# UNIVERSITY OF TRIESTE <br> ACADEMIC AND TEACHING REGULATIONS <br> for students enrolled in the academic year 2019/2020 

Bachelor's degree in Industrial Engineering - L09

## Art. 1 Objective

1. The following regulations lay down the contents of the related educational system, under art. 12, subsection 1 of the Ministerial Decree n. 270/2004 on "Regulations regarding educational systems' autonomy in universities".
2. The educational system and the organization of the bachelor's degree are hereby defined in accordance with freedom of teaching and with the rights and obligation of teachers and students.

## Art. 2 Contents of the Academic Regulations

1. The Academic and Teaching Regulations define the implementation of the educational system and its organisational aspects.
2. In accordance with art. 4, subsection 2 of the University's of Trieste Academic Regulations, the present Academic and Teaching Regulations lay down:
a) the list of classes (and their academic sector) divided by year of the course, their partition into modules and other educational activities;
b) the way in which laboratory activities, practical activities and traineeships shall be conducted;
c) the specific educational objects, the ECTS and any prerequisites for classes and other educational activities, all divided by year of the course, and the minimum requirements to apply to the following year;
d) the curricula available to students and, where necessary, how to present the individual curriculum;
e) any indications on compulsory attendance and/or any alternative learning plan for student worker and/or disabled people;
f) the admission requirements and admission test and any additional rules on preparatory and integrative activities aimed at fulfilling a conditional pass;
g) the type and procedure for the final examination and graduation;
h) the procedure for verification of knowledge of the foreign language and the meeting of university's requirements.

## Art. 3 Structure and organisation of the degree

The following documents and regulations set the organisation and managing of the degree course:

- University's Academic Regulations;
- educational system;
- course and educational activities listing;
- annual curriculum.


## Art. 4 Educational system

1. The educational system sets the structure and organisation of the degree course, in accordance with the rules such degree courses are bound to abide by. In particular, it contains:
a) the denomination and its degree class;
b) the educational objectives of the degree course in accordance with the European qualification framework;
c) the degree's job opportunities in relation to the activities listed by ISTAT;
d) the general layout of educational activities in accordance with the degree class;
e) the ECTS of all educational activities;
f) the requirements to access the degree course and the procedures for the verification of knowledge at the beginning of the course;
g) all features of the final examination and graduation;
2. The educational system can be also found in the degree's SUA statement.

## Art. 5 Course and educational activities listing

1. The course and educational activities listing lays down:
a) the list of classes taught and their academic fields and related educational activities;
b) the modules into which the classes may be divided and their academic fields;
c) the ECTS of each class and educational activity;
d) any progression between classes;
2. The course and educational activities listing can be found in the degree's SUA statement.

## Art. 6 Annual curriculum.

The curriculum is updated annually and can be found in the annex A and in the ESSE3 statement.

## Art. 7 Admission

In order to be admitted students must have a high-school degree, Italian or foreign.
To enrol to the first-year students must take a self-evaluation test to assess their skills and preparation. To this purpose, the University holds some test sessions before the semester's start. If the result is below the prerequisite threshold, the student can repeat the test.
If the aforementioned test is failed, the students will have to pass either the Mathematical Analysis I exam or the Geometry exam within the first year in order to enrol to the second year.
Before the semester's start, preparatory courses on mathematics and informatics are offered. Their attendance is suggested to everyone, but in particular to those who failed the aforementioned selfevaluation test.

## Art. 8 Degree achievement

1. In order to graduate students will have to have earned 180 ECTS.
2. Given that each course year conventionally equals to 60 ECTS, the duration of the course is three years.
3. The degree can be attained in less than three years if the student has earned all 180 ECTS included in their curriculum.

## Art. 9 Structure of the degree course

1. The Degree Course entails the following types of educational activities:
a) core educational activities;
b) connotative educational activities;
c) educational activities related to the connotative ones, regarding surrounding cultures and interdisciplinary education;
d) activities to be chosen by the student;
e) educational activities related to the final examination;
f) educational activities to improve linguistic knowledge, any traineeships, computer skills, telematic and relational skills and all skills useful for the job market.
2. The number of ECTS assigned to each of the listed activities is laid down in annex A.

