

Goals of the course PEF-3110 Concepção, projeto e realização das estruturas: aspectos históricos

1. To present the historical evolution of structures and examine the social, cultural, scientific and technological factors behind this development, especially the fundamental role that new materials, new structural systems and new design methods play in the evolution of structures.
2. To present the students the history of engineering and the extraordinary constructions built by mankind from prehistory up to the present time.
3. To show that buildings, bridges and temples, much more than constructions that fill fundamental needs of society are remarkable expressions of the ingenuity and creativity of mankind, and as such must be appreciated, protected and preserved.
4. To give qualitative notions of structural behaviour.
5. To show that in order to conceive and design a structure well the engineer must use widely his intuition and possess a sound knowledge about the behaviour of structures and the way they work, and in addition be very creative in his activity, trying to use new structural systems, new structural materials and new methods of design.
6. To discuss the role of computers in the design of structures, their assets and limitations and the dangers resulting from the wrong use of this extremely powerful tool.
7. To show how beautiful structural engineering is, thus improving the self-esteem of the students and their pride for the profession they have chosen and increasing their enthusiasm for the engineering course.
8. To stimulate the writing of papers and oral presentations.