

Course: Industry Project

credits: 17

Course code	WBVH19IP	Modes of delivery	Assignment
Name	Industry Project		Education
Study year	2019-2020		Problem-based learning
ECTS credits	17		Project-based learning
Language	English	Assessments	Industry Project - Assignment
Coordinator	S.A. Dijk		

Learning outcomes

The student:

General

- defines personal development goals based on past experiences and reflects on the planned actions taken
- recognizes the needs of the team and takes appropriate initiatives (i.e. by filling the gap or discussing it within the group)
- works in such a way that the project team is leading and the supervisor has an advising role
- checks if the actual view of the stakeholders (client and supervisor) matches with their own view regarding the progress, collaboration, communication and final results
- relates and applies the insights gained from (guest)lectures on actual developments of the industry to the project

Problem analysis and definition

- composes a clear problem analysis and project goals, identifying relevant aspects and dilemma's while considering the company's objectives, energy strategy and ambition level
- defines a project plan including scope, approach and planning in accordance with the stakeholders (client and supervisor) and executes it transparently

Design and Engineering

- identifies and quantifies energy flows of the given installation and quantifies the losses, i.e. by analyzing process data
- designs a concept solution for improving the installation, based on the findings of the analyses
- engineers the designed solution to a level agreed upon with the client, at least including a business case, PFD, equipment specifications, calculations and control strategy
- documents and motivates the designed solution and the corresponding investment proposals to the stakeholders, referring to the issues identified in the problem analysis and evaluating project goals

Content

A huge contribution of the total (industrial) energy usage is due to the process industry. To increase energy efficiency of industrial processes without losing profitability of the core business, chemical/process engineers and mechanical engineers need to improve unit operations and utilities in an integrated way. To do so, the project will be fulfilled in close cooperation with the process industry companies, such that all parties (student, companies and schools) will have an added value. In this project the student will learn how to recognize potential energy improvements for the existing installation based on real data analysis, how to quantify the potential energy efficiency of the possible solutions and to clarify corresponding investment proposals.

Included in programme(s)

Minor Energy Efficiency in the Process Industry
Exchange Energy Efficiency in the Process Industry (autumn)

School(s)

Institute of Engineering