Courses in English
Course Description

Department	05 Technical Systems, Processes and Communication
Course title	**Paper Technology Fundamentals**
Course number	
Hours per week (SWS)	4
Number of ECTS credits	5 (2.5 ECTS Lecture / 2.5 ECTS Practical Training)
Course objective	Knowledge of the basic scientific, measurement and mechanical engi neering terms as well as the processes of paper production as a basis for in-depth specialised courses in the complex of process engineering and chemistry. □ Understanding of the classification of the pulp and paper industry in the material economy, the elementary procedural views of processes in their sequence order or procedures and important selection criteria for raw and semi-finished materials regarding the desired product quality. □ explain the structure and functioning of packaging and processing of pa per and their refinement procedures; □ independently conduct work on paper-specific laboratory procedures and measuring instruments; □ compile measured parameters coherently, to evaluate and interpret the same from an engineering technological perspective; □ explain obtained data in the context of models known from the theory and to develop suggestions for implementation for the optimization of complex processes.
Prerequisites	
Recommended reading	G.A. Smook, Handbook For Pulp & Paper Technologists, 2nd Edition, Angus Wilde Publications, ISBN 0-9694628-1-6 Sixta, H. (2006). Handbook of Pulp, Wiley. Herbert Holik (Ed.), Handbook of Paper and Board, Wiley-VCH Verlag GmbH & Co. KGaA, ISBN 3-527-30997-7 Hannu Paulapuro, Paper and Board Grades, Fapet Oy, ISBN 952-5216-18-7 Gullichsen, J. and C.-J. Fogelholm (1999). Chemical Pulping. Helsinki, Finnish Paper Engineers' Association/Paperi ja Puu Oy. Johan Gullichsen, Hannu Paulapuro, (1999) Papermaking Science and Technology, Mechanical Pulping Göttsching, L. and H. Pakarinen, Recycled Fiber and Deinking. 1 ed. Papermaking Science and Technology, ed. J. Gullichsen and H. Paulapuro. Vol. 7. 2009, Helsinki: Finnish Paper Engineers' Association/Paperi ja Puu Oy. Paulapuro, H., Papermaking Part 1, Stockpreparation and Wet End. 1 ed. Papermaking Science and Technology, ed. J. Gullichsen and H. Paulapuro. Vol. 8. 1999, Helsinki: Finnish Paper Engineers' Association/Paperi ja Puu Oy. 460. Karlsson, M., Papermaking Part 2, Drying. 1 ed. Papermaking Science and Technology, ed. J. Gullichsen and H. Paulapuro. Vol. 9. 2000, Helsinki: Finnish Paper Engineers' Association/Paperi ja Puu Oy. 496. Jokio, M., Papermaking Part 3: Finishing. 1 ed. Papermaking Science and Technology, ed. J. Gullichsen and H. Paulapuro. Vol. 10. 1999, Helsinki: Finnish Paper Engineers' Association/Paperi ja Puu Oy. 361.
Teaching methods	Lectures, Lab, practical work, excursion, etc.
Assessment methods	Modular exam: Written examination; 120 min, Lab Reports
Language of instruction	English
Name of lecturer	Prof. Dr. Jürgen Belle
Email	juergen.belle@hm.edu
Link	

Hochschule München University of Applied Sciences

Courses in English
Course Description

Course content

- Morphology and chemical structure of wood and important fibres used in papermaking
- Raw materials and technical processes used in the preparation of pulp
- Technology of pulp preparation and paper production
- Engineering science applications for equipment used in papermaking
- Technical procedures used in methods of processing and upgrading
- Experimental work in the laboratory for paper technology, using various stock suspensions
- Independent use of analytical measurement systems in the chemical laboratory
- analysis and discussion on data obtained based on candidate's own reports

Remarks