computational Geometry
MBEI0291 Distributed Systems

2+0+2 C 5 cr.

Social and educational services for students

Created to meet the educational needs of the Hungarian community from Romania, the Sapientia University offers various social services and facilities for students. Student services include the possibility to accommodate more than 10% of the students, places being distributed by the Students' Association according to the *Dormitory Regulations*. At the canteen situated within the Miercurea Ciuc and Târgu-Mureş study centres students and lecturers can have lunch at reasonable prices. The menu is established weekly, being negotiated with the students whose representatives are implied in the running of the canteen. The University offers financial support to the Students' Associations which have a sustained activity representing students in different decision boards as well as in organising various student programmes including camps for freshmen, special competitions, sports events and entertainment.

Both the Ethical Code and the Charter of the University state that no type of discrimination is accepted in the institution. Special facilities are ensured for disabled people (parking places, lift, ramps), social grants are offered for those who suffer from specified illnesses, for orphans and socially disadvantaged students.

Contact details

Sapientia Hungarian University of Transylvania

RECTOR'S OFFICE

CLUJ-NAPOCA

RO-400112 Cluj-Napoca

Str. Matei Corvin nr. 4

Phone: +40 264 439 266 • Fax: +40 264 593 688

E-mail: office@sapientia.ro

www.sapientia.ro

FACULTY OF ECONOMIC AND HUMAN SCIENCES

MIERCUREA CIUC

RO-530104 Miercurea Ciuc

Piața Libertății nr. 1

Phone: +40 266 314 657 • Fax: +40 266 372 099

E-mail: ghkar@sapientia.siculorum.ro

ghk.csik@sapientia.ro

FACULTY OF TECHNICAL AND SOCIAL SCIENCES

MIERCUREA CIUC

RO-530104 Miercurea Ciuc

Piața Libertății nr. 1

Phone: +40 266 317 121 • Fax: +40 266 372 099

E-mail: mttkar@sapientia.siculorum.ro

mttk.csik@sapientia.ro

FACULTY OF SCIENCES AND ARTS

CLUJ-NAPOCA

RO-400112 Cluj-Napoca

Str. Matei Corvin nr. 4

Phone: +40 264 439 266 • Fax: +40 264 593 690

RO-400375 Cluj-Napoca, str. Deva nr. 19

Phone/Fax: +40 364 401 458

E-mail: office@kv.sapientia.ro

kv.sapientia.ro

FACULTY OF TECHNICAL AND HUMAN SCIENCES

TÂRGU-MUREȘ

Târgu-Mureș/Corunca, Șoseaua Sighișoarei nr. 1C

Mailing address: RO-540485 Târgu-Mureș, Op. 9, Cp. 4

Phone: +40 265 208 170 • Fax: +40 265 206 211

E-mail: office@ms.sapientia.ro

ms.sapientia.ro