CAD/CAE Systems
Rules

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Rules

- We have 7 lectures and 7 labs every week
- The first lecture is October 7
- There will be six exercizes based on OCTAVE programs .
- OCTAVE is a free version of MATLAB (like Libre Office is a free version of MS Office), so you can either use MATLAB or OCTAVE
- Each exercize will be graded in scale 2-5
- Each student must refer online the solution exercize during the labs to get the grade
- Last lab will be a final test
- The final grade is the average of all the grades
- It is allowed to be absent on two labs

Exercize 1

1. Prepare a vector of knots that generates a basis equivalent to the Lagrange basis of polynomials of the first order on two elements [0,1] and [1,2]. Please run Octave code and draw base functions.

2. Prepare a vector of knots that generates a basis equivalent to the Lagrange basis of fourth-degree polynomials on five elements [0,1] and [1,2] and [2,3] and [3,4] and 4,5. Please run Octave code and draw base functions.

3. Prepare a vector of knots that generates the basis of B-spline polynomials of the third order with C2 continuity spread over three elements [0,0.1] and [0.1,0.9] and [0.9 1]. Run the Octave code and draw the base functions.

4. Prepare a vector of knots that generates a base of B-spline polynomials of the third order with continuity C1 spanning four elements [0,1] and [1,2] and [2,3] and [3,4]. Please run Octave code and draw base functions.