Regulations on departmental selection criteria and procedure
for the Industrial Engineering Bachelor’s degree program
for the 2019-2020 academic year

The Dean of the Industrial Engineering & Innovation Sciences department, pursuant to Article 2 of the Eindhoven University of Technology (TU/e) Selection and Placement Regulations for Numerus Fixus Programs 2019-2020, having heard the advice from the Program Committee dated September 17, 2018 and the Department Council dated September 19, 2018, hereby adopts the departmental selection criteria and procedure for the Industrial Engineering Bachelor’s degree program 2019-2020.

Article 1 General
1. The implementation of these regulations has been assigned to the Industrial Engineering Selection Committee, hereinafter referred to as: Committee.
2. The admission of candidates whose pre-university education does not automatically grant admission must be assessed by the Central Admissions Committee. To this end, candidates should submit a complete admissions file by January 31, 2019 at the latest.
   A complete file should include at least the following:
   A. For candidates with pre-university education in the Netherlands:
      o a Studielink registration,
      o a digitally completed application form in OSIRIS,
      o a list of the subjects taken in the penultimate year of the candidate’s pre-university education
      o a certified copy of the grade list.
   B. For international students:
      o a Studielink registration,
      o a completed application form,
      o a certified copy of the grade list,
      o certified copies of existing diplomas, and
      o an English-language test.
3. The Executive Board has set the maximum number of students for the 2019-2020 academic year at 275.
4. Candidates with a functional impairment are covered by Article 5 of these regulations.
5. Every candidate should take part in every component of the selection process in order to be considered for a ranking. Any candidate who does not take part in all the components will be excluded and will not receive a ranking. However, the candidate in question will be deemed to have used up a participation opportunity.
6. All dates and times mentioned in these regulations are Dutch times (CET - Central European Time).
7. The email address used in the selection procedure is the same as the one used for Studielink, which can be maintained via Studielink. It is the responsibility of each student to keep their email address up to date and to monitor their inbox and spam folder throughout the selection procedure.

Article 2 Selection criteria
Selection for the Industrial Engineering Bachelor’s degree program is based on 4 criteria:
 a. determining cognitive knowledge based on the average of a number of VWO-5 grades or their equivalent,
 b. testing cognitive skills: the score on the individual test Industrial Engineering,
 c. having taken part in reflection choice activities.
 d. Participation in all selection activities (pre-conditional)
 Various instruments are used for the purpose of selection according to these 4 selection criteria, as detailed in Articles 3 and 4.

Article 3 Selection: Selection method in outline
The study program uses the following instruments for assessing the criteria when carrying out the selection process:
 Re a. the VWO-5 or equivalent end-of-year report;
 Re b. a cognitive skill test;
 Re c. study program-related activities in support of choice of study
Based on the VWO-5 grades and the cognitive skill test, the candidates are ranked from 1 to the number of candidates taking part.

**Article 4 Selection: Selection method in detail**

**Component 1 – VWO-5 grades**

a. The VWO-5 grades of subjects that form part of the national written examination (Centraal Schriftelijk Eindexamen) 2019 form part of the selection process.
b. If necessary, the grades are rounded up or down to the nearest whole number.
c. Candidates should enter their grades online and upload a copy of the grades that has been certified by their secondary school by January 31, 2019 at the latest.
d. For candidates who enroll with a Higher Vocational Education (HBO) freshman diploma, the Senior General Secondary Education (HAVO) final exam grades form part of the selection, if no VWO-5 results are available.
e. In the case of candidates who may be admitted to the study program through a different diploma, the Committee will determine which subjects are equivalent, for the purpose of selection. The subjects will be considered in a comparable manner. Grade conversion tables drawn up by Nuffic will be used, if necessary. Until January 15 at the latest, candidates may ask the Committee in writing which grades it will use in the selection process.
f. Any candidate who has not presented a certified list of grades by January 31, 2019, will be excluded from the selection process and will not receive a ranking. Candidates who have been excluded will be notified of the fact by email within two weeks after Friday, February 1, 2019.

**Component 2 – cognitive skill test**

a. Prior to the date of the cognitive skills test candidates receive homework material to prepare for the test.
b. Use of the following items is permitted during the test: ID, a simple, concise English – foreign language dictionary, answer form, information sheet as provided by the department, blank paper in single sheets, calculator (non-programmable), pencils/pens, a protractor. Use of other items is not allowed. The candidates have to contact the Commission if they have any questions about this: IE.selection@tue.nl.
c. A grading model will be used to determine the individual candidates’ test scores.
d. The candidate should fill out the test individually and independently without the help of other sources of information, except for the material designated as "allowed" in the instructions for the test.
e. The candidates discuss IE questions in small groups and each group must present the joint findings regarding the likely answer.
f. For candidates abroad, the IE test is remotely surveilled. This means that candidates will be ‘monitored’ online to check that the test is completed under the appropriate conditions. During the test the items mentioned under 4.2b are permitted. Candidates receive a manual about the online surveilled test. This manual describes the strict rules that candidates should follow during the test. By participating in the online surveilled test, candidates agree to remote registering and monitoring by video recordings, keystrokes, and screenshots. A reviewer will have access to this data in order to assess whether the test has been completed according to the rules. The data collected will only be used for this purpose and will be destroyed as soon as it is clear whether the candidate is admitted or not.

**Component 3 - activities in support of choice of study**

Study program-related activities consist of:
- the standard TU/e questionnaire,
- the advice on choice of study report, with the results from the standard questionnaire,
- relevant educational experience (may be online, in the form of a MOOC, for example, in combination with a homework assignment),
- a personal interview with the candidates with a negative advice. These interviews may be conducted using Skype, or by phone.

