

**UNIVERSITY OF PÉCS
FACULTY OF PHARMACY
BIOTECHNOLOGY BSc**



Biotechnology BSc

- ▶ **Degree:** Biotechnologist
- ▶ **Duration of training:** 3 years (6 semesters)
- ▶ **Language of instruction:** English
- ▶ **Program director:** **Prof. Dr. Judit E. PONGRÁCZ**

MODULE I

1. Physical and biophysical foundation of biotechnology I. Dr Grama László	<i>14ea/2 kr 14 sz/1 kr 28 gy/2 kr</i>					
2. Physical and biophysical foundation of biotechnology II. Dr Grama László		<i>14ea/2 kr 14 sz/1 kr 28 gy/2 kr</i>				
3. Physical chemistry Dr. Ósz Katalin	<i>14 ea/1 kr 0 sz/0 kr 28 gy/4 kr</i>					
4. Biotechnology on the border of physics and chemistry Dr. Kunsági-Máté Sándor		<i>14 ea/1 kr 0 sz/0 kr 14 gy/2 kr</i>				
5. General chemistry Dr Perjési Pál	<i>28 ea/2 kr 14 sz/1 kr 14gy/1 kr</i>					
6. Inorganic chemistry Dr Horváth Attila	<i>28 ea/2kr 0 sz/0 kr 28 gy/2 kr</i>					
7. Analytical chemistry Dr Felinger Attila			<i>14 ea/1kr 14 sz/1 kr 28 gy/2 kr</i>			
8. Organic chemistry Dr Kálai Tamás		<i>28 ea/2 kr 14 sz/1 kr 14 gy/2 kr</i>				
9. Mathematical foundation of biostatistics Dr Hideg Éva	<i>0 ea/0 kr 14 sz/2 kr 28 gy/2 kr</i>					
10. Mathematical and biostatistical foundation of biotechnology Dr Bugyi Beáta		<i>28 ea/2 kr 14 sz/1 kr 28 gy/2 kr</i>				

MODULE II

1.Cell biology Dr Sipos Katalin	14 ea/1 kr 14 sz/2 kr 28gy/2 kr					
2.Genetic background of gene manipulation I. Dr Csöngéi Veronika			28 ea/2 kr 0sz/0 kr 28gy/4 kr			
3.Genetic background of gene manipulation II. Dr Csöngéi Veronika				14 ea/1kr 14 sz/2 kr 28 gy/4 kr		
4.Biochemistry I. Dr Sipos Katalin		14 ea/1 kr 28 sz/2 kr 0 gy/0 kr				
5.Biochemistry II. Dr Sipos Katalin			14 ea/1 kr 14 sz/1 kr 28gy/2 kr			
6.Omics methods Dr Fekete Csaba					14 ea/1 kr 14 sz/1 kr 28gy/2 kr	
7.General microbiology Dr Gazdag Zoltán		14 ea/1kr 0sz/0kr 28gy/2kr				
8.Biomedical microbiology Dr Bártainé Dr Kerényi Mónika			14 ea/1kr 0sz/0kr 28gy/2kr			
9.Immunology Dr Kvell Krisztián				28 ea/2 kr 14sz/1 kr 28gy/2 kr		
10.Physiology of plants and herbs Dr Horváth Györgyi			14 ea/1kr 14sz/1kr 28gy/2kr			
11. Experimental animals in biotechnology Dr Gábrriel Róbert			14 ea/1kr 14sz/2kr 14gy/1kr			
12.Human physiology Dr Buzás Péter			28 ea/2kr 0sz/0kr 28gy/4kr			
13.Informatics and bioinformatics I. Dr Gyenesei Attila				0ea/0kr 28sz/2kr 28gy/2kr		
14.Informatics and bioinformatics II. Dr Gyenesei Attila					0ea/0kr 28sz/2kr 28gy/2kr	