Art. 10 Laboratory, hands-on and traineeships activities.
Such activities are promoted and coordinated by the professor teaching the class they refer to.

## Art. 11 Educational activities preparing for the final examination;

In accordance with its objectives and ECTS, the final examination is structured as follows:

1. The student at the end of the three-year curriculum will choose a professor (Tutoring Professor) who will guide the student preparing the final examination.
2. The professor will select a limited number of articles, book chapters or other reading materials possibly written in an EU language and helps the student to understand, clarify and organise the material mentioned in point 3 for the final examination.
3. The student will integrate the material on their own initiative and add articles, use softwares or carry out practical activities in laboratories.
4. The student will write a report of the activities performed and a presentation for the pre-graduation Committee. Both the report and the presentation can be written in one of the official EU languages as agreed with the Tutoring Professor. If the student will choose a language other than Italian, in accordance with the law in force the student will have to write a summary in Italian
5. The time spent on the final examination should not be longer than 2 months in order to allow students to start their master's degree as quickly as possible. It will however be possible, shall the student want to and find it useful for their training, to spend more time on the final examination than what determined by the number of ECTS assigned to it.
6. The pre-graduation Committee consists of the Tutoring Professor and - normally other four Professors (either with permanent position in the University or contract professors) teaching in the degree course attended by the graduating student. The Committee must be formed by at least 3 members.
7. The pre-graduation Committee evaluates the presentation and grades it with a maximum of 30 points. The score will than added to the weighted average of all marks obtained during the degree course according to the following chart:
Grade out of $30 \quad$ Final mark
18-22 +1
23-25 +2
26-28 +3
29-30 +4
8. One point may be added to the final mark if the students will have obtained at least three " 30 cum laude" during the degree course, regardless of the grade assigned by the pre-graduation Committee.
Two additional points may also be added if the student graduates within 3 years (within the extraordinary session); one additional point may be added in case the student graduates within the fourth year (the additional points will be awarded automatically by the teaching secretary.
9. The presentation shall last no more than 15 minutes to evaluate the student's ability to synthesize.

## Art. 12 Exam progression

1. In order to guarantee an appropriate teaching and learning environment, the progression between exams must be respected in accordance with the University's Academic Regulations.
2. The list of exams progression can be found in annex B.

## Art. 13 Specific curricula

1. Within the degree course the classes and educational activities can be combined to offer specific curricula and to fulfil different cultural or professional needs.

## Art. 14 Presenting an individual curriculum

The student may suggest each year a curriculum with a minimum of 48 ECTS and a maximum of 84 ECTS per year, including the ECTS of previous exams still not passed by the student. The number of ECTS for classes still not attended must be below 60 .
The Degree Course Council (Consiglio di Corso di Studi) may allow the students to replace their exams with other exams from the same University or from other degree courses and foreign Universities, weather they are Bachelor Degrees or Master's Degrees, based on the coherence with the degree course's objectives and the number of ECTS.

## Art. 15 Exams

1. Criteria for the arrangement of exams committees.

The exams Committees consists of two members: the professor of the course in question and another professor or researcher or substitute professor. Substitute professor must be subject experts. Subject experts are appointed by the Department Council.
If the course is the sum of two or more modules with different professors, they all must be part of the exam Committee.
2. Verification of knowledge for degree courses and other educational activities.

The verification of knowledge can take place with ongoing assessment tests or a final test held after the end of the classes or other educational activities.
3. Results registration for exams made up by several tests.

The registration is made only when a final grade is available.
4. Retaking exams within the same course year.

Students can retake exams in any date available in the exam calendar, provided they have attended the course.

## Art. 16 Mandatory attendance

Attendance is mandatory and may be verified as the Professor sees fit. The Professor may also establish different attendance rules for student workers or other students.

