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S7_S9 **ACDC**	**Mineure « Aircraft Conceptual Design »**	

OBJECTIFS / *OBJECTIVES*

Upon completion of the courses in this Mineure, the student will be able to:

- Describe the operations of passenger transport aircraft and identify the resulting design requirements.
- Describe the different aircraft configurations and qualitatively justify the technical choices that led to their development.
- Describe the different modelling levels used in the main disciplines according to the degree of maturity of an aircraft project or the objectives of a study.
- Describe the physical interactions that take place between the different components of the aircraft and between the aircraft and its environment during operations, as well as the existing or emerging methods and tools to model them.
- Identify the various sources of data related to aircraft operations in global airspace and describe how these sources can be used to improve aircraft definition.
- Outline the methods and tools used, or emerging, to solve complex design problems.
- List and describe the main challenges of tomorrow's air transportation and their potential impact on aircraft design.
- Propose and optimize a zero-emission aircraft configuration that meets a set of specifications by implementing engineering techniques and applied mathematics methods.

Why do all newly designed aircraft look so much alike ?
Why aren't there already hybrid airplanes like there are hybrid cars ?
Will we one day see flying wings for passenger transport ?
What are the alternatives to kerosene to power future airplanes ?
What are the challenges facing aviation to make a successful ecological transition ?

This course will give you the knowledge to answer these questions as well as many others that you may have about the definition and optimization of complex systems (aircraft or others).

Pour en savoir plus / *For more information* : http://formations.enac.fr/fr/formations/feuilleter-le-catalogue/sciences-technologies-sante-STS/formation-d-ingenieur-classique-FI/ingenieur-enac-program-47517.html


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