MODULE III

1.Molecular biology and gene technology I. Dr Kvell Krisztián				<i>28ea/2kr 14sz/2kr 28gy/4kr</i>		
2.Molecular biology and gene technology II. Dr Kvell Krisztián					<i>28ea/2kr 14sz/2kr 28gy/4kr</i>	
3.Modern analitical devices Dr Széchenyi Aleksandar				<i>14 ea/1kr 0sz/0kr 28 gy/4 kr</i>		
4.Pharmaceutical and medical biotechnology Dr Pongrácz Judit					<i>28 ea/2kr 14sz/1kr 28gy/4kr</i>	
5.Environmental biotechnology Dr Fekete Csaba						<i>14 ea/1kr 14sz/1kr 14gy/1kr</i>
6.Agricultural biotechnology Dr Magyar István					<i>14ea/1kr 14sz/2kr 0gy/0kr</i>	
7.Industrial biotechnology Dr Czömpöly Tamás					<i>14 ea/1kr 14sz/2kr 14gy/2kr</i>	
8.Quality assurance, biosafety Dr Fittler András						<i>0 ea/0kr 28sz/2kr 0gy/0kr</i>
9.Experimental data science Dr Farkas Ágnes						<i>0 ea/0kr 14sz/1kr 14gy/2kr</i>

PRACTICE BASED

▶ 6 WEEKS INDUSTRIAL OR LABORATORY PRACTICE

▶ Based on the aims of the biotechnology BSc programme as well as the partner company, individual contracts will be drawn up

▶ COMMITTED INDUSTRIAL PARTNERS:

- ❖ Soft-Flow-Foss Plc
- ❖ Szentágothai János Research Centre (eight Core Facilities)
- ❖ Tettye Forrásház Water Supply Plc
- ❖ Pécsi Brewery Plc
- ❖ CEBINA Gmbh (Vienna, Austria)
- ❖ Pharminvivo Ltd
- ❖ Pharmaroad Ltd
- ❖ Prolimb Ltd
- ❖ Corvusmed Ltd
- ❖ Core Tech Solutions Ltd,
- ❖ PaksII Nuclear Power Station, etc

APPLICATION PROCESS

<https://admissions.medschool.pte.hu/en/menupont/77>

IMPORTANT INFORMATION

- ▶ Deadline for application:
 - ▶ 06/30/2022
- ▶ Start date:
 - ▶ 09/01/2022
- ▶ Tuition fee:
 - ▶ 3,500 EUR per semester + 250 Entry exam fee
- ▶ Application fee:
 - ▶ USD 200

ENTRY REQUIREMENTS

► **Needed for application:**

- ❖ a high school diploma/official transcript of grades from secondary school (or a provisional certificate proving that you are going to graduate in the application period, therefore you will be able to submit it only later on, until the time of enrolment at the latest) with the best possible grades in Biology, as well as Chemistry and Physics.
- ❖ have B2 level/upper intermediate English knowledge
- ❖ pass a complex (oral and written) entrance exam
- ❖ have eligibility for higher education studies in home country

FURTHER STUDY OPPORTUNITIES FOR GRADUATES WITH A BIOTECHNOLOGY BSc DEGREE

▶ **IN HUNGARY**

▶ University of Pécs:

- ▶ Biotechnology MSc, Medical School
- ▶ Biomedical Engineering, Faculty of Engineering-Medical School

▶ Semmelweis University, Eötvös Lóránd University, University of Szeged, University of Debrecen

▶ **IN THE EU**

▶ Josip Juraj Strossmayer University, Osijek, CROATIA

- ▶ Food Biotechnology MSc – in English

▶ Austria, Germany, Finland, etc with a great variety of MSc programs

JOB OPPORTUNITIES WITH BIOTECHNOLOGY BSc DEGREE

- ▶ Research laboratories
- ▶ Industry

How can whole-genome sequencing be used to make vaccines more effective?

<https://sciani.com/portfolio/how-can-whole-genome-sequencing-be-used-to-make-vaccines-more-effective/>