

UNIVERSITY OF BELGRADE
FACULTY OF VETERINARY MEDICINE
11000 Belgrade, Bulevar oslobodjenja 18



STUDY PROGRAM
THE INTEGRATED ACADEMIC STUDIES - VETERINARY MEDICINE IN ENGLISH LANGUAGE

Based on the Articles 34 and 35 of the Law on Higher Education ("Official Gazette of the Republic of Serbia" No 88/2017, 73/2018, 27/2018 - other law, 67/2019 and 6/2020 - other laws), the Article 88 of the Statute of the University of Belgrade ("Gazette of the University of Belgrade" No 201/18, 207/19, 213/2020, 214/2020 and 217/2020), in accordance with the Rulebook on Standards and Procedures for Accreditation of Study Programs ("Official Gazette of the Republic of Serbia" No 13/2019), Rulebook on Study Programs Approval ("Gazette of the University of Belgrade" No 139/07) and Article 101 of the Statute of the Faculty of Veterinary Medicine, on the proposal of the Academic Council of Medical Sciences, number: 61201-1393/2-23 dated April 19th, 2023, the University Senate, at the session held on April 26th, 2023, adopted the INTEGRATED ACADEMIC STUDIES - VETERINARY MEDICINE IN ENGLISH LANGUAGE (IAS).

GENERAL INFORMATION ON THE STUDY PROGRAM
THE INTEGRATED ACADEMIC STUDIES - VETERINARY MEDICINE IN ENGLISH
LANGUAGE

1.1. Title of the study program

THE INTEGRATED ACADEMIC STUDIES - VETERINARY MEDICINE IN ENGLISH LANGUAGE (IAS)

1.2. Objectives of the study program

The objectives of the study program for students are to gain knowledge and skills that will be applicable in diverse fields of veterinary medicine:

- Theoretical, practical and methodological knowledge related to the morphology and physiology of animals, their physiological and social needs and behaviour.
- Knowledge and skills related to diagnostic and clinical examination that include vital signs, animal body condition assessment and animal welfare, analysis of aetiology, pathogenesis and clinical signs of common diseases and disorders in domestic animals, as well as diseases of international importance that are a potential risk for national and international biosafety and trade.
- Proper specimens sampling and handling, test interpretation and understanding the limitations of the results.
- Skills related to animal handling methods, safe animal restraint and instructing others in order to help and consciousness about caution measures to minimize the safety risks in the working environment.
- Treatment planning and life-threatening emergency management. Prescription and administration of drugs according to the law and recommendations. Reporting suspected adverse drug effects. Performing surgery using sterile techniques. Sedation, anaesthesia and pain management protocols, as well as euthanasia when indicated. Keeping clinical records understandable for colleagues and public.
- Understanding the activities related to animal husbandry, application of disease prevention principles, promotion of animal health and welfare, implementation of legislation related to animal care, welfare, and movement of animals and diseases that should be reported according to the law.
- Performing necropsy, keeping records, tissue sampling and appropriate transport of the samples taken.

- A comprehensive approach to food safety. Assessment of every stage in food production chain according to the “farm to fork” principle considering food safety, quality and environmental protection.
- Ethical approach in professional work. The Veterinary organization, management and legislation acknowledgement.
- Continual improvement of communication skills. Encouragement of teamwork and cooperation with the institutions, clients and public.
- Implementation of evidence-based medical principles, critical thinking and critical assessment of the professional literature. Recognition of personal/professional limitations and need for professional help. Commitment to self-improvement and lifelong learning.
- Keeping up to date with findings and demands in veterinary medicine.

The goals of the IAS are adjusted to the Faculty of Veterinary Medicine tasks and goals which are defined in the Quality Assurance Strategy of the Faculty of Veterinary Medicine.

The goals of the IAS are created according to the competencies required for future doctors of veterinary medicine in order to effectively respond to the demands in the animal health and welfare, public health, food safety and infectious diseases management.

Successful mastering of the listed goals give the opportunity for students to continue their professional and scientific development in the country or abroad.