## Art. 17 English language test (field E)

In order to graduate, students must prove their knowledge of the English language is at least a B2 level. Testing can be performed through an examination or by supplying a proper certification.

1) Knowledge and skill level required for EU language other than Italian (English)

With reference to the level established by the ALTE (Association of Language Testers in Europe), students must attain the following knowledge level of the EU language other than Italian:

- ALTE Level Three - Independent User

This level corresponds to the following number of ECTS:

- level three: 3 ECTS

Regarding the English knowledge required for bachelor's degree course, the FIRST certificate issued by the British School corresponds to 3 ECTS.
2) Approved certificates

All certificates issued by one of the institutions listed in annex G can be submitted to the Department's Academic Office to obtain the corresponding ECTS.
The language test performed by CLA for ERASMUS+ student can also be used for the language assessment.

## Art. 17bis Other foreign languages.

Students who have a language certificate issued by the CLA for a different foreign language can register 3 supernumerary ECTS.

## Art. 18 Registering ECTS for traineeship activities (field F).

For any traineeship activity see annex C.
Art. 19 Criteria for registering ECTS for activities and skills obtained prior to the enrollment to the Bachelor's Degree.
The Degree Course Council can allow the students to register ECTS for activities performed or skills obtained prior to the enrolment to the Bachelor Degree course, if such activities are deemed coherent with the educational activities, the objectives of the degree course and the number of hours, as specified in annex D.
The Degree Course Council may also register ECTS for students transferring from a different degree course and/or from other universities, evaluating each individual situation and assessing the studens' skills through a meeting or tests, where necessary. The Degree Course Council will substantiate any choice of not registering ECTS. Students transferring from the same degree class will be able to register a minimum of 60 ECTS.

Art. 20 Regular verification of registered ECTS to assess the presence of up-to-date knowledge, and auxiliary tests on individual classes in case the cultural and professional content is considered outdated
The ECTS earned during the Bachelor's Degree are valid for 9 years. After 9 years, the ECTS will have to be substantiated by the Degree Course Council, which will confirm their educational content is not outdated.
If the Degree Course Council finds some or all of the contents outdated, it will establish auxiliary tests and their contents.
Once the student has passed the auxiliary tests, the Degree Course Council can officially register the ECTS. If the tests include a grade, the new official grade may be registered instead of the previously obtained one, upon a proposal from the exam Committee.

## Art. 21 Minimum number of ECTS to be earned by the student in a certain amount of time.

The Degree Course Council, through a deliberation, may allow students with a particularly high performance referred to the previous year to register in their curriculum a number of ECTS for educational activities they haven't attended yet of more than 60 ECTS, with a maximum of 84 ECTS. When laying down their curriculum, students will have to insert first the classes and educational activities which, in the official degree's curriculum, are presented as immediately subsequent to the ones already registered, except where otherwise specified by the Degree Course Council upon the students' request.
In order to enrol to the second year, students will have to have obtained a minimum of 30 ECTS of classes of the first-year curriculum. In order to enrol to the third year, students will have to have obtained a minimum of 78 ECTS. Students who haven't obtained 30 ECTS to enrol to the second year may ask for a maximum of 24 ECTS to be registered upfront and must enrol to the second year as a "repeating-year" student. Likewise, students who haven't obtained 78 ECTS to enrol to the third year may ask for a maximum of 24 ECTS to be registered upfront and must enrol to the third year as a "repeating-year" student. The request can be made until 15 th march.
All students can enrol to the following year and obtain the missing ECTS within February's exam session.

## Art. 22 Nature of this Regulation

This Regulation is defined as a Degree Course Regulation under article 12 of the Ministerial Decree 270/2004.

