SELF-EVALUATION REPORT
OF BACHELOR CURRICULUM

<table>
<thead>
<tr>
<th>Type</th>
<th>Bachelor curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution</td>
<td>University of Nis, Faculty of Civil Engineering and Architecture</td>
</tr>
<tr>
<td>Reporting date</td>
<td>20 January 2022</td>
</tr>
<tr>
<td>Report author(s)</td>
<td>Milan Gocić, Slaviša Trajković, Mladen Milanović</td>
</tr>
</tbody>
</table>

MASTER CURRICULUM DESCRIPTION
with special reference to goals and outcomes

The study programs in the field of engineering management at the Faculty of Civil Engineering and Architecture in Nis have a direct social mission to educate staff for the same large branch of industry, whose role in the overall development of society is crucial. Poor qualification and age structure of the staff is one of the consequences of the long stagnation in this industry. For this reason, there is a clear need for skilled engineering managers who need to get involved in working in this industry, and thus for their adequate education.

The program of undergraduate academic studies, being the first in a series of these programs, is primarily aimed at acquiring knowledge in the fundamental sciences related to the engineering management profession, without neglecting the professional knowledge necessary for day-to-day engineering work. For students who will complete this degree, the program provides a wide range of competencies. Students who choose to pursue higher level academic studies receive a solid enough foundation for successfully pursuing more complex disciplines in advanced courses.
The Engineering Management study program was established with the following objectives:

- training students to apply the required knowledge in fundamental scientific disciplines (mathematics, physics, mechanics, etc.),
- achievement of professional competences of students in various fields of engineering management through scientific-professional and professional-applied subjects,
- developing students' creative abilities to consider engineering problems and their critical thinking skills,
- developing teamwork skills,
- developing professional ethics,
- developing the ability to publicly present work results,
- training in the use of common computer tools for document creation, presentation, budgeting, and simulation,
- training for continuing education at higher levels.

By completing undergraduate Engineering Management study programme, the students acquire the following general competencies:

- identifying, describing and solving engineering problems,
- applying fundamental knowledge to solve practical problems in construction,
- using common computer tools for document creation, presentation, budgeting and simulation,
- sharing information, ideas, problems and solutions with people in and outside the profession,
- collaboration in team professional work,
- taking an ethical stance in solving engineering problems,
- applying critical and strategic thinking,
- social and civil responsibility,
- staying up-to-date with technological development,
- continuing education in graduate academic studies in engineering management or other related fields.

Engineering Management is a program that combines engineering courses with business management principles. Students obtain a comprehensive engineering education consisting of planning, scheduling, monitoring, and control of engineering projects while developing business expertise, social awareness, and organizational communication skills. On the bachelor’s level, Engineering Management is a four-year degree that immerses students in a multidisciplinary field that deals with the technical, financial, strategic, and human resources
components of the program. Graduates of this degree apply their experiential knowledge and skill set necessary for practical problem solving to address the complexities of the discipline.

The basic academic study program in Engineering Management lasts 4 years (divided into 8 semesters) and is worth 240 ECTS credits. The academic title acquired after graduation is a civil engineer. Curriculum structure encompasses distribution of courses over eight semesters, the fund of teaching hours during 30 working weeks of 1 school year and ECTS credits distribution (30 ECTS\(^1\) in each of the eight semesters).

The study program covers fundamentally theoretical subjects such as mathematics, physics, design geometry, geology or mechanics. In addition, students gain basic practical knowledge in the application of computer technology.

All subjects of the study program are one-semester courses, and in most of them active teaching consists of lectures and computational exercises. Laboratory exercises (physics, construction materials, fluid mechanics, etc.) exist in a number of subjects. In addition to attending classes, students’ obligations include a two-week professional internship worth 4 ECTS credits. Final year work is a compulsory part of the studies and is worth 15 ECTS credits.

Upon completion of this study program, students may continue their studies in the Master Academic Program in Engineering Management at the Faculty of Civil Engineering and Architecture in Nis or related studies in the country and abroad.

**Problems encountered during the event preparation phase**

Please add your comments, if any:

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\(^1\) 1 school year = 60 ECTS;  
1 ECTS = 25-30 working hours;  
1 school year = 60 x (25-30) = 1500-1800 working hours in all forms of engagement (active teaching, individual work, exams, etc.)
Results of general evaluation of master curriculum

Description

Students marked bachelor curriculum as very good or excellent with average marks from 4.44 to 4.89. It should be highlighted that the fulfilment of expectations regarding master curriculum has the greatest mark i.e. 4.89. The average mark for the whole master curriculum is 4.69.

Table/ Figure

<table>
<thead>
<tr>
<th>General evaluation of master curriculum</th>
<th>Very poor</th>
<th>Poor</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you rate the quality of teaching on new bachelor study programme?</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>27.8</td>
<td>72.2</td>
</tr>
<tr>
<td>How do you assess the interest of teaching staff in the quality of bachelor study programme?</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>33.3</td>
<td>66.7</td>
</tr>
<tr>
<td>Rate quality of teaching material</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>38.9</td>
<td>61.1</td>
</tr>
<tr>
<td>How do you assess access to literature?</td>
<td>0.0</td>
<td>0.0</td>
<td>11.1</td>
<td>33.3</td>
<td>55.6</td>
</tr>
<tr>
<td>Rate learning obligations</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>16.7</td>
<td>83.3</td>
</tr>
<tr>
<td>Assessing the fulfilment of expectations regarding bachelor curriculum</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>11.1</td>
<td>83.9</td>
</tr>
</tbody>
</table>
Results of general expectations

Description

Students marked general expectations as very good or excellent with average marks from 4.67 to 4.94. It should be highlighted that the overall impression has the greatest mark i.e. 4.94. The average mark for general expectations is 4.76.

Table/Figure

General expectations

<table>
<thead>
<tr>
<th>Description</th>
<th>Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall impression</td>
<td>Very poor</td>
</tr>
<tr>
<td>Scope of material</td>
<td>0.0</td>
</tr>
<tr>
<td>Laboratory equipment</td>
<td>0.0</td>
</tr>
<tr>
<td>Practical exercises</td>
<td>0.0</td>
</tr>
<tr>
<td>My expectations were met</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Please indicate your suggestions for further improvement:

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This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.