**NAME**: add here your **name** and the **date**

**Student references to justify the required Pre-Requisites**

List in this table the lectures you had that fit with the following Pre-requisites.

Be specific, give name of courses, year (such as 2nd year of Bachelor) and the most import is the the content (10-30 lines). You can copy the Table of content if relevant.

The more important expected prerequisites are ***Solid mechanics,* *Strength of materials, Fluid mechanics, Dynamics of Mechanical Systems and some basic programming as MATLAB***

|  |
| --- |
| 1. *Fundamental courses in* ***Mathematics***

*List the lectures you had in this topic. Give details of the content (table of content or abstract)* |
| 1. *Fundamental courses in* ***Numerical Methods***

*List the lectures you had in this topic. Give details of the content (table of content or abstract)*Expected topics (not exhaustively) include: Linear systems, Gauss-Seidel, Simpson’s formula, Runge Kutta, …).  |
| 1. *Fundamental courses in* ***Physics***

*List the lectures you had in this topic. Give details of the content (table of content or abstract)* |
| 1. *Fundamental courses in* ***Thermodynamics - Heat Transfer***

*List the lectures you had in this topic. Give details of the content (table of content or abstract)**See more info on:* <http://progcours.ulg.ac.be/cocoon/en/cours/MECA0445-2.html> |
| 1. *Fundamental courses in* **Solid Mechanics,**

*List the lectures you had in this topic. Give details of the content (table of content or abstract)*Expected topics (not exhaustively) include: Solid Mechanics: concept of stress tensor, strain tensor, material's constitutive law, Hooke's law, deformation energy and link with thermodynamics, virtual work principle and energy theorems, isotropic linear elasticity theory , …See more info on [http://progcours.ulg.ac.be/cocoon/en/cours/MECA0012-6.htm](http://progcours.ulg.ac.be/cocoon/en/cours/MECA0012-6.html)l  |
| 1. *Fundamental courses in* ***Strength of materials – Mechanics of Materials***

*List the lectures you had in this topic. Give details of the content (table of content or abstract)*Expected topics (not exhaustively) include: Material properties; Link between the stresses and the deformations, Beam theory, Calculation of internal forces in a structure constituted of beams (bending and shear force diagrams), Calculation of internal forces in a truss, …See more info on <http://progcours.ulg.ac.be/cocoon/en/cours/MECA0001-2.html> |
| 1. *Fundamental courses in* ***Fluid mechanics****,*

*List the lectures you had in this topic. Give details of the content (table of content or abstract)*See more info on <http://progcours.ulg.ac.be/cocoon/en/cours/MECA0025-3.html>   |
| 1. *Courses in* ***Dynamics of Mechanical systems,***

*List the lectures you had in this topic. Give details of the content (table of content or abstract)*Expected topics (not exhaustively) include: Single degree-of-freedom systemSee more info on <http://progcours.ulg.ac.be/cocoon/en/cours/MECA0155-2.html> |
| 1. *Experience in programming (Matlab), Finite Element Method Programing code and CAD.*

*Please list your experience in:** *Programming (coding), using for instance MATLAB, C++, Python, …. Note that MATLAB will be used in several courses;*
* *Finite Element Method : Appreciated but not mandatory;*
* *CAD tool is highly relevant (but not mandatory).*
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**Please add here any explanations, you feel suitable to justify the requested prerequisites**

**English B2 LEVEL is required (TOEFL) or equivalent**

(B1 may be accepted based on an interview)