The IAS study programme goals are in compliance with demands in veterinary profession, science and economy, respecting the Veterinary Law, the Animal Husbandry Law, the Food Safety Law, the Animal Welfare Law, the Population Protection from Infectious Diseases Law with the related legislation and international education standards (ESEVT).

1.3. Type of study

The Integrated Academic Studies - Veterinary Medicine in English language last 5.5 years / 11 semesters and students obtain overall 330 ECTS.

1.4. Competences and learning outcomes

In accordance with the national standards regulated by the Republic of Serbia Veterinary Law, Regulated Professions and Recognition of Professional Qualifications Law and European standards from EU Directive 2005/36 and EU Directive 2013/55/, as well as EU Regulation 1024/2012, graduate students of Integrated Academic Studies are competent in all fields of the veterinary profession.

Competences of a doctor of veterinary medicine are divided into:

1) General skills:

- value of veterinary ethics, organization, management and legislation.

- estimate safety risks in the working environment, plan risk minimizing measures and assess the effect of the measures taken.
- apply the principles of evidence-based medicine.
- overcome unforeseen situations, adjust to changes.
- embrace teamwork; communicate with clients, colleagues, institutions.
- recognize personal /professional limitations; seek professional help.
- critically analyze professional literature.
- assess and solve problems independently
- apply acquired knowledge and methodology in clinical problems solving.
- become familiar with methods and research processes, interpret and objectively present the obtained results.

2) Subject-specific abilities

- logical scientific and clinical approach, awareness of its benefits and limitations.
- understand the methods and contributions of fundamental and applied research in veterinary science.
- understand domestic, wild and laboratory animals' morphology, physiology, behaviour and their physiological and social needs.
- understand animal husbandry.
- analyse aetiology, pathogenesis, clinical signs, diagnostics and treatment of common diseases and disorders in animals.
- become familiar with worldwide diseases that are a potential risk for national and international biosafety and trade.
- apply the legislation related to animal care and welfare, animal migration and reportable infectious diseases.
- apply the legislation related to drugs and guidelines on responsible use of medicines including antimicrobial and antiparasitic drugs.
- apply the principles of disease prevention and promote animal health and welfare.
- understand issues related to the public health, including epizootiology, zoonoses, food borne diseases, food hygiene and food technology.
- apply principles of effective interpersonal interaction, including communication, leadership, management and teamwork.
- keep clinical documentation understandable to colleagues and the public, objectively estimate the data obtained from clinical documentation and improve activities through comprehensive analysis.
- apply ethical principles in decision making regarding professional ethics and ethics related to animal welfare.
- apply information and communication technologies in mastering knowledge in the field, work on continual self-improvement, follow and apply professional innovations and contribute to the improvement of veterinary medicine.

The outcomes of the IAS study program are described by the "Day One Competences". The knowledge and skills obtained should ensure veterinary graduated students' an independent professional work.

Certified doctors of veterinary medicine should know how to:

- restrain animals safely and instruct others on how to help.
- conduct a clinical examination and make a decision.
- suggest the best treatment plan for the patient.
- take care of emergency cases, provide first aid.
- assess vital signs, welfare, animal body condition, advise the client.
- handle samples, perform and interpret tests, be familiar with the results limitations.
- recognise the signs of reportable diseases and take actions accordingly.
- prescribe/dispense medicines in accordance with the law; to report side effects.
- perform aseptic surgery.
- apply sedation/anesthesia.
- perform the indicated euthanasia, respecting the animal and the owner.
- conduct an autopsy, record observations, take samples, transport tissues.
- inspect animals in the food chain; recognize causes that affect the quality/safety of food.
- conduct inspection of food and feed and its production technology.
- implement disease prevention programs.

1.5. Professional, academic/scientific title

Doctor of Veterinary Medicine (Dr. vet.)

