Courses in English
Course Description

Department	05 Technical Systems, Processes and Communication
Course title	**Minerals**
Course number	
Hours per week (SWS)	4
Number of ECTS credits	5
Course objective	□ recognize the connection between cause and effect in mineral compo nents; □ suggest projects, including complex projects, for the synthesis of mineral materials as well as for the solution of problems encountered with fillers and pigments; □ explain the interactions that occur in the course of the processes and, as part of a team
Prerequisites	Knowledge of general inorganic chemistry
Recommended reading	Script Prof. Dr. T. Gliese “Minerals” F. W. Tegethoff (Editor) – “Calciumcarbonat – From the Cretaceous Period into the 21.-st Century” Birkhäuser Verlag – Basel, Boston, Berlin 2001 B.A. Wills – “Minerals Processing Technology”, Intl. Series on Material Science & Technology, Pergamon Press – Oxford / England 1988 R.W. Hagemeyer – “Pigments for Paper”, Tappi Press – Atlanta / GA 1997
Teaching methods	Lecture, seminar instruction, project work, labatory experiments
Assessment methods	Laboratory reports, Written examination
Language of instruction	English
Name of lecturer	Prof. Dr. Thoralf Gliese
Email	thoralf.gliese@hm.edu
Link	
Course content	□ Structure, occurrence and preparation of mineral substances, the con cepts of mineralogy - with emphasis on carbonates, silicates (clay, tal cum), titanium dioxide, sulphates, aluminium compounds, as well as pig ments; the use of these as fillers and coating pigments in the paper and packaging materials industries □ Behaviour of mineral substances in the first application and in recycling □ Consideration of ecological and economic aspects in relation to the products discussed
Remarks	