INTERDISCIPLINARY MASTER’S (2\textsuperscript{nd}-CYCLE) PROGRAMME “PING”

\begin{itemize}
  \item **Location:** Maribor
  \item **Duration:** 120 ECTS, 2 years
\end{itemize}

\section*{Admission requirements:}

1. **GING – TRACK “CIVIL ENGINEERING”**
   Candidates who completed the following may apply for the master’s (2\textsuperscript{nd}-cycle) programme “Industrial Engineering”, track “Civil Engineering”:
   \begin{enumerate}
     \item A bachelor’s (1\textsuperscript{st}-cycle) programme in a relevant field: industrial engineering- track “civil engineering” (5829), building and civil engineering (5820);
     \item A bachelor’s (1\textsuperscript{st}-cycle) programme in one of the following fields: transport services (traffic) (8400), engineering and engineering trades (traffic engineering) (5200), architecture (5811), mechanics (5211), industrial engineering – track “mechanical engineering” (5219), industrial engineering– track “electrical engineering”(5221), industrial engineering (5200) and town planning (5812). Prior to enrolment, candidates must fulfil study obligations corresponding to 10-60 ECTS credits under the bachelor’s programme, a training programme or by taking placement tests. Candidates must fulfil the following obligations: “Structural Mechanics”, “Geotechnics”, “Hydrotechnics”, “Engineering Structures”, “Construction Management”, “Construction Materials” and “Economics”;
     \item A bachelor’s vocational programme adopted prior to 11 June 2004 in a relevant field: building and civil engineering (5820).
     \item A bachelor’s vocational programme adopted prior to 11 June 2004 in one of the following fields: transport services (traffic) (8400), engineering and engineering trades (traffic engineering) (5200), architecture (5811), mechanics (5211) and town planning (5812). Prior to enrolment, candidates must fulfil study obligations corresponding to 10-60 ECTS credits under the bachelor’s programme, a training programme or by taking placement tests. Candidates must fulfil the following obligations: “Structural Mechanics”, “Geotechnics”, “Hydrotechnics”, “Engineering Structures”, “Construction Management”, “Construction Materials” and “Economics”;
     \item An undergraduate programme adopted prior to 11 June 2004 in a relevant field: industrial engineering – track “civil engineering” (5829), building and civil engineering (5820). These candidates are typically awarded 60 ECTS
\end{enumerate}
credits and may enrol in the second year provided they satisfy the transfer criteria laid down in the accredited degree programme;

6. An undergraduate programme adopted prior to 11 June 2004 in one of the following fields: transport services (traffic) (8400), architecture (5811), mechanics (5211), town planning (5812). These candidates are awarded up to 40 ECTS credits and may enrol in the corresponding year;

7. A bachelor’s vocational programme adopted prior to 11 June 2004 and a specialisation programme adopted prior to 11 June 2004 in a relevant field: building and civil engineering (5820). These candidates are typically awarded 60 ECTS credits and may enrol in the second year provided they satisfy the transfer criteria laid down in the accredited degree programme;

8. A bachelor’s vocational programme adopted prior to 11 June 2004 and a specialisation programme adopted prior to 11 June 2004 in one of the following fields: transport services (traffic) (8400), architecture (5811), mechanics (5211), town planning (5812). These candidates are awarded up to 40 ECTS credits and may enrol in the corresponding year.

### Selection criteria in the event of limited enrolment:

If there is greater demand than there are places available, candidates shall be ranked according to their academic performance under the bachelor’s programme:

- grade point average (100%).

### Transfer criteria:

In accordance with the transfer criteria, candidates may transfer to the master’s (2nd-cycle) programme “Industrial Engineering - track “Civil Engineering” from programmes in the field of building and civil engineering provided they lead to the acquisition of comparable competencies and provided that at least half of the obligations under the former study programme relating to compulsory subjects of the new programme can be recognized.

In the recognition procedure, satisfied obligations that may be recognized wholly or partly are identified and new obligations required for completion of the new programme are laid down.

### Full-time studies

In the event of five or less enrolled students, classes will be replaced with individual consultations. In the event of ten or more enrolled students, courses will be held as envisaged. If between six and nine students enrol, courses will be implemented to a lesser extent (between 60 and 90%).

Electives at the Faculty of Economics and Business will be implemented in full if defined as compulsory by this Faculty. Electives defined as optional by the Faculty of Economics and Business will be conducted in form of individual consultations in the event of five or less enrolled students. In the event of ten or more enrolled students, lectures will be held as envisaged. If between six and nine students enrol, courses will be implemented to a lesser extent (between 60 and 90%).

