

## Master Program of Aerospace Engineering

<b>Program Name (In Indonesian)</b>	Program Studi Magister Teknik Dirgantara
<b>Program Name (English translation)</b>	Master Program of Aerospace Engineering (MPAE)
<b>Final degree</b>	Magister Teknik (MT)/ Master of Science (M.Sc.)
<b>The standard period of study</b>	2 years
<b>Credit points (according to ECTS)</b>	36 credit points, equivalent to 90 ECTS credit points
<b>Type (several can be indicated)</b>	Full time / <del>part time</del> / <del>distance learning</del> / <del>dual degree</del> / <del>cooperative or sandwich course</del> / <del>intensive program</del> / etc.
<b>Website of the higher education institution</b>	<a href="https://www.ftmd.itb.ac.id/program-s1-s2-s3-teknik-dirgantara/">https://www.ftmd.itb.ac.id/program-s1-s2-s3-teknik-dirgantara/</a>
<b>Programs start date within the academic year</b>	August and January
<b>Program Inception</b>	1999
<b>Intake rhythm</b>	Fall semester / summer semester / etc.
<b>Expected intake number of students</b>	50 students a year
<b>Faculty/department</b>	Faculty of Mechanical and Aerospace Engineering
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<b>Last accreditation issued by</b>	National Accreditation Agency for Higher Education in Indonesia (BAN-PT)
<b>Duration of the last accreditation</b>	10 January 2018 - 10 January 2022

## Program Educational Objectives (PEO)

The educational objectives of the study program are formulated based on the Vision and Mission of ITB (SK SA No. 09/SK/I1-SA/OT/2011), ITB Goals (PP No. 65 of 2013 concerning ITB Statute Article 3 paragraph 3), and Vision and Mission of FTMD (Renstra FTMD 2016-2020).

Educational Objectives or Program Educational Objectives (PEO) in the Master Program of Aerospace Engineering (MPAE) are as follows:

**PEO 1** - Having moral integrity, discipline, and mutual respect, fairness, and responsibility;

**PEO 2** – Having the ability to consolidate/build knowledge and skills in the field of Aerospace Engineering and interdisciplinary science;

**PEO 3** - Having the ability to create and innovate, working effectively both individually and in groups, communicating well orally and in writing, learning throughout life, and adapting to the research environment.

Based on Presidential Decree No. 8 the Year 2012 about Indonesian National Qualification Framework (KKNl), the qualifications for Master Program are as follows:

**Qualification A** - Capable of developing knowledge, technology, and/or art in their scientific field or professional practice through research to produce innovative and tested work;

**Qualification B** - Capable of solving science, technology, and/or art problems in their scientific fields through an interdisciplinary or multidisciplinary approach; and

**Qualification C** - Capable of managing research and development beneficial to society and science and getting national and international recognition.

The relationships between PEOs of the MPAE and the Indonesian National Qualification Framework (KKNl) is provided in the following table.

*Relationship between PEOs of the MPAE and Indonesian National Qualification Framework (KKNl)*

PEO	Indonesian National Qualification Framework (KKNl)		
	Qualification A	Qualification B	Qualification C
Objective 1 (PEO 1)			√
Objective 2 (PEO 2)	√	√	√

Objective 3 (PEO 3)	√	√	√
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### Program Learning Outcome (PLO)

Program Learning Outcomes (PLO) are designed based on the PEOs of MPAE. Learning outcomes are targets that must be achieved by students of the MPAE so that by the time they graduate from the MPAE, graduates will have the ability in accordance with the PEO of the MPAE.

The PLOs for graduates from MPAE program, based on the 2109 curriculum document, are:

- A. The ability to identify, formulate, and solve complex engineering problems by applying innovative engineering, science, and mathematical methods and tools;
- B. The ability to consolidate and deepen knowledge in interdisciplinary fields;
- C. The ability to apply analysis, synthesis, optimization, and creativity in the engineering design process, resulting in a design that meets the desired needs;
- D. The ability to design, develop and perform appropriate experiments, analyze and interpret data, and use engineering judgments to conclude.
- E. The ability to communicate effectively orally and in writing with a wide range of scientific audiences in a national and international context;
- F. The ability to take responsibility ethically and professionally in technical situations and make informed judgments considering the impact of engineering solutions in a global, economic, social, and environmental context;
- G. The ability to play an influential role in teams setting goals, planning tasks, meeting activity schedules, and analyzing risks and uncertainties to responsibly integrate them into their actions.
- H. The ability to understand the ongoing need for additional knowledge and find, evaluate, integrate, and apply this knowledge appropriately.