**Component 4 – Participate in all selection activities**

a. After registration in Studielink, candidates receive an invitation for an online skills and motivation questionnaire. This questionnaire must be completed by March 20, 2019. Completing the questionnaire is mandatory. However, this questionnaire is for self-reflection purposes only and the results do not count in determining the final rank number.
b. Candidates receive an invitation to participate in the IE Selection Day (23 February 2019).
c. All candidates participate in the IE Selection Day (23 February 2019); candidates abroad take it online and receive an invitation for an online web lecture and online IE test. Validation of participation is based upon the candidate's email address. It is required that candidates use the same email address for both the selection of activities and for the registration in the Studielink.
d. During the IE selection day, the candidates follow a lecture on mathematics.
e. During the IE selection day, candidates will conduct the IE test.
f. Not participating in all activities results in exclusion of the selection procedure. Candidates who are excluded from the selection procedure will be informed by email after March 20, 2019.
g. Appendix 1 summarizes the timetable of the procedure.

**Article 5 Back-up procedure for exceptions**

Exceptions are in any event understood to mean:

candidates with a functional impairment, such as dyslexia or ADHD,
b. candidates who live outside the Netherlands or who are outside the Netherlands at the time of the selection procedure and who consequently are unable to be present if any part of the selection process is held on the TU/e campus.

Re a. For candidates with a functional impairment, be it temporary or permanent, one or more of the selection components may be modified or special facilities may be made available. Requests to this end may be submitted after the relevant information has initially been stated in Studielink; such requests should be accompanied by any documents reasonably required to assess the request in question. These should include at least a recent statement from a physician or psychologist or from a remedial educationalist associated with an assessment agency registered with BIG (Individual Health Care Professions), NIP (Dutch professional association of psychologists) or NVO (Association of Educationalists in the Netherlands). If possible, the statement should provide an estimation of the extent and likely duration of the functional impairment. International students should use the equivalent organization in their country of origin.

Re b. Candidates who live more than 260 km away from Eindhoven (as the crow flies, including the whole of the Netherlands, up to Eemshaven) and who are unable to travel to Eindhoven should give notice of the fact by email, no later than 23:59 on January 31, 2019 (selection@tue.nl). The reasons behind any such request should be given and backed up with evidence of the circumstances, if possible.

If any candidate wishes to use these facilities, they should email the Education and Student Affairs director no later than January 31, 2019 at selection@tue.nl.

**Article 6 Fraud**

1. Any candidate found to be committing fraud during the selection will be excluded from the selection procedure. The candidate in question will not receive a ranking and will be deemed to have used up a participation opportunity.
2. A committee consisting of the Education and Student Affairs Manager of the Industrial Engineering and Innovation Sciences department, the Program Director of the Industrial Engineering Bachelor’s degree program, and a member of the Examination Committee of the Industrial Engineering program will decide whether any fraud has taken place.

3. Any candidate who is suspected of or caught committing fraud will be asked by the admissions committee to cooperate in the gathering of evidence. The suspect will be given a hearing and the opportunity to add written comments to the admissions committee’s report. Candidates suspected of fraud will be allowed to continue participating in the selection process while the investigation is taking place.

**Article 7 Weightings and determining the results from the selection rounds and the rankings**

a. Rankings are based on a combination of:
   - the average VWO-5 grade (of the equivalent grade for international students and for students who have not taken VWO prior education) and
   - the results of the cognitive skills test
   - having taken part in study program-related activities.

b. All the results will be converted into standard scores before being combined into an overall score. This overall score will be rounded up or down to two decimal places.

   For determining the overall score, components (1) and (2) account for 2/3 and 1/3 respectively.

c. The participant with the highest overall score is given the lowest ranking number, the participant with the second-highest overall score receives the next lowest ranking number, and so on, in accordance with the provisions of Article 9 paragraph 3 of the Eindhoven University of Technology (TU/e) Selection and Placement Regulations for Numerus Fixus Programs 2019-2020.

d. If two or more candidates tie for the same ranking based on the results from the various components, they will be ranked according to their VWO-5 grades. If any candidates are still ranked equally after this, their ranking will be determined by the drawing of lots.

e. The score on the IE test is determined by the weighted number of correct answers. The scores of candidates will be compared with the scores of the other candidates. Therefore, there is no fixed single number for ‘success’ or ‘failure’. There will be no feedback about the scores, except for the final results in the email containing the final rank number.

**Article 8 Notification of the result**

a. Candidates who have not withdrawn will be notified of their ranking via Studielink on April 15, 2019.

b. Candidates may obtain further information about the result of the selection by sending an email to the Committee, who can provide an explanation of the scores for each component that led to the ranking.

**Article 9 Final provisions**

These regulations were adopted by the Dean of the Industrial Engineering & Innovation Sciences department of Eindhoven University of Technology on September 27, 2018, and may be referred to as the Regulations on departmental selection criteria and procedure for the Industrial Engineering Bachelor’s degree program 2019-2020 and will be applicable as of October 1, 2018.

Prof.dr. I.E.J. Heynderickx

Dean Department Industrial Engineering & Innovation Sciences

Eindhoven University of Technology
Appendix 1: Overview time schedule selection procedure IE

<table>
<thead>
<tr>
<th>Date</th>
<th>Deadline selection procedure</th>
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<tbody>
<tr>
<td>15 January 2019</td>
<td>Registration Studielink</td>
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<tr>
<td>31 January 2019</td>
<td>Complete admission dossier</td>
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<tr>
<td>31 January 2019</td>
<td>If applicable request and proper documentation in case of functional limitations</td>
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<tr>
<td>23 February 2019</td>
<td>IE selection day</td>
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<tr>
<td>20 March 2019</td>
<td>Complete online skills and motivation questionnaire</td>
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<tr>
<td>15 April 2019</td>
<td>Announcement rank number via Studielink</td>
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