TITLE	Environmental Waste Water Control System

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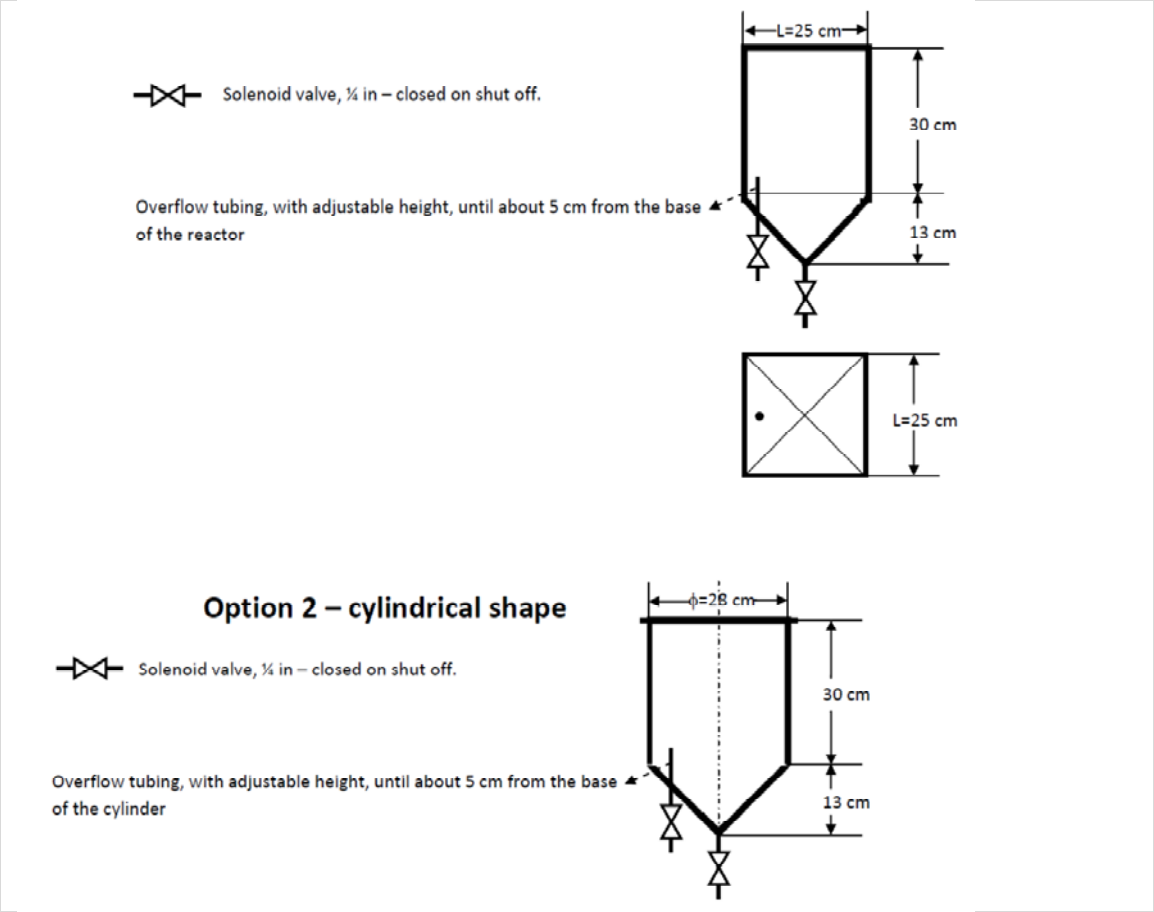
SHORT DESCRIPTION	
Objective	Design and build a chemical reactor system that can be operated in cycle mode for an environmental waste water control system. It involves building a sequential batch reactor, sensors, actuators and control and ventilation circuits.
Requirements	– Communication: Wi-Fi; – Interfaces: Remote via Web or PC or Manual (digital control panel or manual controller for time cycles, namely for valve opening and shutoff, centrifugal or peristaltic dosing pump on/off, level control, flow rate control, aeration); – Power: 220 V AC or one suitable for the chosen valves; – 20 l volume (mixed liquor volume inside the tank will be of 15 l); transparent material; work at room temperature; automatic valve operation; valve electrical housing should be water proof; reactor stand; possibility of choosing independent cycle times; – Possible temperature, level and/or dissolved oxygen sensors; – Sludge purging by sensor alert; – Compliance with the 2006/42/CE 2006-05-17, 2005/95/CE 2006-12-2 and ROHS EU Directives.

RELEVANT DATA
Possible configurations for the SBR are shown below:



RESOURCES
– 500 €, including VAT; – Pumps are available; – Compressed air system/distribution line is available; – Access to the Polymer Lab from the Mechanical Engineering Department to building the container; – Access to the Technology Lab of the Chemical Engineering Department.

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