## Annex

Ann. A: Curriculum.
Ann. B: Exam progression
Ann. C: Traineeship activities
Ann. D: Registering previously obtained skills or activities
Ann. G: List of linguistic certifications accepted by the CLA

## BACHELOR'S DEGREE IN

## INDUSTRIAL ENGINEERING (CLASS LO9)

## PLAN OF STUDY

For the students enrolled in the first year in the academic year 2019/20
The Course of degree in Industrial Engineering includes 5 curricula:

- Curriculum "Electrical energy and systems engineering"
- Curriculum "Materials"
- Curriculum "Mechanics"
- Curriculum "Process"
- Curriculum "Management"

The courses are classified by the Type of Educational Activity (Tipologia di attività formativa, TAF):
A = fundamental educational activity
$B=$ characteristic educational activity
C = related and integrative educational activity
$\mathrm{D}=$ educational activity according to the student
$\mathrm{E}=$ final examination
$F=$ other activity

| Curriculum "Electrical energy and systems engineering" |  |  |  |
| :---: | :---: | :---: | :---: |
| 1 year (57 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Mathematical analysis I | MAT/05 | A | 9 |
| Geometry | MAT/03 | A | 9 |
| Chemistry | CHIM/07 | A | 9 |
| Fundamentals of information technology | ING-INF/05 | C+F | 9 |
| Physics I: classical mechanics and thermodynamics | FIS/01 | A | 9 |
| Foreign language - English (B2) |  | F | 3 |
| Science and technology of materials | ING/IND/22 | B | 9 |
| II year (60 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Mathematical analysis II | MAT/05 | A | 9 |
| Physics II: electricity and magnetism | FIS/01 | A | 9 |
| Applied Thermodynamics and heat transfer | ING-IND/10 | B | 9 |
| Fundamentals of automatic control | ING-INF/04 | B | 9 |
| Fundamentals of electrical engineering | ING-IND/31 | B | 9 |
| Mathematical methods for engineering | MAT/05 | C | 6 |
| Rational mechanics | MAT/07 | C | 9 |
| III year (63 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Electric power systems (distribution) | ING-IND/33 | B | 9 |
| Electric machines | ING-IND/32 | B | 9 |
| Mechanics of solids and structures | ICAR/08 | B | 9 |
| Mechanical drawing | ING-IND/15 | B | 6 |
| Applied mechanics | ING-IND/13 | B | 6 |
| Electrical measurements | ING-INF/07 | B | 6 |
| Courses to be chosen by students |  | D | 15 |
| Final examination |  | E | 3 |

Some courses to choose (TAF D) can be added in the study programme selectable between:

| COURSES TO CHOOSE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Course | Sector | TAF | CFU |
| Economics applied to engineering |  | ING-IND/35 | D | 6 |


| Database | ING-INF/05 | D |
| :--- | :---: | :---: |
| Industrial management | 6 |  |
| Industrial energy management | ING-IND/17 | D |
| 6 |  |  |
| Operations research | ING-IND/08 | D |
| Mechanical technology | MAT/09 | D |
| 6 |  |  |
| Numerical analysis | ING-IND/16 | D |
|  | 9 |  |


| Curriculum "Materials" |  |  |  |
| :---: | :---: | :---: | :---: |
| 1 year (57 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Mathematical analysis I | MAT/05 | A | 9 |
| Geometry | MAT/03 | A | 9 |
| Chemistry | CHIM/07 | A | 9 |
| Fundamentals of information technology | ING-INF/05 | C+F | 9 |
| Physics I: classical mechanics and thermodynamics | FIS/01 | A | 9 |
| Foreign language - English (B2) |  | F | 3 |
| Science and technology of materials | ING/IND/22 | B | 9 |
| Il year (57 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Mathematical analysis II | MAT/05 | A | 9 |
| Physics II: electricity and magnetism | FIS/01 | A | 9 |
| Applied Thermodynamics and heat transfer | ING-IND/10 | B | 9 |
| Organic chemistry | CHIM/06 | C | 6 |
| Fundamentals of linear circuits and electric machines | ING-IND/31 | B | 9 |
| Numerical analysis | MAT/08 | C | 6 |
| Rational mechanics | MAT/07 | C | 9 |
| III year (66 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Metallurgy and corrosion | ING-IND/22 | B | 9 |
| Materials science | ING-IND/22 | B | 9 |
| Mechanics of solids and structures | ICAR/08 | B | 9 |
| Mechanical drawing | ING-IND/15 | B | 6 |
| Applied mechanics | ING-IND/13 | B | 6 |
| Mechanical technology | ING-IND/16 | B | 9 |
| Courses to be chosen by students |  | D | 15 |
| Final examination |  | E | 3 |

