Courses in English
Course Description

Department	05 Technical Systems, Processes and Communication
Course title	**Biofibres**
Course number	
Hours per week (SWS)	4
Number of ECTS credits	5
Course objective	decide on the basis of parameters of natural sciences and process engi-neering which raw materials can be used for various fibre production sys-tems; classify different raw materials for the production of paper; understand the mechanical and / or chemical processes in the production of pulp fibers; select the necessary pulp materials based on the criteria for the paper and to safely use them in the product development; prepare topics for discussion and presentation of different case studies and to discuss the critical analysis of various processes.
Prerequisites	Basic knowledge of organic chemistry
Recommended reading	Papermaking Science and Technology, Volume 6, Chemical Pulping, ed-ited by Johan Gullichsen and Carl-Joahn Fogelholm
Teaching methods	Seminar-type teaching (2.5 ECTS) + Laboratory experiments (2.5 ECTS)
Assessment methods	Modular work
Language of instruction	English
Name of lecturer	Prof. Dr. Helga Zollner-Croll
Email	helga.zollner-croll@hm.edu
Link	https://moodle.hm.edu/enrol/index.php?id=14565
Course content	Chemical and morphological structure of wood and various non-wood plants as well as cellulose fibres Fibre chemistry: components and function of cellulose, poly-saccharides, lignin and extractives materials Mechanical pulping of wood in detail: SGW, PGW, TMP, CTMP Chemical pulping of wood in detail: sulphite, Kraft and solvent pulping processes; technical plants for the production of pulp Bleaching pulps with technical process background Chemical recovery and bio-refinery systems Technical procedures used in processing wood and the production of chips Newest developments in the field of pulp and wood cellulose production
Remarks	