

SYLLABUS

GENERAL VIROLOGY - MULTIPLICATION OF VIRUSES
Bacteriology/Oncology/Plant Pathology 640

FALL SEMESTER, 2018

1:20 pm Mon, Wed, Fri / Room 125 McArdle Bldg, 1400 University Ave (**not** WIMR)

Paul Ahlquist 841A Bock Labs; Tel: 263-5916; Email: ahlquist@wisc.edu
 Professor Office hours: Monday and Wednesday 2:10-3:00 PM

Robert Kalejta 641A Bock Labs; Tel: 265-5546; Email: rfkalejta@wisc.edu
 Professor Office hours: Monday and Wednesday 2:10-3:00 PM

Nathan Sherer 501A Bock Labs; Tel: 890-2551; Email: nsherer@wisc.edu
 Assoc. Professor Office hours: Monday and Wednesday 2:10-3:00 PM

Kristopher Kieft 4503 Microbial Sciences Bldg.; Tel: 231-215-6574; Email:
 kieft@wisc.edu
 Discussion Leader Office hrs: Mon and Wed 2:10-3:00 PM. Exam review sessions will be arranged.

DATE **TOPIC**

(Sessions in regular type are led by Ahlquist, in italics by Kalejta; in bold by Sherer; others as indicated)

Wed	Sept 5	Course Introduction / Why and how we study viruses
Fri	Sept 7	Viruses in the Real World: Ebola - Peter Halfmann and Amie Eisfeld
Mon	Sept 10	Icosahedral virion structure
Wed	Sept 12	dsRNA viruses
Fri	Sept 14	dsRNA viruses
Mon	Sept 17	Picornaviruses (Poliovirus, rhinovirus, hepatitis A virus, etc.)
Wed	Sept 19	Picornaviruses / Zika virus
Fri	Sept 21	Alphaviruses (Sindbis, chikungunya, various encephalitis viruses, etc.)
Mon	Sept 24	Alphaviruses
Wed	Sept 26	Coronaviruses (SARS, MERS, etc.)
Fri	Sept 28	Exam 1 (100 pts)
<i>Mon</i>	<i>Oct 1</i>	<i>Papillomavirus</i>
<i>Wed</i>	<i>Oct 3</i>	<i>Papillomavirus/Adenovirus</i>
<i>Fri</i>	<i>Oct 5</i>	<i>Adenovirus</i>
Mon	Oct 8	Retroviruses/HIV
Wed	Oct 10	Retroviruses/HIV
Fri	Oct 12	Retroviruses/HIV
Mon	Oct 15	Retroviruses/HIV
<i>Wed</i>	<i>Oct 17</i>	<i>Herpesviruses</i>
<i>Fri</i>	<i>Oct 19</i>	<i>Herpesviruses</i>
<i>Mon</i>	<i>Oct 22</i>	<i>Herpesviruses</i>
Wed	Oct 24	Exam 2 (100 pts)

<u>DATE</u>	<u>TOPIC</u>
Fri Oct 26	Rhabdoviruses
Mon Oct 29	Rhabdoviruses
Wed Oct 31	Filoviruses
Fri Nov 2	Orthomyxoviruses
Mon Nov 5	Orthomyxoviruses
Wed Nov 7	Pandemic flu preparations
Fri Nov 9	Plant viruses - initiation and spread of infection
Mon Nov 12	Plant resistance responses: relation to animal innate immunity
Wed Nov 14	Plant & invertebrate resistance responses: RNAi
Fri Nov 16	Genetic variability in viruses
Mon Nov 19	Exam 3 (100 pts)
Wed Nov 21	Antiviral Drugs
Fri Nov 23-	Thanksgiving recess, no class -
<i>Mon Nov 26</i>	<i>Intrinsic immunity</i>
<i>Wed Nov 28</i>	<i>Intrinsic immunity</i>
<i>Fri Nov 30</i>	<i>Innate immunity</i>
<i>Mon Dec 3</i>	<i>Innate immunity</i>
<i>Wed Dec 5</i>	<i>Adaptive immunity</i>
Fri Dec 7	Vaccines (TA)
Mon Dec 10	Poxviruses (TA)
Wed Dec 12	Emerging viruses
Fri Dec 14	Comprehensive Final Exam (150 points) 2:45 pm – 4:45 pm 125 McArdle [The final covers the last 9 lectures (~75 pts) plus comprehensive questions on earlier material (~75 pts).]

Suggested Texts and References

Principles of Virology: Molecular Biology, Pathogenesis, and Control (Fourth Edition, 2015)

Flint, S. J., Racaniello, V. R., Rall, G.F., Skalka, A. M., Enquist, L. W. ASM Press.

Fields Virology (Sixth Edition, 2013)

Knipe, D. and P. Howley (editors). Lippincott, Williams and Wilkins.

Selected Websites

"All the Virology on the WWW"

<http://www.virology.net/>

Universal Virus Database of the International Committee on Taxonomy of Viruses

<http://www.ncbi.nlm.nih.gov/ICTVdb/index.htm>

NCBI Viral Genomes Resource

<http://www.ncbi.nlm.nih.gov/genomes/VIRUSES/viruses.html>

Virus World - Structures and Images (UW-Madison Institute for Molecular Virology)

<http://rhino.bocklabs.wisc.edu/cgi-bin/virusworld/virustable.pl?>

Grading

- Grading is based on exam performance.
- There are three hour exams (100 points each) plus a comprehensive final exam (150 points) for a total of 450 points.
- Separate curves are used for graduate and undergraduate students.
- Examples of prior year exams can be found on the course website. To access this, log on to the MyUW portal at <http://my.wisc.edu/> and click on your academic tab. In the list for current courses, this course should contain a link for "library/reserve."

Sample Distribution of Test Scores and Letter Grades in Previous Years

The following grades and scores are listed for illustration only and do not necessarily reflect how grades will be given this year.

	Year	% of total course points required for indicated grade					
		A	AB	B	BC	C	D
Graduate	2017	88	82	72			
	2016	86	83	73	67		
	2015	86	82	70	66		
	2014	83	81	72		56	
	2013	89	85	75	65		
	2012	85	82	72	63	56	
	2011	87	82	72	65		
	2010	86	81	72			
	2009	83	80	70	65	56	
Undergrad	2017	85	77	67	63	55	45
	2016	83	80	70	60	54	
	2015	83	80	66	63	51	42
	2014	81	77	69	60	55	43
	2013	85	81	70	63	55	
	2012	82	76	66	60	52	
	2011	82	75	67	60		
	2010	81	76	67	60	50	45
	2009	80	75	66	60	53	45
		Number of students with indicated grade					
		A	AB	B	BC	C	D
Graduate	2017	9	8	2			
	2016	2	3	3	2		
	2015	5	5	7	1		
	2014	7	2	8		1	
	2013	10	4	5	1		
	2012	7	4	10	1	1	
	2011	5	8	18	3		
	2010	6	7	3			
	2009	14	2	11	5	1	
Undergrad	2017	7	7	6	2	3	1
	2016	5	4	5	6	1	
	2015	5	4	10	3	4	1
	2014	7	1	6	3	1	1
	2013	2	4	5	4	5	
	2012	4	5	9	3	3	
	2011	5	4	3	2		
	2010	7	1	6	2	2	2
	2009	5	4	3	2		1