

Winter University Programme – Preliminary Course Outline

Module: Mechanical Engineering in Modern Power Plants

CLASS HOURS

Consult programme schedule

PROFESSORS

Academic Director	
Office: Schöfferstr. 3, 64295 Darmstadt Email: bernhard.schetter@h-da.de	Office hours: by appointment Phone: +49.6151.16-8573
Lecturers:	
Office: Schöffeestr. 3, 64295 Darmstadt Email: britta.pyttel@h-da.de	Office hours: by appointment Phone: +49.6151.16-7956
Prof. Dr. Roland Angert Office: Schöfferstr. 3, 64295 Darmstadt Email: roland.angert@h-da.de	Office hours: by appointment Phone: +49.6151.16-8592
Prof. Dr. Ernst Hammerschmidt Office: Schöfferstr. 3, 64295 Darmstadt Email: ernst.hammerschmidt@h-da.de	Office hours: by appointment Phone: +49.6151.16-8579
Dr. Sven Linow Office: Schöfferstr. 3, 64295 Darmstadt	Office hours: by appointment

COURSE DESCRIPTION

Email: sven.linow@h-da.de

The module 'mechanical engineering in modern power plants' will provide a survey about modern thermal power generation and the topics and limitations of mechanical engineering herein.

Phone: +49.6151.16-8582

Although seeming to be rather complicated power plants are developed strictly by optimization of their efficiency. According to this students will be introduced into the major components of steam plants, gas turbine plants and combined cycle arrangements.

Thermodynamic influences are shown as well as the importance of materials development and limitation by production facilities and reliability demands.

The course is completed by lectures about materials and failure analysis, vibrations, production and modern technologies of carbon mitigation.

LEARNING OBJECTIVES

Students are provided an introduction to the structure and components, development and limitations of modern thermal power plants.

Students are able to recognize a given plant as being a state of the art one, an old fashioned type or a highly innovative plant with all consequences on operating these different types.

Students are able to identify global possibilities and risks of the operation of the different power plants.

This course description was issued on July 28, 2016. The program is subject to change.