

## Agricultural Engineering Undergraduate Study Programme

**The name of study programme:** Agricultural Engineering

**Level of degree:** baccalaureus, bachelor, abbr.: BSc-degree

**Qualification written in the degree:** Agricultural Engineer

**Name of the programme supervisor:** Dr. Dóra, Beke

**Picture of the supervisor:** [https://admissions.sze.hu/images/cv/CV\\_BekeD%C3%B3ra.pdf](https://admissions.sze.hu/images/cv/CV_BekeD%C3%B3ra.pdf)

**Link to the supervisor's CV:** [https://admissions.sze.hu/images/cv/CV\\_BekeD%C3%B3ra.pdf](https://admissions.sze.hu/images/cv/CV_BekeD%C3%B3ra.pdf)

**The language of study programme:** English

**The area of education:** Agricultural

**Duration of study programme:** 7 semesters/terms

**The number of credit points necessary for the BSc degree:** 210 credit points

### The aim of study programme:

The BSc in Agriculture (equivalent to the Agronomist course) is designed for students to obtain the knowledge necessary to operate successfully in the different areas of agriculture, with special regard to plant production, animal breeding and environmental aspects related to agriculture. The training starts with a strong emphasis on basic sciences, especially chemistry, plant and animal physiology, physics and mathematics. The technical aspects of agriculture are important parts of the curriculum, which also includes the fundamentals of precision agriculture. The principal areas of training from the third semester are animal breeding and crop production, which includes all the related sciences necessary to operate as a qualified agronomist. A special emphasis is placed on the environmental aspects and on the application of environmentally sound technologies, which results not only in less environmental load, but also in a more economical way of production.

### The content of the study programme:

#### Compulsory courses:

	Neptun code of course	Name of course	lessons / week	seminars / week	assessment type	credit points	semester	
1.	<a href="#">MENB_AVTA010</a>	Agricultural basic studies	2	1	v	4	1	
2.	<a href="#">MENB_BETA034</a>	Informatics	1	2	v	4	1	
3.	<a href="#">MENB_BETA036</a>	Mathematics	2	2	v	4	1	

4.	<a href="#">MENB_ÉTTA001</a>	General Microbiology	2	2	v	4	1	
5.	<a href="#">MENB_NTTA006</a>	Practical training I.	0	0	a	0	1	
6.	<a href="#">MENB_VKTA006</a>	The Basics of Chemistry	2	2	v	4	1	
7.	<a href="#">MENB_VKTA016</a>	Botany	2	1	v	4	1	
8.	<a href="#">MENB_VKTA029</a>	Zoology	2	1	v	4	1	
9.	<a href="#">MENB_AVTA005</a>	Human resource management	2	1	v	4	2	
10.	<a href="#">MENB_AVTA019</a>	Statistics	2	2	v	4	2	
11.	<a href="#">MENB_AVTA023</a>	Agricultural Economics I.	2	1	v	4	2	
12.	<a href="#">MENB_BÉTA001</a>	Agricultural engineering basics	2	1	v	4	2	
13.	<a href="#">MENB_NTTA007</a>	Practical training II	0	0	a	0	2	
14.	<a href="#">MENB_NTTA016</a>	Plant physiology	2	2	v	4	2	
15.	<a href="#">MENB_NTTA038</a>	Principles of plant production	2	2	v	4	2	
16.	<a href="#">MENB_VKTA022</a>	The Basics of Pedology	2	1	v	4	2	
17.	<a href="#">DKNB_JETA001</a>	Basics of Law	2	0	v	3	3	
18.	<a href="#">MENB_ÁTTA022</a>	Animal Physiology	2	1	v	4	3	
19.	<a href="#">MENB_ÁTTA033</a>	Universal Animal Husbandry	2	1	v	4	3	
20.	<a href="#">MENB_AVTA008</a>	Basic Principles of Economics	2	0	v	3	3	
21.	<a href="#">MENB_NTTA002</a>	Practical training III.	0	0	a	0	3	
22.	<a href="#">MENB_NTTA027</a>	Crop production I.	2	2	v	4	3	
23.	<a href="#">MENB_NTTA042</a>	Soil management	2	2	v	4	3	
24.	<a href="#">MENB_VKTA002</a>	Principles of Agrometeorology	2	1	v	4	3	
25.	<a href="#">MENB_VKTA003</a>	Biochemistry	2	1	v	4	3	
26.	<a href="#">MENB_ÁTTA015</a>	Bovine and Sheep Breeding	2	2	v	4	4	
27.	<a href="#">MENB_ÁTTA017</a>	Basic animal nutrition and feeding	2	1	v	4	4	
28.	<a href="#">MENB_ÁTTA028</a>	Horse Husbandry and Breeding	2	1	v	3	4	
29.	<a href="#">MENB_AVTA011</a>	Farm management I.	2	2	v	4	4	
30.	<a href="#">MENB_BÉTA007</a>	Plant production machines	2	1	v	4	4	