1.6. Requirements for the study program enrollment

The first year enrollment in the Integrated Academic Studies - Veterinary Medicine in English language is carried out through competition announced by the University of Belgrade, in accordance with the Law on Higher Education and the University's regulations, with additional conditions that may be decided by the Faculty.

The candidates have equal rights to enrol in the study programme which cannot be limited based on gender, race, marital status, skin colour, language, religion, political opinion, national, social or ethnic origin, disability or for any other reason or circumstances.

1.7. Methodology and time required for studies

The study program of Integrated Academic Studies - Veterinary Medicine in English language includes 65 obligatory courses, 32 elective courses and professional training.

Classes are held at the Faculty and in teaching facilities, on farms, in stables, at the veterinary institutes, clinics, walk in clinics and in other organizations that the Faculty has cooperation agreement with. Studies last five and a half years or 11 semesters and students obtain overall 330 ECTS.

1.8. Teaching methodology

The study program of Integrated Academic Studies - Veterinary Medicine in English language includes theoretical lectures, practical exercises, demonstrative exercises, interactive teaching, professional practice under teachers' supervision and extramural summer clinical practice in teaching facilities - veterinary clinics, diagnostic institutes and laboratories, slaughterhouses and dairies that the Faculty has cooperation agreement with.

STUDY PLAN

No	Code	Course title	Sem.	Active teaching				Other	ECTS	Obligatory/ Elective O/E	Course type
				L	P	DON	SRW				
1st YEAR											
1.	23IE1O01	Anatomy 1	1.	4	5				7.0	O	Theoretical-methodological
2.	23IE1O02	Medicinal chemistry	1.	2	1				4.0	O	Academic-general
3.	23IE1O03	Zoology	1.	1	2				4.0	O	Academic-general
4.	23IE1O04	Biophysics	1.	1	1				3.0	O	Academic-general
5.	23IE1O05	Biostatistics with informatics	1.	2	1				4.0	O	Academic-general
6.	23IE1O06	Animal behaviour, welfare and protection	1.	2	1				4.0	O	Academic-general
7.	23IE1O07	Anatomy 2	2.	3	3				6.0	O	Theoretical-methodological
8.	23IE1O08	Topographic anatomy	2.	1	1				3.0	O	Theoretical-methodological
9.	23IE1O09	Biochemistry	2.	4	3				7.0	O	Theoretical-methodological
10.	23IE1O10	Veterinary genetics	2.	2	2				4.0	O	Scientific-professional
11.	23IE1O11	Botany	2.	1	1				2.0	O	Academic-general
12.	23IE1O12	Histology with embriology 1	2.	3	2				5.0	O	Theoretical-methodological
Elective courses:											
In the first semester, students choose 4 ECTS in total from Elective Block 1A (1-5).											
In the second semester, students choose 3 ECTS in total from Elective Block 1B (6-9).											
1.	23IE1I01	Veterinary profession and society	1.	2	0				2.0	E	Academic-general
2.	23IE1I02	Medical terminology - english	1.	2	0				2.0	E	Academic-general
3.	23IE1I03	Psychosocial aspects of animal husbandry	1.	0	2				2.0	E	Academic-general
4.	23IE1I04	Experimental chemistry	1.	0	2				2.0	E	Theoretical-methodological
5.	23IE1I05	Physics fundamentals of diagnostic and therapeutic methods	1.	0	2				2.0	E	Theoretical-methodological
6.	23IE1I06	Introduction to veterinary clinical practice	2.	1	2				3.0	E	Theoretical-methodological
7.	23IE1I07	Introduction to veterinary laboratory practice	2.	1	2				3.0	E	Theoretical-methodological
8.	23IE1I08	Breeding and care of wild and exotic animals	2.	1	2				3.0	E	Theoretical-methodological
9.	23IE1I09	Breeding and care of honey bees	2.	1	2				3.0	E	Theoretical-methodological
Total class hours (lectures + practicals, DON, other classes) and ECTS per year				29	27				60.0		
Total hours of teaching per year				56					60.0		