Some courses to choose (TAF D) can be added in the study programme selectable between:

| COURSES TO CHOOSE |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Course |  |  |  |  |  | Sector | TAF | CFU |
| Transport phenomena 1 | ING-IND/24 | D | 6 |  |  |  |  |  |
| Industrial management | ING-IND/17 | D | 6 |  |  |  |  |  |
| Electrical measurements | ING-INF/07 | D | 6 |  |  |  |  |  |
| Thermodynamics | ING-IND/24 | D | 9 |  |  |  |  |  |


| Curriculum "Mechanics" |  |  |  |
| :---: | :---: | :---: | :---: |
| 1 year (57 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Mathematical analysis I | MAT/05 | A | 9 |
| Geometry | MAT/03 | A | 9 |
| Chemistry | CHIM 07 | A | 9 |
| Fundamentals of information technology | ING-INF/05 | C+F | 9 |
| Physics I: classical mechanics and thermodynamics | FIS/01 | A | 9 |
| Foreign language - English (B2) |  | F | 3 |
| Science and technology of materials | ING/ND/22 | B | 9 |
| Il year (60 CFU) |  |  |  |


| Course | Sector | TAF | CFU |
| :---: | :---: | :---: | :---: |
| Mathematical analysis II | MAT/05 | A | 9 |
| Physics II: electricity and magnetism | FIS/01 | A | 9 |
| Applied Thermodynamics and heat transfer | ING-IND/10 | B | 9 |
| Fundamentals of automatic control | ING-INF/04 | B | 9 |
| Fundamentals of linear circuits and electric machines | ING-IND/31 | B | 9 |
| Numerical analysis | MAT/08 | C | 6 |
| Rational mechanics | MAT/07 | C | 9 |
| III year (63 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Fluid machines and energy systems | ING-IND/08 | B | 9 |
| Mechanical technology | ING-IND/16 | B | 9 |
| Mechanics of solids and structures | ICAR/08 | B | 9 |
| Mechanical drawing | ING-IND/15 | B | 6 |
| Applied mechanics | ING-IND/13 | B | 6 |
| Economics applied to engineering | ING-IND/35 | C | 6 |
| Courses to be chosen by students |  | D | 15 |
| Final examination |  | E | 3 |

Some courses to choose (TAF D) can be added in the study programme selectable between:

| COURSES TO CHOOSE |  |  |  |
| :---: | :---: | :---: | :---: |
| Course | Sector | TAF | CFU |
| Database | ING-INF/05 | D | 6 |
| Biomaterials, artificial organs and protheses | ING-IND/34 | D | 6 |
| Industrial management | ING-IND/17 | D | 6 |
| Operations research | MAT/09 | D | 6 |
| Shipboard electrical power systems | ING-IND/33 | D | 6 |
| Electric power systems (distribution) | ING-IND/33 | D | 9 |
| Automation of electrical measurements | ING-INF/07 | D | 6 |
| Models for system management | ING-IND/17 | D | 6 |
| Metallurgy and corrosion | ING-IND/22 | D | 9 |
| Science and technology of polymeric materials | ING-IND/22 | D | 6 |
| Computer networks | ING-INF/05 | D | 6 |
| Thermodynamics | ING-IND/24 | D | 9 |
| Solid modelling | ING-IND/15 | D | 3 |
| Production planning and control | ING-IND/16 | D | 6 |


