

SPECIAL VIROLOGY (IInd year)

No. of credits: 2

Subject structure (weekly assigned hours)

Semester	Lecture	Seminar	Practical session	Project
IV	2	-	1	-

Subject status

Mandatory

Person in charge

Assoc. Prof. ANIȚĂ Adriana Elena DVM, PhD

Subject objectives (lectures and applications)

The objective of this course is to: study viruses as individual biological entities; know the specific aspects of the pathogenesis of viral infections; know the different viral families of the viruses that cause animal infection; study the virus host interactions, laboratory diagnosis and prevention measures.

After completing this course, students should be able to:

- account for taxonomic subdivision of viruses and for the most important animal and zoonotic pathogenetic viruses;
- account for the infection process on organism level for a number of medically important viruses;
- account for pathogenesis in relation to viral properties and the function of the immune system;
- able to plan experiments that show how viruses interact with the host cell and also practical laboratory experience in the field of molecular virology diagnosis.

Subject content (syllabus)

Lectures	Hrs.
Virus taxonomy and nomenclature. Prions. Viroids. Virusoids. Transposons.	2
DNA viruses: Fam. <i>Poxviridae</i> , Fam. <i>Asfarviridae</i> , Fam. <i>Iridoviridae</i>	2
Order <i>Herpesvirales</i> , Fam. <i>Adenoviridae</i>	2
Fam. <i>Papillomaviridae</i> , Fam. <i>Polyomaviridae</i>	2
Fam. <i>Hepadnaviridae</i> , Fam. <i>Parvoviridae</i> , Fam. <i>Circoviridae</i> , Fam. <i>Anelloviridae</i>	2
RNA viruses: Fam. <i>Retroviridae</i> ,	2
Fam. <i>Reoviridae</i> , Fam. <i>Birnaviridae</i> , Fam. <i>Picobirnaviridae</i>	2
Order <i>Mononegavirales</i> : Fam. <i>Paramyxoviridae</i> , Fam. <i>Pneumoviridae</i>	2
Fam. <i>Rhabdoviridae</i> , Fam. <i>Filoviridae</i>	2
Fam. <i>Bornaviridae</i> , Fam. <i>Orthomyxoviridae</i>	2
Order <i>Bunyavirales</i> , Fam. <i>Coronaviridae</i>	2
Fam. <i>Arteriviridae</i> , Fam. <i>Roniviridae</i> ,	2
Fam. <i>Picornaviridae</i> , Fam. <i>Caliciviridae</i>	2
Fam. <i>Togaviridae</i> , Fam. <i>Flaviviridae</i> , Fam. <i>Hepeviridae</i>	2

Practical Sessions	Hrs.
Introduction. Virology Laboratory Guidelines.	2
Isolation of Viruses: preparation of inoculum.	2
Virus isolation on embryonated eggs. <i>In vivo</i> model systems for virus culture; practical aspects of poxvirus replication	2
Opening inoculated embryonated eggs and specimen harvest.	2
In vitro model systems for virus culture. Practical aspects of paramyxovirus and adenovirus replication.	2
Molecular methods used in viral diagnosis.	2
Basic principles of viral vaccines.	2

Bibliography

1. Electronic course and practical work support – PPT presentation
2. Maclachlan N.J., Dubovi E.J. Fenner's Veterinary Virology, Fifth Edition, 2010, Elsevier, ISBN 978-01-280-0946-8
3. Rossi R. Animal Virology. 2012, White Word Publications, ISBN 978-81-323-4080-5
4. International Committee on Taxonomy of Viruses ICTV (ictvonline.org)
5. Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, World Organisation for Animal Health available at <http://www.oie.int/international-standard-setting/terrestrial-manual/access-online/>

Subject content knowledge (Final evaluation)

Evaluation type	Evaluation methods	Percentage from final
Exam	MCQ exam	70%
Lecture	Attendance	10%
Continuous evaluation	Written	20%

Contact person

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