No	Code	Course title	Sem.	Active teaching				Other	ECTS	Obligatory/ Elective O/E	Subject type
				L	P	DON	SRW				
2nd YEAR											
13.	23IE2O01	Histology with embriology 2	3.	3	3				6.0	O	Theoretical-methodological
14.	23IE2O02	Physiology 1	3.	4	3				7.0	O	Scientific-professional
15.	23IE2O03	Microbiology and immunology 1	3.	3	3				6.0	O	Scientific-professional
16.	23IE2O04	Animal nutrition 1	3.	3	3				5.0	O	Theoretical-methodological
17.	23IE2O05	Animal breeding 1	3.	2	2				5.0	O	Theoretical-methodological
18.	23IE2O06	Physiology 2	4.	4	3				8.0	O	Scientific-professional
19.	23IE2O07	Microbiology and immunology 2	4.	3	2				6.0	O	Scientific-professional
20.	23IE2O08	Animal nutrition 2	4.	2	2				5.0	O	Theoretical-methodological
21.	23IE2O09	Animalbreeding 2	4.	2	2				4.0	O	Theoretical-methodological
22.	23IE2O10	Parasitology 1	4.	3	2				5.0	O	Scientific-professional
Elective courses: In the third semester, students choose 1 ECTS from Elective Block 2A (10-11). In the fourth semester, students choose 2 ECTS in total from Elective Block 2B (12-14).											
10.	23IE2I01	Medicinal and poisonous plants of the Balkans	3.	1	0				1.0	E	Academic-general
11.	23IE2I02	Aquaristics	3.	1	0				1.0	E	Scientific-professional
12.	23IE2I03	Breeding and care of caged birds	4.	1	1				2.0	E	Scientific-professional
13.	23IE2I04	Aquaculture and fisheries	4.	1	1				2.0	E	Scientific-professional
14.	23IE2I05	Molecular-genetic methods in veterinary medicine	4.	1	1				2.0	E	Theoretical-methodological
Total class hours (lectures + practicals, DON, other classes) and ECTS per year				31	26				60.0		
Total hours of teaching per year				57					60.0		

No	Code	Course title	Sem.	Active teaching				Other	ECTS	Obligatory/ Elective O/E	Subject type
				L	P	DON	SRW				
3rd YEAR											
23.	23IE3O01	Parasitology 2	5.	1	1				2.0	O	Scientific-professional
24.	23IE3O02	General pathology	5.	4	3				8.0	O	Scientific-professional
25.	23IE3O03	Pathophysiology	5.	3	3				6.0	O	Scientific-professional
26.	23IE3O04	Pharmacology and toxicology 1	5.	3	2				5.0	O	Scientific-professional
27.	23IE3O05	General clinical diagnostics and propedeutics	5.	2	4				7.0	O	Professional-applied
28.	23IE3O06	Bee diseases	6.	1	1				2.0	O	Professional-applied
29.	23IE3O07	Special pathology	6.	4	3				7.0	O	Scientific-professional
30.	23IE3O08	Pharmacology and toxicology 2	6.	4	2				6.0	O	Scientific-professional
31.	23IE3O09	Animal hygiene and herd health	6.	4	4				8.0	O	Theoretical- methodological
32.	23IE3O10	Fish diseases	6.	1	1				3.0	O	Professional-applied
33.	23IE3O11	Anesthesiology	6.	1	1				2.0	O	Professional-applied
Elective courses:											
In the fifth semester, students choose 2 ECTS in total from Elective Block 3A (15-17).											
In the sixth semester, students choose 2 ECTS in total from Elective Block 3B (18-20)											
15.	23IE3I01	Cynology and felinology	5.	2	0				2.0	E	Scientific-professional
16.	23IE3I02	Breeding and welfare of sport horses	5.	2	0				2.0	E	Scientific-professional
17.	23IE3I03	Breeding and care of farm animals	5.	2	0				2.0	E	Scientific-professional
18.	23IE3I04	Protection and rescue of animals in emergency situations	6.	2	0				2.0	E	Scientific-professional
19.	23IE3I05	Sport medicine of horses	6.	2	0				2.0	E	Scientific-professional
20.	23IE3I06	Rearing and nursing of dogs and cats	6.	2	0				2.0	E	Professional-applied
Total class hours (lectures + practicals, DON, other classes) and ECTS per year				32	25				60.0		
Total hours of teaching per year				57					60.0		

