



Compendium of Electives

WPF-Master-eng

Elective Courses English Master Studies

Accreditation 2017

of Bachelor Studies

"Textil- und Bekleidungstechnik"

"Design-Ingenieur"

"Textile and Clothing Management"

and of Master Studies

"Textile Produkte"

"Management of Textile Trade and Technology"

Faculty Textile and Clothing Technology
Compiled at 27.11.2017

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WPF-MA-801 Advanced Business Game

Lecturer: Prof. Dr. Harsch, Walter

Credits: 6 Examination: Written Examination

HpW: 4 Course Type: L: 0 SL: 4 E: 0 P: 0

Content:

The students are able

- to develop and execute a business strategy,
- to take all necessary decisions in the field of business administration and business policy for a fictional time period of 8 years and, if possible, deduce them by calculations,
- to react in an appropriate way on measures of competitors, changing market situations and changing economic parameters,
- to take decisions in a team and under time pressure,
- to develop different kinds of elaborations and presentations for problems out of the field of business administration with situational solutions in a team and in short time.

Contents:

- Taking decisions for a virtual industrial company for a time period of 8 years.
- Development of a long-term strategy with economic, social and ecologic objectives.
- Determine the range of products and the marketing mix.
- Calculate the optimal batch size for buying and warehousing.
- Plan and realize technological and ecological product improvements.
- Evaluate and make use of key figures out of the field of business administration.
- Taking decisions in the field of human resources management, e.g. recruitments, dismissals, develop programs for increase in productivity, taking measures for the reduction of absenteeism and labour turnover.
- React on competitors, recession, changing economic situations.
- Develop concepts focused on industry and leadership, present the results, doing role plays.
- To develop and hold a detailed and comprehensive final presentation about business and economic issues of the business game and present them in a "professional" way.

Literature:

Participant's manual

WPF-MA-804 Multi-Channel-Retailing

Lecturer: Prof. Dr. Heinemann, Gerrit

Credits: 3 Examination: Written Examination

HpW: 2 Course Type: L: 2 SL: 0 E: 0 P: 0

Content:

1. Proposition

- The Digital Universe - Online is Mobile
- Online versus Offline - Facts, Figures and Structures
- E-Commerce - New Type of Trading plus Case Study
- Key Trends in E-Commerce
- Success Factors and Best Practices in Online Retailing

2. Implementation

- Multi Channeling - Combination of Online- and Offline plus Case Study Next
- Multi-Channel-Retailing versus Multi-Channel-Distribution
- Multi-Channel- versus Omni-Channel- versus No-Line-Retailing
- Success Factors and Best Practices in Multi Channel Retailing
- Structures and Processes in Multi-Channel-Retailing

3. Operation

- Web-to-Store: Multi-Channel-Services and No-Line-Retailing
- Digital-in-Store: Inside- out and Outside-in Digitalisation
- Store-to-Web: Showrooming and Live-Chat-Advice
- Ultimate Usability: Smart Stores
- Highest Evolutionary Step: Smart Retailing

Literature:

Heinemann, G. (2017). Reinvention of Retailing - Customer Centrality and Ultimate Usability in Retailing of the Future.

Heinemann, G.; Gaiser, C. (2015). Social, Local, Mobile: The Future of Location-based Shopping. Berlin.

Heinemann, G.; Schwarzl, C. (2010): New Online-Retailing - Innovation and Transformation. Wiesbaden.

WPF-MA-805 **Quality Management of Textile Hygiene**
Qualitätsmanagement bei der Textilhygiene

Lecturer: Prof. Dr. Vossebein, Lutz

Credits: 3 Examination: Written Examination

HpW: 2 Course Type: L: 2 SL: 0 E: 0 P: 0

Content:

The students will learn basics of hygiene and microbiology in general as well as specific knowledge for laundries, the fashion industry and textile service enterprises in order to ensure a correct implementation of e.g. EN 14065 (RABC-System). Students are confronted with legal regulations from different hygiene demanding areas and will be able to distinguish between different hygiene levels in relevant fields.

