

<b>Level:</b> Specialist studies				
<b>Course title:</b> Non waste technologies (advanced course)				
<b>Status:</b> elective				
<b>ECTS:</b> 5				
<b>Requirements:</b> none				
<b>Learning objectives</b> Students receive a comprehensive overview of the technological processes in terms of pollution prevention, waste minimization measures in the technological process of production as well as connecting material and energy flows in a cyclical trends, to optimize the use of resources.				
<b>Learning outcomes</b> Students will acquire specialized knowledge related to material and energy flows of production and be able to recognize opportunities for improvement in accordance with the principles of waste free technology. They will gain specialized knowledge of reference documents on best available technologies and potential applications of this knowledge in national and European legislation.				
<b>Syllabus</b> <i>Theoretical instruction</i> The differences between classical and ecological technological processes. Schemes of ecological technology. Definitions and cleaner production schemes. The principles of cleaner production. The advantages and benefits of cleaner production. Waste disposal alternatives, with recycling and cleaner methods of unit operations and processes in mining, raw material processing, metallurgy, inorganic and organic technology. Best available techniques (BAT). EU Directive on integrated pollution prevention and control in order to achieve a high level of environmental protection and prevention of emissions to air, water or land, including waste disposal measures. National legislation.  <i>Practical instruction</i> Visit plants where BAT and waste free technologies are applied. Demonstration exercises of advanced techniques used in reducing waste emissions.				
<b>Weekly teaching load</b>				Other:
Lectures: 30	Exercises:	Other forms of teaching: 30	Student research:	