31.	<a href="#">MENB_NTTA003</a>	Practical training IV.	0	0	a	0	4	
32.	<a href="#">MENB_NTTA022</a>	Animal pests in agriculture	2	1	v	4	4	
33.	<a href="#">MENB_NTTA028</a>	Crop production II.	3	3	v	4	4	MENB_NTTA027
34.	<a href="#">MENB_NTTA033</a>	Phytopathology	2	1	v	4	4	
35.	<a href="#">MENB_ÁTTA013</a>	Porcine and Poultry Breeding	3	2	v	4	5	
36.	<a href="#">MENB_AVTA013</a>	Farm management II.	2	1	v	4	5	MENB_AVTA011
37.	<a href="#">MENB_AVTA022</a>	Basics of Accounting	2	1	v	4	5	
38.	<a href="#">MENB_BÉTA018</a>	Animal husbandry machines	2	1	v	4	5	
39.	<a href="#">MENB_NTTA095</a>	Thesis Consultation I. (Bachelor Programme)	0	0	f	5	5	
40.	<a href="#">MENB_VKTA026</a>	The Basics of Water Management	2	2	v	4	5	
41.	<a href="#">MENB_NTTA005</a>	Internship	0	0	f	30	6	
42.	<a href="#">MENB_ÁTTA002</a>	Genetics	2	0	v	4	7	
43.	<a href="#">MENB_ÁTTA007</a>	Animal Health and Hygiene	2	2	v	4	7	
44.	<a href="#">MENB_AVTA045</a>	Agromarketing I.	2	2	v	4	7	
45.	<a href="#">MENB_BÉTA011</a>	Geographic information system	1	2	v	4	7	
46.	<a href="#">MENB_NTTA014</a>	Horticulture	2	0	v	4	7	
47.	<a href="#">MENB_NTTA035</a>	Basic technology for crop protection	2	0	v	4	7	
48.	<a href="#">MENB_NTTA096</a>	Thesis Consultation II. (Bachelor Programme)	0	0	f	6	7	
Összes kreditpontszám:202								

### Hungarian Language (compulsory)

Nr.	Neptun code of course	Name of course	lessons / week	seminars / week	assessment type *	credit points
1	<a href="#">KGNB_NOKA036</a>	Hungarian Language & Culture 1	0	3	a	0

2	<a href="#">KGNB_NOKA037</a>	Hungarian Language & Culture 2	0	3	a	0
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### Free optional courses