### 2. GING – TRACK “MECHANICAL ENGINEERING”

Candidates who completed the following may apply for the master’s (2nd-cycle) programme “Industrial Engineering”, track “Mechanical Engineering”:

1. A bachelor’s (1st-cycle) programme in a relevant field: engineering and engineering trades (52), biology and biochemistry (421), environmental science (422), computer science (481), computer use (482), building and civil engineering (582), transport services (840), environmental protection (broad programmes) (850);

9. A bachelor’s (1st-cycle) programme in one of the following fields: economics (314), business and administration (broad programmes) (340), software and retail sales (341), marketing and advertising (342), management and administration (345), physical science (broad programmes) (440), physics (441), chemistry (442), mathematics (461), statistics (462), food processing (541), textiles, clothes, footwear, leather (542), materials (wood, paper, plastic, glass) (543), mining and extraction (544), architecture and town planning (581). Prior to enrolment, candidates must fulfil study obligations corresponding to 29 ECTS credits under the bachelor’s programme, a training programme or by taking placement tests. Candidates must pass the following exams: “Mathematical Analysis” (6 ECTS), “Algebra” (6 ECTS), “Mechanics I” (6 ECTS), “Principles of Economics” (5 ECTS), “Business Economics” (6 ECTS);
10. A bachelor’s vocational programme adopted prior to 11 June 2004 in a relevant field: engineering and engineering trades (52), biology and biochemistry (421), environmental science (422), computer science (481), computer use (482), building and civil engineering (582), transport services (840), environmental protection (broad programmes) (850);

11. A bachelor’s vocational programme adopted prior to 11 June 2004 in one of the following fields: economics (314), business and administration (broad programmes) (340), wholesale and retail sales (341), marketing and advertising (342), management and administration (345), physical science (broad programmes) (440), physics (441), chemistry (442), mathematics (461), statistics (462), food processing (541), textiles, clothes, footwear, leather (542), materials (wood, paper, plastic, glass) (543), mining and extraction (544), architecture and town planning (581). Prior to enrolment, candidates must fulfil study obligations corresponding to 29 ECTS credits under the bachelor’s programme, a training programme or by taking placement tests. Candidates must pass the following exams: "Mathematical Analysis" (6 ECTS), “Algebra” (6 ECTS), “Mechanics I" (6 ECTS), “Principles of Economics” (5 ECTS), “Business Economics” (6 ECTS);

12. An undergraduate programme adopted prior to 11 June 2004 in a relevant field: engineering and engineering trades (52), biology and biochemistry (421), environmental science (422), computer science (481), computer use (482), building and civil engineering (582), transport services (840), environmental protection (broad programmes) (850). These candidates are typically awarded 60 ECTS credits and may enrol in the second year provided they satisfy the transfer criteria laid down in the accredited degree programme;

13. An undergraduate programme adopted prior to 11 June 2004 in one of the following fields: economics (314), business and administration (broad programmes) (340), wholesale and retail sales (341), marketing and advertising (342), management and administration (345), physical science (broad programmes) (440), physics (441), chemistry (442), mathematics (461), statistics (462), food processing (541), textiles, clothes, footwear, leather (542), materials (wood, paper, plastic, glass) (543), mining and extraction (544), architecture and town planning (581). The candidates are awarded 30 ECTS credits and may enrol in the corresponding year;

14. A bachelor’s vocational programme adopted prior to 11 June 2004 and a specialisation programme adopted prior to 11 June 2004 in a relevant field: engineering and engineering trades (52), biology and biochemistry (421), environmental science (422), computer science (481), computer use (482), building and civil engineering (582), transport services (840), environmental protection (broad programmes) (850). These candidates are typically awarded 60 ECTS credits and may enrol in the second year provided they satisfy the transfer criteria laid down in the accredited degree programme;

15. A bachelor’s vocational programme adopted prior to 11 June 2004 and a specialisation programme adopted prior to 11 June 2004 in one of the following fields: economics (314), business and administration (broad programmes) (340), wholesale and retail sales (341), marketing and advertising (342), management and administration (345), physical science (broad programmes) (440), physics (441), chemistry (442), mathematics (461), statistics (462), food processing (541), textiles, clothes, footwear, leather (542), materials (wood, paper, plastic, glass) (543), mining and extraction (544), architecture and town planning (581). The candidates are awarded 30 ECTS credits and may enrol in the corresponding year.

Selection criteria in the event of limited enrolment:

If there is greater demand than there are places available, candidates shall be ranked according to their academic performance under the bachelor’s programme:
– grade point average: 100%

Transfer criteria:

In accordance with the transfer criteria, candidates may transfer to the master’s (2nd-cycle) programme “Industrial Engineering - track “Mechanical Engineering” from programmes in the field of engineering and engineering trades (52), biology and biochemistry (421), environmental science (422), computer science (481), computer use (482), building and civil engineering (582), transport services (840), environmental protection (broad programmes) (850) provided they lead to the acquisition of comparable competencies and provided that at least half of the obligations under the former study programme relating to compulsory subjects of the new programme can be recognized.