| Curriculum "Process" |  |  |  |
| :---: | :---: | :---: | :---: |
| I year (57 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Mathematical analysis I | MAT/05 | A | 9 |
| Geometry | MAT/03 | A | 9 |
| Chemistry | CHIM/07 | A | 9 |
| Fundamentals of information technology | ING-INF/05 | $\mathrm{C}+\mathrm{F}$ | 9 |
| Physics I: classical mechanics and thermodynamics | FIS/01 | A | 9 |
| Foreign language - English (B2) |  | F | 3 |
| Science and technology of materials | ING/IND/22 | B | 9 |
| II year (57 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Mathematical analysis II | MAT/05 | A | 9 |
| Physics II: electricity and magnetism | FIS/01 | A | 9 |
| Applied Thermodynamics and heat transfer | ING-IND/10 | B | 9 |
| Organic chemistry | CHIM/06 | C | 6 |
| Fundamentals of linear circuits and electric machines | ING-IND/31 | B | 9 |
| Numerical analysis | MAT/08 | C | 6 |
| Rational mechanics | MAT/07 | C | 9 |
| III year (66 CFU) |  |  |  |
| Course | Sector | TAF | CFU |


| Chemical plants | ING-IND/25 | B |
| :--- | :---: | :---: |
| Materials science | 9 |  |
| Mechanics of solids and structures | ING-IND/22 | B |
| 9 |  |  |
| Mechanical drawing | ICAR/08 | B |
| Applied mechanics | 9 |  |
| Thermodynamics | ING-IND/15 | B |
| Courses to be chosen by students | 6 |  |
| Final examination | ING-IND/13 | B |
|  | 6 |  |

Some courses to choose (TAF D) can be added in the study programme selectable between:

| COURSES TO CHOOSE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Course | Sector | TAF | CFU |
| Electrical measurements |  | ING-INF/07 | D | 6 |
| Transport phenomena 1 |  | ING-IND/24 | D | 6 |
| Industrial management |  | ING-IND/17 | D | 6 |
| Operations research |  | MAT/09 | D | 6 |


| Curriculum "Management" |  |  |  |
| :---: | :---: | :---: | :---: |
| I year (57 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Mathematical analysis I | MAT/05 | A | 9 |
| Geometry | MAT/03 | A | 9 |
| Chemistry | CHIM/07 | A | 9 |
| Fundamentals of information technology | ING-INF/05 | C+F | 9 |
| Physics I: classical mechanics and thermodynamics | FIS/01 | A | 9 |
| Foreign language - English (B2) |  | F | 3 |
| Science and technology of materials | ING/IND/22 | B | 9 |
| II year (60 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Mathematical analysis II | MAT/05 | A | 9 |
| Physics II: electricity and magnetism | FIS/01 | A | 9 |
| Applied Thermodynamics and heat transfer | ING-IND/10 | B | 9 |
| Fundamentals of automatic control | ING-INF/04 | B | 9 |
| Fundamentals of linear circuits and electric machines | ING-IND/31 | B | 9 |
| Numerical analysis | MAT/05 | C | 6 |
| Rational mechanics | MAT/07 | C | 9 |
| III year (63 CFU) |  |  |  |
| Course | Sector | TAF | CFU |
| Fluid machines and energy systems | ING-IND/08 | B | 9 |
| Mechanical technology | ING-IND/16 | B | 9 |
| Mechanics of solids and structures | ICAR/08 | B | 9 |
| Mechanical drawing | ING-IND/15 | B | 6 |
| Industrial management | ING-IND/17 | B | 6 |
| Economics applied to engineering | ING-IND/35 | C | 6 |
| Courses to be chosen by students |  | D | 15 |
| Final examination |  | E | 3 |

Some courses to choose (TAF D) can be added in the study programme selectable between:

| COURSES TO CHOOSE |  |  |  |
| :--- | :---: | :---: | :---: |
| Course | Sector | TAF | CFU |
| Industrial energy management | ING-IND/08 | D | 6 |
| Applied mechanics | ING-IND/13 | D | 6 |
| Operations research | $\mathrm{MAT} / 09$ | D | 6 |
| Renewable energy technology | ING/IND/09 | D | 6 |

# UNIVERSITY OF TRIESTE ACADEMIC AND TEACHING REGULATIONS 

## Degree in INDUSTRIAL ENGINEERING

## Annex $B$ - Exam progression

The correct exam progression will be monitored both by the Department's Teaching Secretariat and by professors before each exam. Specific cases (e.g. students previously enrolled in a different degree course) will be evaluated individually.

