



<b>Genetics II</b>	
<b>Course code:</b>	5MO099
<b>Time:</b>	2020-12-03 – 2021-01-15
<b>Lecture halls:</b>	Zoom or A103, Building 6A ( <b>unless otherwise stated</b> )
<b>Course requirements:</b>	<ol style="list-style-type: none"><li>1. All lab work and student presentations are mandatory. Attendance to lectures, discussions and the calculation workshops are strongly recommended. In case of absence due to sickness, inform JL without delay.</li><li>2. Information will be in lectures, in the discussion sessions and the course book (information at start of course).</li></ol>
<b>Literature, Course book:</b>	Hartwell <i>et al.</i> : GENETICS, from genes to genomes. 6 <sup>th</sup> edition or 5 <sup>th</sup> edition.
<b>Examination:</b>	Written exam                      2021-01-15, <b>18.00-22.00</b> Östra Paviljongen Written re-exam                      2021-02-27 ( <i>preliminary</i> )
<b>Course leader:</b>	Jan Larsson (JL) <a href="mailto:jan.larsson@molbiol.umu.se">jan.larsson@molbiol.umu.se</a>
<b>Course administrator:</b>	Ingela Nilsson <a href="mailto:ingela.nilsson@umu.se">ingela.nilsson@umu.se</a>
<b>Teachers on labs and calculation workshops:</b>	Alexander Glotov (AG) <a href="mailto:alexander.glotov@umu.se">alexander.glotov@umu.se</a> Anton Björk (AB) <a href="mailto:anton.bjork@umu.se">anton.bjork@umu.se</a>
<b>Lecturers</b>	Lectures and tutoring:                      Jan Larsson (JL), Molecular Biology Lectures and tutoring:                      Yuri Schwartz (YS), Molecular Biology Lectures:                      Mattias Alenius (MA), Molecular Biology Tutoring:                      Johan Henriksson (JH), Molecular Biology



<b>Thu 3/12</b>	09.00 – 10.00	<b>Welcome, Roll call + Course Introduction (JL)</b>	Zoom or A103
	10.00 – 12.00	<b>Repetition (JL)</b>	
	13.30 – 15.30	<b>Chromatin and chromatin techniques (JL)</b>	
<b>Fri 4/12</b>	09.00 – 12.00	<b>Quiz and problem solving I (AG, AB, JL)</b>	Zoom or A103
	12.00 – 14.00	<b><i>Work with the Chromatin lecture</i></b>	
	14.00 – 15.00	<b>Discussion of questions - Chromatin lecture, (JL)</b>	
<b>Mon 7/12</b>	09.00 – 11.00	<b>Genomics (YS)</b>	Zoom or A103
	12.00 – 13.00	<b><i>Work with the Genomics lecture</i></b>	
	13.00 – 14.00	<b>Discussion of questions (YS)</b>	
<b>Tue 8/12</b>	09.00 - 11.00	<b>Genes and chromosomes in 3D (YS)</b>	Zoom or A103
	11.00 – 13.00	<b><i>Work with the Genes and chromosomes in 3D lecture</i></b>	
	13.00 – 15.00	<b>Discussion of questions (YS)</b>	
	15.00 – 17.00	<b>Introduction to primary literature work (JL)</b>	
<b>Wed 9/12</b>	09.00 – 11.00	<b>Gene regulation (JL)</b>	Zoom or A103
	12.00 – 13.00	<b><i>Work with the Gene regulation lecture</i></b>	
	13.00 – 15.00	<b>Discussion of questions (JL)</b>	
<b>Thu 10/12</b>	09.00 – 11.00	<b>Introduction of labs (AG, AB)</b> 1) Population genetics 2) Genomics lab	Zoom or A103
	11.00 – 13.00	<b>Time to try the labs (ensure to list all questions you have for the session after lunch)</b> 1) Population genetics 2) Genomics lab	
	13.00 – 15.00	<b>Problem solving II (AG, AB)</b>	
	15.00 – 17.00	<b>Labs: Questions / Discussion (AG, AB)</b>	
<b>Fri 11/12</b>	09.00 – 11.00	<b>Epigenetics (JL)</b>	Zoom or A103
	12.00 – 13.00	<b><i>Work with the Epigenetics lecture</i></b>	
	13.00 – 15.00	<b>Discussion of questions (JL)</b>	



<b>Mon 14/12</b>	09.00 – 12.00	<b>Problem solving III (AG, AB)</b>	Zoom or A103
	13.00 – 16.00	<b>Meeting I: Paper tutoring (JL, YS, JH)</b>	
<b>Tue 15/12</b>	09.00 – 11.00	<b>Population genetics and evolution (JL)</b>	Zoom or A103
	12.00 – 13.00	<b><i>Work with the Population genetics and evolution lecture</i></b>	
	13.00 – 15.00	<b>Discussion of questions (JL)</b>	
<b>Wed 16/12</b>	09.00 – 11.00	<b>Genome evolution (JL)</b>	Zoom or A103
	12.00 – 13.00	<b><i>Work with the Genome evolution lecture</i></b>	
	13.00 – 15.00	<b>Discussion of questions (JL)</b>	
<b>Thu 17/12</b>	09.00 – 11.00	<b>Forward and reverse genetics (MA)</b>	Zoom or A103
	11.00 – 13.00	<b><i>Work with the Forward and Reverse genetics lecture</i></b>	
	13.00 – 16.00	<b>Discussion of questions (MA)</b>	
<b>Fri 18/12</b>	09.00 – 15.00	<b>Meeting II: Paper tutoring (JL, YS, JH)</b>	Zoom or A103

Enjoy your holidays 😊

<b>21/12 – 23/12 and 7/1 - 8/1</b>		<b>Lab 1 and 2 + work on paper presentation and problems</b>	Cambro
<b>Mon 11/1</b>	09.00 – 11.00	<b>Probability and practical statistics (JL)</b>	Zoom or A103
	13.00 – 17.00	<b>Problem solving IV (AG, AB)+ study time</b>	
<b>Tue 12/1</b>	9.00 – 17.00	<b>Paper presentation (JL) /Lab discussion (AG, AB) (separate schedule)</b>	Zoom or A103
<b>Wed 13/1</b>	09.00 – 14.45	<b>Paper presentation (JL) /Lab discussion (AG, AB) (separate schedule)</b>	Zoom or A103
<b>Thu 14/1</b>	10.00 – 12.00	<b>Old exams – Discuss questions and solutions / Time for questions (JL)</b>	Zoom or A103
	13.00 – 16.00	<b>Problem solving V (AG, AB)</b>	
<b>Fri 15/1</b>	09.00 – 13.00	<b>EXAM</b>	

**IMPORTANT: Lab report deadlines**

- January 24<sup>th</sup>: Lab reports – first examination
- February 21<sup>th</sup>: Lab reports – second examination
- March 21<sup>th</sup>: Lab reports – third examination