1. **Name, Scope and Level of the Course**

The course is provided by the University of Skövde and is named Experimental Methods and Design in Bioscience A1N. It comprises 10 credits and is on advanced level. The level of progression of the course is A1N.

2. **Objectives**

After completed course the student should be able to:

- in depth describe the theories behind molecular biological techniques where DNA, RNA and proteins are studied,
- in an independent way plan and perform lab experiment using molecular biological techniques,
- in a critical and correct way analyze the obtained results and present the results in a scientific way, orally and in writing.

3. **Course Content**

The course consists of theory and laboratories in experimental molecular biology. In the course, one or more research problems in life science is to be practically solved and presented by the student in an independent and scientific way.

4. **Forms of Teaching**

The teaching comprises lectures, supervision, laboratory sessions, presentations, seminars/group discussions and exercises.

The teaching is conducted in English.

5. **Examination**

The course is graded A (Excellent), B (Very good), C (Good), D (Satisfactory), E (Sufficient) or F (Fail).

The examination Laboratory assignment involves a dugga. The purpose of the dugga is to ensure that the student has the required knowledge regarding safety surrounding the laboratory work. The dugga also secure that the student can perform the laboration in an occupational workmanlike manner. The student must pass the dugga in order to be able to participate and complete the laboration.

The final grade is determined by a weighted mean value of the grades (A=5, B=4, C=3, D=2 and E=1) for the examinations Supervised written examination and Laboratory assignment.

### Registration of examination results:

<table>
<thead>
<tr>
<th>Name of examination</th>
<th>Credits</th>
<th>Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervised written examination</td>
<td>3 credits</td>
<td>A/B/C/D/E/F</td>
</tr>
<tr>
<td>Laboratory assignment^1</td>
<td>5 credits</td>
<td>A/B/C/D/E/F</td>
</tr>
<tr>
<td>Reports</td>
<td>1.5 credits</td>
<td>G/U</td>
</tr>
<tr>
<td>Oral presentation</td>
<td>0.5 credits</td>
<td>G/U</td>
</tr>
</tbody>
</table>

^1 The exam contains dugga.

Students with a permanent disability who have been approved for special educational support may be offered adapted or alternative examinations.
6 Admission Requirements
The prerequisites for this course are 150 higher education credits passed, of which at least 90 higher education credits must be courses within biology or medicine. Among these higher education credits, at least 15 must be on G2E-level or higher (or the equivalent).

7 Subject, Main Field of Study and Disciplinary Domain
The course forms a part of the academic subject area of Bioscience. The course is a part of the main field of study in Bioscience at the University of Skövde. The course can also be a part of the main field of study in Biomedicine, Molecular Biology, Systems Biology. The disciplinary domain of the course is Natural Sciences.

Every course at the University of Skövde belongs to a subject. The division of subjects is used for follow-up and quality assurance. A main field of study is an area in which a degree can be awarded. Disciplinary domain is a division which is used by the government for the allocation of resources for studies at basic level and advanced level.

8 Approval of Course and Course Syllabus
The course was approved by the Curriculum Committee for Bioscience on 25 October 2018. This course syllabus was approved by the Curriculum Committee for Bioscience on 28 February 2019. It is valid from 1 July 2019 and replaces the course syllabus approved 25 October 2018.

9 Overlapping with Another Course
This course cannot constitute a part of a degree also containing a course the content of which is totally or partly equivalent to the content of this course, e.g.

- Experiment Design A1N 7.5 credits
- Experimental Biomedicine A1N 7.5 credits
- Experimental Methods and Design in Biomedicine A1N 10 credits
- Experimental Design in Molecular Biology A1N 7.5 credits

- Experimental Molecular Biology A1N 7.5 credits
- Experimental Methods and Design in Molecular Biology A1N 10 credits

10 Additional Information
Further information will be available on the university’s website before a course is given.

National and local regulations for higher education are available on the university’s website.

Upon completion of the course there will be a follow-up. The main purpose of this follow-up is to contribute to improvements of the course. The students’ experiences and views constitute one of the criteria for the follow-up and are gathered by means of course evaluations. The students will be informed of the results of the follow-up and any decisions regarding actions that are to be taken.

11 Course Literature and Other Educational Materials


or


Scientific articles and experimental protocols.