The following exam progressions are planned:

| Course | Exam progression |
| :--- | :--- |
| Physics II: electricity and <br> magnetism | Physics I: classical mechanics and thermodynamics |
| Mathematical analysis II | Mathematical analysis I, Geometry |
| Applied Thermodynamics <br> and heat transfer | Physics I: classical mechanics and thermodynamics, Mathematical analysis <br> I |
| Fundamentals of automatic <br> control | Mathematical analysis I, Geometry |
| Rational mechanics | Mathematical analysis I, Geometry, Physics I: classical mechanics and <br> thermodynamics |
| Fundamentals of linear <br> circuits and electric machines | Mathematical analysis I |
| Mechanics of solids and <br> structures | Rational mechanics |
| Numerical analysis | Mathematical analysis I |
| Materials science | Science and technology of materials |
| Thermodynamics | Chemistry |

# UNIVERSITY OF TRIESTE ACADEMIC AND TEACHING REGULATIONS 

Degree in INDUSTRIAL ENGINEERING
Annex C-Traineeship activities
No traineeship activities.

# UNIVERSITY OF TRIESTE ACADEMIC AND TEACHING REGULATIONS 

## Degree in INDUSTRIAL ENGINEERING

## Annex $D$ - Registering previously obtained skills or activities

As regards the acknowledgement of previously acquired competences and activities, except for what may be determined by possible specific agreements with the University of the Department of Engineering and Architecture:

- computer engineering skills and competences can be acknowledged and registered as TAF F up to a maximum of 3 ETCS;
- "Moduli Formativi" offered by the University of Trieste can be recognised as TAF D up to 6 ECTS;
- ECTS obtained through post-secondary activities organised and implemented by the University of Trieste can be acknowledged as TAF D up to 15 ECTS.
- "Moduli Formativi" relating to "Meccatronica per l'industria" and "Manutenzione aeromobili", ECTS will be acknowledged for the Curricumum "Mechanical" only according to the following scheme:
COURSE
6
Mechanical drawing
Applied mechanics ..... 6
Economics applied to engineering ..... 6
Mechanical technology ..... 9
TAF D courses ..... 15
Foreign language - English (B2) ..... 3
Fluid machines and energy systems ..... 3
Applied Thermodynamics and heat transfer ..... 3



## Italian Association of University Linguistic Centres

ACCEPTED LINGUISTIC CERTIFICATIONS DALL'ASSOCIAZIONE ITALIAN ASSOCIATION OF UNIVERSITY LINGUISTIC CENTRES



Italian Association of
University Linguistic Centres

| FOREIGN LANGUAGE | INSTITUTION | CERTIFICATION |
| :---: | :---: | :---: |
| French | Alliance Française | DELF <br> B1 Certificat d'Etudes de Français Pratique 2 (CEFP2) <br> DELF B2 Diplôme de <br> Langue <br> Française (DL) <br> DALF CI Diplôme <br> Supérieur <br> d'Etudes Françaises <br> Modernes <br> (DS) <br> DALF C2 Diplôme de Hautes <br> Etudes Françaises (DHEF) <br> DELF PRO (dal B1) |
|  | ESSEC | Diplôme Supérieur d'Etudes Commerciales (DSEC) |
|  | CCIP (Chambre de Commerce et Industrie de Paris) | DFP B1 <br> DFP B2 <br> DFP C1 <br> DFP C2 <br> (Généraliste ou spécifique: scientifique, technique, tourisme, secrétariat, médical, juridique, affaires etc.) |