**8 credit points** should be obtained from this group of courses.

Nr.	Neptun code of course	Name of course	lessons / week	seminars / week	assessment type *	credit points
1.	<a href="#">MENB_ÁTTA037</a>	Pet Breeding	2	1	v	4
2.	<a href="#">MENB_AVTA061</a>	Rural tourism	2	1	v	4
3.	<a href="#">MENB_AVTA062</a>	Services Marketing	2	1	v	4
4.	<a href="#">MENB_AVTA063</a>	Foreign Trade	2	1	v	4
5.	<a href="#">MENB_BÉTA028</a>	Basic machines in food industry	2	1	v	5
6.	<a href="#">MENB_ÉTTA004</a>	Introduction to Chemistry	0	1	v	2
7.	<a href="#">MENB_ÉTTA038</a>	Disaster management	1	2	v	4
8.	<a href="#">MENB_NTTA029</a>	Grassland management	2	2	v	4
9.	<a href="#">MENB_NTTA046</a>	From bio farming to gene technology	2	1	v	4
10.	<a href="#">MENB_NTTA051</a>	Precision crop production	2	1	v	4
11.	<a href="#">MENB_NTTA052</a>	Alternative crop production	2	1	v	4
12.	<a href="#">MENB_NTTA053</a>	Growing of ornamental plants	2	1	v	4
13.	<a href="#">MENB_VKTA035</a>	The Origin, Habitat and Conservation of our Arable Weeds	2	1	v	4

#### \* type of assessment

f - evaluation based on student's performance and work during the semester

v - evaluation based on student's exam grade in a 5-grade system:

excellent (5) – good (4) – satisfactory (3) – passed (2) – fail (1)

The percentage of each training area/field:

Knowledge of Natural Sciences

20 kredit

Knowledge of Engineering Basics	8 kredit
Knowledge of Agriculture and Technology	30 kredit
Knowledge of Economics and Human Sciences	12 kredit
Agricultural Engineering Professional Knowledge:	85 kredit
Professional Practice/Internship	30 kredit
Freely elected courses	10 kredit
Diploma Thesis	15 kredit

### **Professional Practice/Internship:**

The mandatory internship period of 12 weeks has to be absolved outside of university at a suitable professional location.

Information about Internship: <https://karrier.sze.hu/international-internship>

### **The supervisory system of knowledge contains the following items:**

Acquisition of the prescribed knowledge requirement, internship absolved, diploma thesis completed and final examination absolved.

### **Requirements of the thesis:**

The diploma thesis is the elaboration of a specified agricultural Engineering or research task. This task must be based on the acquired knowledge of the student and on the state of the art know how of the topic based on literature. The elaboration process is supported by at least one supervisor of the university and can be assisted by an external industrial expert. The duration is 2 semesters.

The candidate proves with his/her thesis, that he/she obtained and can apply sufficient knowledge/skills in order to resolve a dedicated professional analysis, design or development task on his/her own, and creating added value.

Please find details of thesis and final exams on: [https://mek.sze.hu/en\\_GB/guide-to-writing-theses-1](https://mek.sze.hu/en_GB/guide-to-writing-theses-1)

### **Conditions for taking the final exam:**

Meeting the requirements of the curriculum, including

- obtaining at least 210 credit points,
- fulfilling the conditions of the practical training/internship as part of the curriculum,
- diploma thesis evaluated and approved by the reviewer.

### **Conditions for issuing the degree:**

In accordance with the 51§ of the Act CCIV/2011 on the National Higher Education, students studying and completing a course held in a foreign language are exempted from taking language examinations regardless the level and number of language examinations laid down in the Educational and Outcome Requirements (KKK). Graduating from a course held in a foreign language implies that the output requirements on foreign language are considered to have been completed.

**Parts of the final exam:**

- comprehensive oral exam including the appointed areas of appointed courses
- evaluation and defence of the thesis,

**The results of the final exam:**

The arithmetical mean of the following two results: the grade received for the defence of the thesis (integer number) and the grade of the comprehensive oral exam rounded to two decimal places. If any of the two grades is „fail” the final exam is regarded as „fail”.

**The assessment of the degree:**

The arithmetical mean of four following results: 1) the grade received for the thesis (integer number), 2) the grade received for the defence of the thesis (integer number), 3) the grade received for the comprehensive oral final exam (rounded to two decimal places), 4) corrected cumulative credit index (rounded to two decimal places).