### Course Title (in English)
Advanced Molecular Biology Laboratory Practice

### Course Title (in Russian)
Продвинутый лабораторный курс "Базовые методы в молекулярной биологии"

### Lead Instructor(s)
Dubiley, Svetlana
Severinov, Konstantin

### Status of this Syllabus
The syllabus is a work in progress (draft)

### Contact Person
Svetlana Dubiley

### Contact Person's E-mail
svetlana.dubiley@gmail.com

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### 1. Annotation

#### Course Description
This course offers students the opportunity to work individually on laboratory projects assigned by the course instructor. During the term students are expected to have at least one entire working day in the lab, although additional days may be required. Final grades are determined by the students’ final presentations, which describe their project/goals along with the results/progress accomplished. Participation in the course requires approval from the students’ own advisors, as well as the instructors of the course.

#### Course Prerequisites
Prior molecular biology laboratory experience or completion of the "Basic Molecular Biology Techniques" course.

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### 2. Structure and Content

#### Course Academic Level
Master-level course suitable for PhD students

#### Number of ECTS credits
6

<table>
<thead>
<tr>
<th>Topic</th>
<th>Summary of Topic</th>
<th>Lectures (# of hours)</th>
<th>Seminars (# of hours)</th>
<th>Labs (# of hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>an individual project</td>
<td>depends on the project</td>
<td>4</td>
<td></td>
<td>64</td>
</tr>
</tbody>
</table>

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### 3. Assignments
<table>
<thead>
<tr>
<th>Assignment Type</th>
<th>Assignment Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td>Students will be given an individual project to complete over the duration of the term. Each student will meet with the course instructor to decide on a project which suits them.</td>
</tr>
</tbody>
</table>

4. Grading

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>Pass/Fail</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Grade Structure</th>
<th>Activity Type</th>
<th>Activity weight, %</th>
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<tbody>
<tr>
<td></td>
<td>Projects</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>Attendance</td>
<td>30</td>
</tr>
</tbody>
</table>

Grading Scale

5. Basic Information

<table>
<thead>
<tr>
<th>Attendance Requirements</th>
<th>Mandatory</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Maximum Number of Students</th>
<th>Maximum Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall: 6</td>
</tr>
<tr>
<td></td>
<td>Per Group (for seminars and labs): 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Stream</th>
<th>Science, Technology and Engineering (STE)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Course Delivery Frequency</th>
<th>Every year</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Students of Which Programs do You Recommend to Consider this Course as an Elective?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters Programs</td>
</tr>
<tr>
<td>PhD Programs</td>
</tr>
<tr>
<td>Biotechnology</td>
</tr>
<tr>
<td>Life Sciences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Tags</th>
<th>Biotechnology</th>
</tr>
</thead>
</table>

6. Textbooks and Internet Resources

<table>
<thead>
<tr>
<th>Web-resources (links)</th>
<th>Description</th>
</tr>
</thead>
</table>

7. Facilities

<table>
<thead>
<tr>
<th>Software</th>
<th>none</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Equipment</th>
<th>none</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Labs for Education</th>
<th>IGB RS</th>
</tr>
</thead>
</table>
8. Learning Outcomes

<table>
<thead>
<tr>
<th>Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>The knowledge gained by each student will depend upon their specific project, as this will determine the methods required to reach their project goals.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills learned will also depend on the individual projects assigned.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will become more independent in a molecular laboratory setting, and be able to come to conclusions and make decisions in order to best achieve their scientific goals.</td>
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</tbody>
</table>

Do you want to specify outcomes in another framework?

Knowledge-Skill-Experience is good enough

9. Assessment Criteria

Select Assignment 1 Type

Report

Assessment Criteria for Assignment 1

Students are expected to prepare a final oral presentation, detailing background information of their project, intended goals, and final results. The course instructor will use this to determine the grade earned by each student.

10. Additional Notes

<table>
<thead>
<tr>
<th>Web-resources (links)</th>
<th>Description</th>
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</table>