

Table of Contents



The Minor in Applied Data Science for Engineering (MADS4Engineering) is a one-semester programme offered to students who have completed at least two years of higher education studies. It is intended for engineering students, but other students who can participate in an engineering data science project are also welcome. It is crafted to address the design requirements of the degree and prepare engineering students with all the necessary skills to face the challenges of today's world economy. MADS4Engineering follows a project-organized/problem-based learning with strong emphasis in critical thinking and ethics. Students work together in international multidisciplinary teams of 3 to 6 on real data science challenges. Some projects are done in cooperation with businesses and industries, other projects with research laboratories. Students learn to learn, to take responsibility for their learning and their project work and develop inter-cultural competencies, communication skills and interpersonal skills.

The [Minor in Applied Data Science for Engineering \(MADS4Engineering\)](#) is a 30-ECTU programme in English offered by ISEP to international 3rd- and 4th-year (or higher) engineering, product design and business students. The programme comprises the following modules:

1. Data Science Lab (21.0 ECTU)
2. Critical Thinking & Ethics in Data Science (1.5 ECTU)
3. Data Preparation, Processing and Visualization (1.5 ECTU)
4. Intercultural and Technical-Scientific Communication (1.5 ECTU)
5. Math Essentials for Data Science (1.5 ECTU)
6. Programming for Data Science (1.5 ECTU)
7. Team Building & Project Management (1.5 ECTU)

It is a project-based learning offer with emphasis on teamwork, involving groups of students from different majors and cultures, to solve real-world multidisciplinary data-based problems.

From:

<https://www.mads4e2026-wiki2.dee.isep.ipp.pt/> - **MADS4Engineering**

Permanent link:

<https://www.mads4e2026-wiki2.dee.isep.ipp.pt/doku.php?id=about&rev=1788635303>

Last update: **2026/09/05 20:08**

