

# BASIC IMMUNOLOGY AND SEROLOGIC DIAGNOSTIC METHODS

<b>1</b>	Course Title:	BASIC IMMUNOLOGY AND SEROLOGIC DIAGNOSTIC METHODS	
<b>2</b>	Course Code:	VMK 6003	
<b>3</b>	Type of Course:	Compulsory	
<b>4</b>	Level of Course:	Third Cycle	
<b>5</b>	Year of Study:	1	
<b>6</b>	Semester:	1	
<b>7</b>	ECTS Credits Allocated:	6.00	
<b>8</b>	Theoretical (hour/week):	2.00	
<b>9</b>	Practice (hour/week):	2.00	
<b>10</b>	Laboratory (hour/week):	0	
<b>11</b>	Prerequisites:	None	
<b>12</b>	Language:	Turkish	
<b>13</b>	Mode of Delivery:	Face to face	
<b>14</b>	Course Coordinator:	Prof. Dr. AYŞIN ŞEN	
<b>15</b>	Course Lecturers:	Prof. Dr. Ayşin Şen	
<b>16</b>	Contact information of the Course Coordinator:	aysins@uludag.edu.tr 0224 294 1292 Uludağ Üniversitesi Veteriner Fakültesi Hayvan Hastanesi Mikrobiyoloji Anabilim Dalı, Görükle/Nilüfer, BURSA	
<b>17</b>	Website:	<a href="http://saglikbilimleri.uludag.edu.tr/">http://saglikbilimleri.uludag.edu.tr/</a>	
<b>18</b>	Objective of the Course:	To conceive the structure of immune system and its functions and the basic principles of immunology, to interpret the immune response to some cases (infections, vaccinations) in domestic animals, to gain experience about applying and interpretation of serological tests to diagnosis of diseases and survey of postvaccinal immunity.	
<b>19</b>	Contribution of the Course to Professional Development:		
<b>20</b>	Learning Outcomes:		
		<b>1</b>	To be able to describe basic structure of immune system
		<b>2</b>	To be able to describe components of nonspecific immunity, to conceive and interpret the reactions of nonspecific immunity.
		<b>3</b>	To be able to conceive the basic functions of humoral immunity and its role on body defense.
		<b>4</b>	To be able to conceive the basic functions of cellular immunity and its role on body defense
		<b>5</b>	To be able to explain the immunological reactions to some diseases in domestic animals and to interpret the consequences of these reactions.
		<b>6</b>	To be able to interpret the basic mechanisms of reaction between antigens and antibodies, to be able to apply the serological test that based on this reaction
		<b>7</b>	To be able to evaluate and interpret the results of serological tests
		<b>8</b>	To be able to use the knowledge that gained in this course for other courses.
		<b>9</b>	
		<b>10</b>	

<b>21</b>	Course Content:		
	<b>Course Content:</b>		
<b>Week</b>	<b>Theoretical</b>	<b>Practice</b>	
<b>1</b>	Description of immunology and serology and basic concept	To obtain blood, serum, plasma	
<b>2</b>	Immune system cells	Diluents and their preparation	
<b>3</b>	Immune system organs	Precipitation tests	
<b>4</b>	Nonspecific immune response, its mechanisms and importance.	Agglutination tests	
<b>5</b>	Phagocytosis and phagocytic cells	Washing red blood cells and preparing of red cells suspension	
<b>6</b>	Antigens and their structural characteristics	Hemagglutination tests	
<b>7</b>	Immunoglobulins, their structure and functions.	Hemagglutination inhibition tests	
<b>8</b>	Cytokins and signal transfer between cells.	ELISA	
<b>9</b>	Complement and its importance for immune response.	Immunofluorescent assay	
<b>10</b>	MHC molecules and its importance for immune response.	Other primary binding tests	
<b>11</b>	Antigen processing and presenting	Tertiary binding tests	
<b>12</b>	Humoral immune response	Sensitivity and specificity in serological tests	
<b>13</b>	Cellular immune response	Evaluation of serological tests and using in the field	
<b>14</b>	General assessment	General assessment	
<b>Activites</b>		<b>Number</b>	<b>Duration (hour)</b>
Theoretical		14	28.00
Practicals/Labs		14	28.00
Self study and preparation		6	48.00
Homeworks		7	56.00
Projects		0	0.00
Field Studies		0	0.00
Midterm exams		0	0.00
Others		2	10.00
Final Exams		1	10.00
<b>Total Work Load</b>			<b>180.00</b>
Total work load/ 30 hr		<b>R</b>	<b>6.00</b>
ECTS Credit of the Course			<b>6.00</b>
Quiz	0	0.00	
Home work-project	7	30.00	
Final Exam	1	70.00	
Total	8	100.00	
Contribution of Term (Year) Learning Activities to Success Grade		30.00	
Contribution of Final Exam to Success Grade		70.00	
Total		100.00	
Measurement and Evaluation Techniques Used in the Course			
<b>24</b>	<b>ECTS / WORK LOAD TABLE</b>		

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	5	0	0	0	0	0	0	3	0	0	0	0	0	0
ÖK6	0	0	5	0	4	0	0	0	0	2	0	0	0	0	0	0
ÖK7	0	0	4	0	4	0	0	0	0	3	0	0	0	0	0	0
ÖK8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>LO: Learning Objectives    PQ: Program Qualifications</b>																
<b>Contribution Level:</b>	<b>1 very low</b>			<b>2 low</b>			<b>3 Medium</b>			<b>4 High</b>			<b>5 Very High</b>			