SM-APM

Aerospace Project Management
(ISAE - EA - ENAC)

Accredited by the Conférence des Grandes Écoles

Aims

Aeronautical, Space and Defense business is, by nature, complex, innovative with high added value. Placed at the hearth of political, economic, environmental and technological issues, in France, in Europe and worldwide, it requires a prospective vision from decision makers. It is based on specific industrial processes, characterized by long, costly and risky cycles (R & D, production, maintenance & support).

Aerospace programs, either in civil or defence, are facing challenging concerns: competitiveness and high technologies development, global supply chain approaches, Government budget reduction, and internationalisation of resources. The development and industrialisation of new programs involves the collaboration of companies from many countries and cultures, several thousands engineers work in all regions around the world through IT platform and tools.

In this context, project management in aerospace environment requires mastering a wide scope of knowledge, know-how and expertise adapted to the specific needs and issues of this challenging worldwide business.

To answer to these concerns, ISAE, Ecole de l'Air and ENAC gather their expertises to develop the Aerospace Project Management (APM) specialized master.

The professionally-oriented APM Specialized Master provides students an overview on military or civil international Aerospace industry and gives up-to-date skills, cutting-edge knowledge, and necessary competences for successfully leading Project or Program teams in global aerospace and defence industry.

With an emphasis on operations, the program is intended to those beginning their career in management of projects or to professionals aiming at enhancing their competences for a fast career evolution. The program of the SM APM is taught, by experts or lecturers with extensive aerospace project experience, with a combination of formal presentations, in-class exercises, or study cases. The objectives of this practical approach are to provide students with current techniques and tools in project management taking into account industrials, economical or legal specificities of the Aerospace business.

Organization

Heads of Program:

ISAE: Prof Philippe Girard

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EA: Prof Pierre Barbaroux

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ENAC: Prof Nicolas Peteilh

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Duration of studies: One year in full time or two years in part time

Beginning of classes: September

Location: ISAE campus SUPAERO Toulouse France and ÉCOLE DE L'AIR Salon de Provence - France

Teaching language: English

Pedagogical approach

The comprehensive training program is organised into two semesters. The first one, organized at ISAE and Ecole de l'Air, will start with an overview of word-wide Aerospace environment in the civil as well military field. This first approach takes into account the career experience or degree course varieties of participants.

After this introduction, the curriculum is structured into three main parts:

First part: methodology (170 hours)

This part leads to a good understanding of Project management tools (WBS, planning, needs specification, etc).

Models and Methods of Project management for Aerospace context with specificities for high stakes and long cycle programs.

Second part: economic and financial (100 hours)

This part leads to a good understanding of economical stakes for nations or industries and the role of politics.

How to evaluate the cost of a long term program, the investment return hope, but also how to manage cost during development or manufacturing phase.

Third part: Human Resources Management (100 hours)

This part underlines the necessity to integrate and federate competences around a common objective; how to motivate people for a long term project.

How to integrate intercultural management within international Program to avoid conflicts and change resistance.

In each of these parts the risks evaluation and control will be systematically underscored as well as Quality concepts and indicators dedicated to Aerospace context.

During semester 2, students have to conduct a professional thesis in aerospace industry or in laboratory, in France or abroad, supervised by a tutor from the host organisation and from ISAE or Ecole de l'Air. The thesis is concluded by the preparation of a report and an oral dissertation in front of jury.

Teaching staff

The teaching staff is composed of permanent professors from ISAE or Ecole de l'Air (CREa). Several consultants, experts into project management are invited to deliver their knowledge from their own experience.

On top of that many experts from industries, most of the time heads of aerospace programs will illustrate with parts of the courses.

Career opportunities

APM Specialized master Program leads students to integrate or to become Head of Aerospace program team. To conceive and pilot complex projects with permanent care of costs and risks control in Aerospace companies or in defense institutions.