No	Code	Course title	Sem.	Active teaching				Other	ECTS	Obligatory/ Elective O/E	Subject type
				L	P	DON	SRW				
4th YEAR											
34.	23IE4O01	Diagnostic imaging	7.	3	2				6.0	O	Professional-applied
35.	23IE4O02	General surgery	7.	2	2				5.0	O	Professional-applied
36.	23IE4O03	Obstetrics and reproduction 1	7.	3	4				7.0	O	Professional-applied
37.	23IE4O04	Diseases of ruminants 1	7.	3	2				5.0	O	Professional-applied
38.	23IE4O05	One health	7.	1	0				2.0	O	Professional-applied
39.	23IE4O06	Basic principles of food hygiene	7.	2	0				3.0	O	Theoretical-methodological
40.	23IE4O07	Specialised surgery	8.	3	3				6.0	O	Professional-applied
41.	23IE4O08	Obstetrics and reproduction 2	8.	3	3				6.0	O	Professional-applied
42.	23IE4O09	Diseases of ruminants 2	8.	3	2				6.0	O	Professional-applied
43.	23IE4O10	Wild animal diseases	8.	1	1				2.0	O	Professional-applied
44.	23IE4O11	Economics and management in veterinary medicine	8.	3	2				4.0	O	Academic-general
45.	23IE4O12	Milk hygiene and technology	8.	4	2				6.0	O	Professional-applied
Elective courses:											
In the seventh semester, students choose 2 ECTS in total from Elective Block 4 (21-24).											
21.	23IE4I01	Pharmacognosy	7.	1	1				2.0	E	Scientific-professional
22.	23IE4I02	Tropical diseases	7.	1	1				2.0	E	Scientific-professional
23.	23IE4I03	Physical therapy	7.	1	1				2.0	E	Professional-applied
24.	23IE4I04	Radioecology	7.	1	1				2.0	E	Scientific-professional
Total class hours (lectures + practicals, DON, other classes) and ECTS per year				32	24				60.0		
Total hours of teaching per year				56					60.0		

No	Code	Course title	Sem.	Active teaching				Other	ECTS	Obligatory/ Elective O/E	Subject type
				L	P	DON	SRW				
5th YEAR											
46.	23IE5O01	Diseases of equides	9.	4	3				6.0	O	Professional-applied
47.	23IE5O02	Diseases of dogs and cats 1	9.	2	2				5.0	O	Professional-applied
48.	23IE5O03	Infectious diseases of animals with epizootiology 1	9.	3	2				5.0	O	Professional-applied
49.	23IE5O04	Poultry diseases	9.	3	2				6.0	O	Professional-applied
50.	23IE5O05	Meat hygiene and technology 1	9.	3	2				5.0	O	Professional-applied
51.	23IE5O06	Ethics and communication in veterinary medicine	9.	1	0				3.0	O	Scientific-professional
52.	23IE5O07	Diseases of dogs and cats 2	10.	2	2				4.0	O	Professional-applied
53.	23IE5O08	Infectious diseases of animals with epizootiology 2	10.	3	2				5.0	O	Professional-applied
54.	23IE5O09	Swine disease	10.	3	2				5.0	O	Professional-applied
55.	23IE5O10	Meat hygiene and technology 2	10.	4	3				6.0	O	Professional-applied
56.	23IE5O11	Radiobiology with radiation hygiene	10.	1	2				2.0	O	Scientific-professional
57.	23IE5O12	Veterinary laws and regulations	10.	2	1				2.0	O	Academic-general
58.	23IE5O13	Forensic veterinary medicine	10.	1	2				4.0	O	Scientific-professional
59.	23IE5LP	Extramural summer clinical practice	10.					2 weeks 80 hours	2.0	O	
Total class hours (lectures + practicals, DON, other classes) and ECTS per year				32	25				60.0		
Total hours of teaching per year				57					60.0		

