



IRT Saint Exupéry - Industrial Partner

Assembly and Bonding (3 ECTS)

Head of the course: Dr. Patrick Martinez

Location of the courses: IRT, Esplanade des Arts et Métiers, Arts et Métiers ParisTech

Language: English

Distribution of courses: Lectures: 18h, Tutorials: 4h, Lab: 4h

Prerequisites:

Basis on polymer material (physical and chemical properties)

Basis on stress and strain tensor, continuum mechanics

Non-linear behaviour of materials (plasticity, viscosity, damage)

Finite Element Method, basis on numerical analysis

Program:

4h	S. TCHERNIAEFF S. MIOT & L.	<u>Practical work</u> : assembly technologies & comparison
2h	BARRIERE S. MIOT & L.	Advanced materials: testing & simulation
4h	BARRIERE	Advanced materials: testing & simulation
4h	J. HUGUES	Additive layer manufacturing for aerospace
4h	J. HUGUES & T. GILLES	Additive layer manufacturing for aerospace
2h	S. BENAZET	Safety aspect for additive manufacturing
2h	J. ESCOBAR	Surface treatment
4h	X. AUBARD	Tutorial on case analysis

Evaluation

First session

1. Multiple choice questionnaire Test – coef 2/3
2. Project Evaluation - coef. 1/3

Second session

1. Multiple choice questionnaire Test – coef 2/3
2. Others (report of Project rating) - coef. 1/3