1 Name, Scope and Level of the Course
The course is provided by the University of Skövde and is named Stem Cell Biology G2F. It comprises 7.5 credits and is on basic level. The level of progression of the course is G2F.

2 Objectives
After completed course the student should be able to:

- describe the different types of stem cells and their most important characteristics,
- describe early embryonic development and different epigenetic mechanisms,
- explain how stem cells can be expanded and differentiated to functional cells and give good examples of application areas,
- describe principles of cloning and describe different techniques for genome editing,
- exemplify putative applications of stem cells in drug discovery and regenerative medicine,
- discuss ethical aspects of stem cells and cloning, and
- plan and perform lab experiments and in a written report present results from these.

3 Course Content
This course in stem cell biology is designed for students at basic level that want to immerse themselves in stem cell biology. The course gives a wide orientation in the area of stem cells and covers characteristics for stem cells such as pluripotency and proliferation. The course also covers early embryonic development and principles for cloning. Furthermore, principles for differentiation of stem cells and possibilities for using stem cells in regenerative medicine as well as the most recent research advances will also be covered.

4 Forms of Teaching
The teaching comprises lectures, laboratory sessions, seminars/group discussions and field trips.

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).

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 examination¹</td>
<td>5 credits</td>
<td>A/B/C/D/E/F</td>
</tr>
<tr>
<td>Laboratory assignment</td>
<td>2.5 credits</td>
<td>G/U</td>
</tr>
</tbody>
</table>

¹ Determines the final grade of the course.

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 60 credits in biology and/or medicine, where of 15 credits in cell biology
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. 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 28 November 2019. This course syllabus was approved by the Curriculum Committee for Bioscience on 28 November 2019. It is valid from 1 July 2020.

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.

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

Research articles and web materials.