

ING.PAED.IGIP

IGIP maintains a list of accredited international engineering educators who were awarded the title ING.PAED.IGIP. The title ING.PAED.IGIP certifies a certain educational level for a teacher, trainer or instructor, which is given by the IGIP curriculum.

Any engineering educator who passes the curriculum at any accredited training center for International Engineering Education or can present certificates on the individual modules of the curriculum, and whose education, training and professional experience meet the IGIP standards may register for the professional register as "International Engineering Educator ING.PAED.IGIP".

Please download (bottom of the page) the ING.PAED.IGIP application form if you fulfill the criteria.

Please contact us if you need more information: office@igip.org.

IGIP Accreditation for Training Centers (ATC) for International Engineering Educators

IGIP accredits training centers for "International Engineering Educators", the teaching matter of which conforms to IGIP's curriculum for engineering pedagogy. These centers have to be reaccredited every five years. Contact imc@igip.org, if you want to be informed about your nearest accredited training center.

Please contact for more information or other questions: office@igip.org.

The ING.PAED.IGIP is for all technical teachers who are

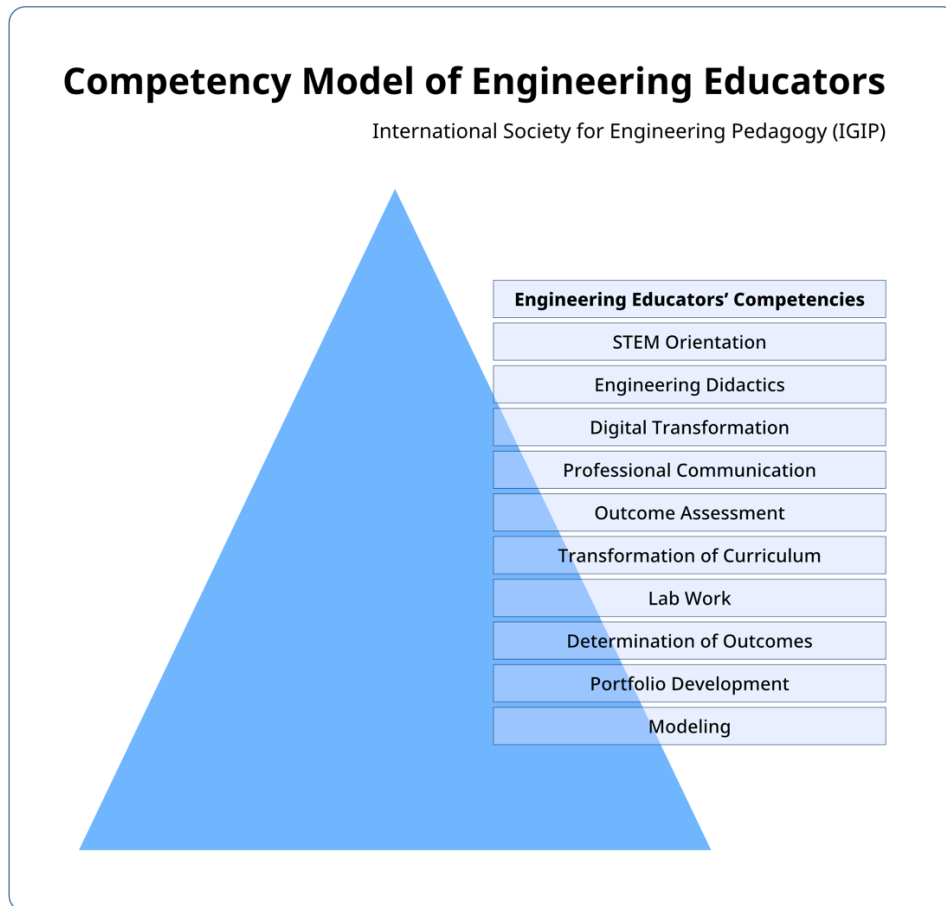
- Engineers according to IGIP principles and
- have studied according to the IGIP curriculum at accredited institutes or can present certificates on the individual modules of the curriculum, plus
- have at least one year of teaching experiences.

IGIP Prototype Curriculum

The new curriculum provides a modular pedagogy-based approach to methodological, didactical, and pedagogical excellence in the field of engineering education. The acquisition of the title "IGIP International Engineering Educator – ING.PAED.IGIP" represents an advanced form of personal and professional development which gives each graduate access to the network and experience of the global engineering education community.

Competency Model of Engineering Educators

International Society for Engineering Pedagogy (IGIP)



1. **STEM Orientation:** Ability for describing different career paths to the career goal "engineer" (STEM-Orientation). Basic knowledge on the relationship between vocational and engineering education in the national context.
2. **Engineering Didactics:** Ability to design teaching and studying processes in initial and continuing education for different target groups.
3. **Digital Transformation:** Ability to use domain specific educational media (digital transformation).
4. **Professional Communication:** Ability to carry out communicative processes purposefully in their teaching activities on the basis of scientific evidence and the provisions of personality characteristics of the communication partners.
5. **Outcome Assessment:** Ability to design and to monitor control and evaluation of learning outcomes (reflective Competencies)
6. **Transformation of Curriculum:** Ability to plan, to carry out and to follow up academic course types in accordance with the intended qualification goals and the target groups.
7. **Lab Work:** Ability to design purposeful teaching and learning processes in laboratory work and internships on scientific findings.
8. **Determination of Outcomes:** Ability to determine of study goals and objectives (qualification and competencies)
9. **Portfolio Development:** Ability to develop and carry out teaching portfolio
10. **Modeling:** Ability to recognize the different levels of abstraction and generalization (modeling, simulating) in engineering education in the solution of company-specific problems and / or scientific problems and in projects.