## Italian Association of University Linguistic Centres

| LINGUA STRANIERA | ENTE | CERTIFICAZIONE |
| :---: | :---: | :---: |
| Inglese | Cambridge ENGLISH LANGUAGE ASSESSMENT | $\begin{aligned} & \hline \text { PET (B1) } \\ & \text { FCE (B2) } \\ & \text { CAE (CI) } \end{aligned}$ |
|  | Trinity College London | $\begin{aligned} & \text { ISE 1(B1) } \\ & \text { ISE } 2(\text { B2) } \\ & \text { ISE } 3 \text { (CI) } \end{aligned}$ |
|  | IELTS | B1 (4.0-5.5) B2 (5.5-7.0) C1 (7.0-8.0) C2 (8.0-9.0) |
|  | TOEFL Internet-based (iBT) | $\begin{aligned} & \text { B1 (57-86) } \\ & \text { B2 (87-109) } \\ & \text { CI (110-120) } \end{aligned}$ |
|  | $\begin{aligned} & \text { TOEFL PBT Paper-Based } \\ & \text { Test (PBT) } \end{aligned}$ | A partire dal punteggio 513 |

 Linguistic Centres

| FOREIGN LANGUAGE | INSTITUTION | CERTIFICATION |
| :---: | :---: | :---: |
| ITALIAN L2 (*) | University for Foreigners of Perugia | CELI Levels A1, A2, B1, B2 Levels A1, C1, C2 |
|  | University "Roma Tre" | $\begin{aligned} & \text { Cert.IT A1, A2, B1, B2, } \\ & \text { (C1), C2 } \end{aligned}$ |
|  | University for Foreigners of Siena | $\begin{aligned} & \text { CILS A1, A2, B1, B2, } \\ & \mathrm{C} 1, \mathrm{C} 2 \end{aligned}$ |
|  | Dante Alighieri Society P <br>  C | $\begin{aligned} & \text { PLIDA A1, A2, B1, B2, } \\ & \mathrm{C} 1, \mathrm{C} 2 \end{aligned}$ |
| Spanish | Instituto Cervantes | DELE (Diplomas de Español corno Lengua Extranjera) (A1, A2, A2/B1, B1, B2, C1, C2) |
|  | Instituto Cervantes, Universidad Nacional Autónoma de México, Universidad de Salamanca, Universidad de Buenos Aires | SIELE (Servicio Internacional de Evaluación de la Lengua Española) (certifies the linguistic level whatever that is) |
|  | Spanish Chamber of Commerce, Universidad Complutense de Madrid | CEC (Certificado de español comercial) (B1) DEC (Diploma de Español Comercial) (C1) |
|  | Ministerio de Relaciones Exteriores y Culto de la RepùB1ica Argentina | CELU (Certificado de Español, Lengua y Uso) |

Tutti gli Enti che rilasciano le certificazioni di Italiano L2 in tabella fanno parte dell＇Associazione IQ（Certificazione Lingua Italiana di Qualità）e dell＇ALTE
（＊）

## C1 <br> Italian Association of University Linguistic Centres

| FOREIGN LANGUAGE | INSTITUTION | CERTIFICATION |
| :---: | :---: | :---: |
| German | Goethe Institut | Goethe－Zertifikat Al：Fax （＋39） 405583580 <br> Goethe－Zertifikat A2 <br> Goethe－Zertifikat B1 <br> Goethe－Zertifikat B2 <br> Goethe－Zertifikat C1 <br> Goethe－Zertifikat C2： <br> GDS Test DaF－B2／C1 |
|  | 緊存terreichische <br> Snrachdiplom Deutsch－SD㩆 | Al Grundstufe Deutsch 1 A2 Grundstufe Deutsch 2 B1 Zertifikat Deutsch B2 Mittelstufe Deutsch CI Oberstufe Deutsch C2 Wirtschaftssprache Deutsch |
|  | telc gGmbH | telc Deutsch： from A1 to C2，with different variations |


| Kultusministerkonferenz | Deutsches Sprachdiplom <br> der <br> Kultusministerkonferenz <br> (DSD <br> (DS |
| :--- | :--- | :--- |
|  | I)-A2/B1 <br> Deutsches Sprachdiplom <br> der <br> Kultusministerkonferenz <br> (DSD <br> II)-B2/C1 |

