K.N. Toosi University of technology   Aerospace Engineering Faculty

Program and Degree: **BSc in Aerospace Engineering**	
Course Description	
Course Title	**Thermodynamics II**
Prerequisites	Thermodynamics I
The course aims	Students' acquaintance with the principles of thermodynamic and combustion machinery 1- Ability of mathematical modeling of thermodynamic machines 2- Modeling the combustion process
Contents	1. Piston machines: Compressors and combustion engines 2. Rotary machines: compressor, gas turbine, steam turbine 3. Refrigerating machines: Condensing cooling cycle, refrigerator and refrigerator 4. Combustion: Chemical reaction of combustion, enthalpy formation, thermal value of fuels and chemical balance 5. Flow in tubes and blades and turbomachines, convergent-divergent duct and velocity triangle
Duration	**1 Semester (16 weeks)**
Course Hours	**2 hours/week**
Course Type	**Required**