Cross module Knowledge and Competencies

1. Ethics in Engineering
2. Psychological findings
3. Social Competencies
4. Digitization of teaching and studying processes

All applicants for an "ING.PAED.IGIP" must study the subjects of the Prototype Curriculum as proposed by IGIP in any accredited IGIP Training Center. After completion of the program, an IGIP international engineering educator has acquired the competencies needed to teach at the highest standards.

The IGIP Prototype Curriculum is organized in modules (module areas), the workloads have to be given in ECTS (European Credit Transfer Points). The curriculum is also divided into compulsory modules and the elective modules, the latter can be chosen by the Accredited Training Center based on needs as well as on interests and must comprise at least 20 ECTS.

Each IGIP Training Center enjoys a high degree of flexibility and offers independent study courses based on the IGIP Prototype Curriculum.

In detail, the new prototype curriculum is divided into Module Areas and their corresponding/respective units.

The module areas and units are not limited to one discipline but are inter-disciplinary.

The related professional fields of action are:

- The profession of "engineer" (including ethics for engineering) with reference to the engineer's duties and tasks
- Engineering Sciences
- social and engineering pedagogical approaches
- the participant (student) as a responsibly acting human being

Modules of the IGIP Prototype Curriculum Compulsory and Elective		
Compulsory	ECTS	Content
STEM Orientation	1	Paths to the career goal "engineer" (STEM-Orientation). Basic knowledge on the relationship between vocational and engineering education in the national context.
Engineering Didactics and Methodics	4	Unit 1: Design of Teaching and Studying Processes Unit 2: Media in EE Unit 3: Professional Communication Processes Unit 4: Control and Evaluation of Learning Outcomes in EE
Design of Academic Courses	4	Unit 1: Relationships between Lecture – Seminar – Consultation – Self Study Unit 2: Lab Didactics
Curriculum Theory and Practice	2	Unit 1: Determination of Study Goals and Qualifications/Competencies Unit 2: Teaching Portfolio
Modelling	3	From Theory to Application – Internships; Research Projects with Partners from Labour Market; Internationalization
Application	3	Unit 1: Best Cases, Best Practice Unit 2: Final Colloquium – Final Project
Electives	ECTS	Content
Selected Additional Units	3	e.g.: Coaching and Mentoring, Entrepreneurship, New Technologies, Sustainable Development, Closed Eco Systems; Peace Engineering; Digitization of Working Processes and Teaching...
Total – Minimum	20	

The Prototype Curriculum should be open to country-specific adjustments. Also, the assessment of modules or units should be defined by country-specific conditions. For the realization of the curriculum, a compulsory engineering-related didactical approach should be developed, which does, however, not require any methodological limitations.

Furthermore, the **target-group ranges** for the IGIP prototype curriculum have been opened up and expanded. The following target groups can be included, if the engineering qualifications and the teaching experience are given:

1. Engineering Educators - Staff at Higher Education Institutions
2. Future Staff in Engineering Education, e.g. PhD candidates
3. Students in Engineering and Sciences Courses at Higher Education Institutions

4. Deans and Heads of Faculties, Schools or Departments
5. Management Staff at Higher Education Institution
6. Technical Vocational Teachers at Higher Technical Vocational Colleges

The Ing.Paed.IGIP qualification profile of an engineering educator is based on their **Engineering qualifications**, and on their **qualifications in engineering pedagogy** as foreseen in the Prototype Curriculum. A **teaching experience** of at least one year is also required.

IGIP also accredits **training centers** for "International Engineering Educator" Programs. These centers have to be re-accredited every five years. For a detailed description, please download the "Application Form for Accredited Training Centers" from below.

Alternatively, please contact our office at imc@igip.org if you want to be informed about your nearest accredited training center.

The accreditation is a voluntary process; educational institutions must apply for accreditation to the IGIP IMC through the responsible IGIP National Section, or the General Secretary, directly.

The accreditation criteria are:

- Organization of the Program
- Stating the Entrance Requirements for first Year Students
- Stating Skills and Abilities of the Graduates
- The Engineering Pedagogy Curriculum used at the Training Center
- Listing of the Lecturers and Professors and their qualifications
- Guarantee of sufficient institutional resources for the program
- Quality Control and Feedback

For more information, please contact gs@igip.org or president@igip.org, or imc@igip.org.

Both the register and the title ING.PAED.IGIP will generally improve the position, role and responsibility of engineering educators in society.

Application Forms

[ING.PAED.IGIP Application Form](#)

[IGIP ATC Application Form](#)