In the recognition procedure, satisfied obligations that may be recognized wholly or partly are identified and new obligations required for completion of the new programme are laid down.
3. GING – TRACK “ELECTRICAL ENGINEERING”

Candidates who completed the following may apply for the master’s (2nd-cycle) programme “Industrial Engineering”, track “Electrical Engineering”:

1. A bachelor’s (1st-cycle) programme in a relevant field: industrial engineering– electrical engineering (522), electricity and energy (522), electronics and automation (523), engineering and engineering trades (broad programmes – mechatronics, 520), physical science (broad programmes – 440), physics (441);

2. A bachelor’s vocational programme adopted prior to 11 June 2004 in a relevant field: electricity and energy (522), electronics and automation (523), physical science (broad programmes – 440), physics (441);

16. A bachelor’s (1st-cycle) programme in a field not specified under the preceding point: mathematics (461), computer science (481), chemical and process engineering (524), mechanics and metal work (521) and building and civil engineering (582). Prior to enrolment, candidates must fulfil study obligations corresponding to 30 ECTS credits under the bachelor’s programme, a training programme or by taking placement tests. Candidates must pass the following exams: “Principles of Electrical Engineering I” (6 ECTS), “Principles of Electrical Engineering II” (6 ECTS), “Principles of Economics” (5 ECTS), “Business Economics” (6 ECTS) and one of the following courses: “Physical Basics of Semiconductors” (7 ECTS), “Electronic Circuits” (7 ECTS), “Electrical Energy Generation and Management” (7 ECTS);

2. A bachelor’s vocational programme adopted prior to 11 June 2004 in a relevant field: electricity and energy (522), electronics and automation (523), physical science (broad programmes – 440), physics (441);

17. A bachelor’s vocational programme adopted prior to 11 June 2004 in one of the following fields: mathematics (461), computer science (481), chemical and process engineering (524), mechanics and metal work (521) and building and civil engineering (582). Prior to enrolment, candidates must fulfil study obligations corresponding to 30 ECTS credits under the bachelor’s programme, a training programme or by taking placement tests. Candidates must pass the following exams: “Principles of Electrical Engineering I” (6 ECTS), “Principles of Electrical Engineering II” (6 ECTS), “Principles of Economics” (5 ECTS), “Business Economics” (6 ECTS) and one of the following courses: “Physical Basics of Semiconductors” (7 ECTS), “Electronic Circuits” (7 ECTS), “Electrical Energy Generation and Management” (7 ECTS);

18. An undergraduate programme adopted prior to 11 June 2004 in a relevant field: engineering and engineering trades (broad programmes – industrial engineering, electrical engineering – 520), electricity and energy (522), electronics and automation (523), physical science (broad programmes – 440), physics (441). These candidates are typically awarded 60 ECTS credits and may enrol in the second year provided they satisfy the transfer criteria laid down in the accredited degree programme;

19. An undergraduate programme adopted prior to 11 June 2004 in one of the following fields: mathematics (461), computer science (481), chemical and process engineering (524), mechanics and metal work (521) and building and civil engineering (582). The candidates are awarded 30 ECTS credits and may enrol in the corresponding year;

20. A bachelor’s vocational programme adopted prior to 11 June 2004 and a specialisation programme adopted prior to 11 June 2004 in a relevant field: electricity and energy (522), electronics and automation (523), physical science (broad programmes – 440), physics (441). These candidates are typically awarded 60 ECTS credits and may enrol in the second year provided they satisfy the transfer criteria laid down in the accredited degree programme;

21. A bachelor’s vocational programme adopted prior to 11 June 2004 and a specialisation programme adopted prior to 11 June 2004 in one of the following fields: mathematics (461), computer science (481), chemical and process engineering (524), mechanics and metal work (521) and building and civil engineering (582). The candidates are awarded 30 ECTS credits and may enrol in the corresponding year.

**Selection criteria in the event of limited enrolment:**

If there is greater demand than there are places available, candidates shall be ranked according to their academic performance under the bachelor’s programme:

– grade point average (100%).

**Transfer criteria:**

In accordance with the transfer criteria, candidates may transfer to the master’s (2nd-cycle) programme “Industrial Engineering - track “Electrical Engineering” from programmes in the field of industrial engineering – electrical engineering (522), electricity and energy (522), electronics and automation (523) and engineering and engineering trades (broad programmes – mechatronics, 520) provided they lead to the acquisition of comparable competencies and provided that at least half of the obligations under the former study programme relating to compulsory subjects of the new programme can be recognized.
In the recognition procedure, satisfied obligations that may be recognized wholly or partly are identified and new obligations required for completion of the new programme are laid down.

Candidates admitted to the track “Civil Engineering” must enrol at the Faculty of Civil Engineering, candidates admitted to the track “Mechanical Engineering” must enrol at the Faculty of Mechanical Engineering, and candidates admitted to the track “Electrical Engineering” must enrol at the Faculty of Electrical Engineering.

**Mode of study:** full-time

<table>
<thead>
<tr>
<th>Envisaged number of available places for enrolment in the 1st year:</th>
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<tbody>
<tr>
<td>- track “Civil Engineering”: 15</td>
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<tr>
<td>- track “Mechanical Engineering”: 30</td>
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<tr>
<td>- track “Electrical Engineering”: 30</td>
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<table>
<thead>
<tr>
<th>Envisaged number of available places for enrolment in accordance with transfer criteria:</th>
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<tbody>
<tr>
<td>- track “Civil Engineering”: 5</td>
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<tr>
<td>- track “Mechanical Engineering”: 10</td>
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<tr>
<td>- track “Electrical Engineering”: 5</td>
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