

1. Introduction

AMET is a high-tech engineering company, active in the design and development of mechanic and mechatronic products and processes, based on numerical simulation. AMET, the acronym of Applied Mechatronic Engineering & Technologies (www.amet.it), has been established in February 1999, as a spin-off of the Mechatronics Laboratory of the Politecnico di Torino.

AMET is certified by TUV NORD according to quality standard ISO 9001:2015.

AMET mission is to provide its customers with best-in-class solutions – i.e. methodologies, technologies and engineering services – for the design and development of industrial products, exploiting an integrated multi-domain model-based approach, to assure optimum system performance. AMET has developed a sound experience in numerical analysis and target achieving for several OEMs.

2. Object

AMET is planning to increase its workforce in the Kosice office to widen the local CAE group. With this aim AMET is proposing a three months paid training stage to freshly graduated engineers to provide them with the basic skill of numerical analysis. Once successfully completed the training a full-time employment will be proposed.

3. Activity description

Under the tutoring of a senior engineer (both Slovak and Italian) the trainees will follow a FE-Method training whose purpose is to introduce or fresh-up skills for designing and performing Computer Aided Engineering Analyses, using FE-Method, and assessing results for designing or performances objectives.

The course includes both FE-Method basic knowledge and CAE Tools training and it is organized in class lessons and single or team practice.

The content is developed following the usual work flow for CAE activities: Pre-process – Solution – Post-process

The expected competencies following the training period are split on 2 vertical levels

- Basic level: it is the first approach with FEM work, but also the ability that all CAE engineer have to acquire
- Specific level: it is the one which a single CAE engineer is specialized in

Both levels are split on 2 degree of participation on the activity

Degree 1 is to train a CAE engineer, able to prepare FE Model ready to be calculated, both for a Basic and Specific level tasks

Degree 2 is to train a CAE engineer, able to calculate and assess a CAE problem, both for a Basic and Specific level tasks

At the end of the training the trainees will be able to handle the following workflow:

PRE PROCESSING	SOLUTION	POST PROCESSING
<ul style="list-style-type: none"> ▪ Assessment to plan 	<ul style="list-style-type: none"> ▪ Choosing of Solver 	<ul style="list-style-type: none"> ▪ Checking the reliability and robustness
<ul style="list-style-type: none"> ▪ Meshing & Connections 	<ul style="list-style-type: none"> ▪ Debugging (error & warning) 	<ul style="list-style-type: none"> ▪ Assessing performances
<ul style="list-style-type: none"> ▪ Modeling & Code Conversion 		
<ul style="list-style-type: none"> ▪ Assessment to inform 		