No	Code	Course title	Sem.	Active teachings				Other	ECTS	Obligatory/ Elective O/E	Subject type
				L	P	DON	SRW				
6st YEAR											
Clinical Rotation - Block 1 "Clinic"											
60.	23IE6O01	Clinical pathology of pets	11.			4		2 weeks	2.0	O	Professional-applied
61.	23IE6O02	Clinical pathology of farm animals	11.			4		2 weeks	2.0	O	Professional-applied
62.	23IE6O03	Clinical pathology of equidae	11.			2		1 week	1.0	O	Professional-applied
63.	23IE6O04	Urgent and mobile clinic	11.			2		1 week	1.0	O	Professional-applied
Clinical Rotation -Block 2 - "Hygiene and technology of food of animal origin, Administrative veterinary medicine, Laboratory practice"											
64.	23IE6O05	Food hygiene and technology of animal origin	11.			2		1 week	1.0	O	Professional-applied
65.	23IE6O06	Administrative veterinary medicine	11.			1		1 week	1.0	O	Professional-applied
66.	23IE6O07	Laboratory practice	11.			1		1 week	1.0	O	Professional-applied
Elective courses in the field of graduate thesis: In the eleventh semester, students with the mentor consent choose 18 ECTS in total from Elective Block 5. Common list with the two elected courses from the entitled field.											
25.	23IE6I01	Clinical pathology and therapy of social animals	11.	1		2	3		9.0	E	Professional-applied
26.	23IE6I02	Diagnostic procedures in internal medicine of social animals	11.	1		2	3		9.0	E	Professional-applied
27.	23IE6I03	Breeding, pathology and therapy of farm animals	11.	1		2	3		9.0	E	Professional-applied
28.	23IE6I04	Farm biosecurity	11.	1		2	3		9.0	E	Professional-applied
29.	23IE6I05	Preventive veterinary medicine	11.	1		2	3		9.0	E	Professional-applied
30.	23IE6I06	Veterinary practice in organic livestock production	11.	1		2	3		9.0	E	Professional-applied
31.	23IE6I07	Control of food of animal origin	11.	1		2	3		9.0	E	Professional-applied
32.	23IE6I08	Integrated food control	11.	1		2	3		9.0	E	Professional-applied
67.	23IE6O08	SRW in the function of graduate thesis	11.				2		1.0	O	
68.	23IE6O09	Preparation and defence of graduate thesis	11.					3 weeks	2.0	O	
Total class hours (lectures + practicals, DON, other classes) and ECTS per year				2		20	8		30.0		
Total hours of teaching per year				30					30.0		

LIST OF ABBREVIATIONS

L – lectures; P – practicals; 23IE1O01 – code (23 – year of the study program adoption; IE – integrated academic studies in English language; 1 – school year when the subject is held; O – obligatory course, E – elective course; 01 – ordinal number of course in one school year); O – obligaroty; E – elective; ECTS - European Credit Transfer and Accumulation System.

SUMMARY REPORT

Obligatory courses (number of hours of obligatory active teaching)	4245
Obligatory practice	80 (other)
The percentage of obligatory courses in the total pool of hours	90.4
Number of ECTS points of obligatory courses	291
Percentage of participation of ECTS points of obligatory courses in the total sum of ECTS points	88.2
Elective courses (number of hours of obligatory active teaching)	4
The percentage of elective courses in the total pool of hours	8.9
Number of ECTS points of elective courses	34
Percentage of participation of ECTS points of elective courses in the total sum of ECTS points	10.3
Lectures (hours)	2370
Practicals (hours)	2205
The ratio between theoretical and practical teaching	51.8% : 48.2%
Total hours of active teaching	4695
Total hours of professional practice	80
Total class hours	4775
Total ECTS points	330