Within the lecture students take samples from (textile) surfaces by using contact slides and they learn to interpret the results after appropriate incubation time and growing of microorganisms.

The module contain:

- Hygiene
- Microbiology
- Laundry engineering
- Washing process
- Detergents Disinfectants
- EN 14065 (quality and hygiene management as well as risk analysis)

Literature:

I.K. Hosein, P.N. Hoffman, S. Ellam, T.-M. Asseez, A. Fakokunde, J. Silles, E. Devereux, D. Kaur, J. Bosanquet. Summertime *Bacillus cereus* colonization of hospital newborns traced to contaminated, laundered linen. *J Hosp Inf* 2013;85(2):149-154

Sattar S.A., Springthorpe S., Mani S., Gallant M., Nair RC., Scott E., Kain J. Transfer of bacteria from fabrics to hands and other fabrics: development and application of a quantitative method using *Staphylococcus aureus* as a model. *J Appl Microbiol.* 2001 Jun;90(6):962-70

Wiener-Well Y., Galuty M., Rudensky B., Schlesinger Y., Attias D., Yinno. Nursing and physician attire as possible source of nosocomial infections. *Am J Infect Control.* 2011 Sep;39(7):555-9

Linke S., Gemein S., Koch S., Gebel J., Exner M. Orientierende Studien zur Inaktivierung von *Staphylococcus aureus* beim Wäscheprozess. *HygMed* 2011; 36 [1/2]: 25-29

Bloomfield SF., Exner M., Nath KJ., Scott EA., Signorelli C. The infection risks associated with clothing and household linens in home and everyday life settings, and the role of laundry. *International Scientific Forum on Home Hygiene (IFH)*, National electronic Library of Infection City eHealth Research Centre <http://www.ifh->

[Homehygiene.org/IntegratedCRD.nsf/IFH_Topic_Infection_Transmission?OpenForm](http://www.ifh-Homehygiene.org/IntegratedCRD.nsf/IFH_Topic_Infection_Transmission?OpenForm), April 2011

Bellante S., Engel, A., Hatice, T., Neumann, A., Okyay, G., Peters, M., Vossebein, L. Hygienische Aufbereitung von Textilien in Privathaushalten - eine Studie aus der Praxis. *HygMed* 2011; 36 [7/8]: 300-305

To be used as portals:

Perinorm: <http://www.perinorm.com>

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/>

Robert-Koch-Institute, RKI: http://www.rki.de/EN/Home/homepage__node.html?__nnn=true

Verbund für Angewandte Hygiene, VAH: <http://www.vah-online.de/>

World-Health-Organisation, WHO: <http://www.who.int/en/>

WPF-MA-806 Strategic Business Management

Lecturer: Prof. Dr. Schlick, Uwe

Credits: 3 Examination: Written Examination

HpW: 2 Course Type: L: 0 SL: 2 E: 0 P: 0

Content:

Content

Stakeholders and legal framework

- corporate stakeholders
- corporate governance
- corporate bodies

Strategic vision and strategic mission

Strategic analysis of the environments

- general environment
- industry environment
- internal environment

Strategic instruments

- scenario analysis
- value chain analysis
- lifecycle analysis
- portfolio analysis
- swot analysis

Strategy formulation

- business level strategies
- corporate level strategies

Strategy implementation

- organisation models
- growth patterns

Strategy Control

- strategy control matrix
- gap analysis

Strategy adjustment

- chessboard of strategy adjustment opportunities
- balanced scorecard as an instrument for strategic control and adjustment

Literature:

Ansoff, H.I.: Corporate Strategy, New York 1965
Chandler, A.D.: Strategy and Structure, Cambridge 1962
Conner, D.R.: Managing the speed of change, New York 1993
Dess/Lumpkin/Eisner: Strategic Management, text and cases, New York 2009
Finlay, Paul: Strategic Management, an introduction to Business and Corporate Strategy, Harlow 2000
Hamel/Prahalad: Competing for the future, Boston 1996
Hitt/Ireland/Hoskisson: Strategic Management, Competitiveness Globalization, Mason-Ohio 2003
Porter, Michael E.: Competitive Advantage, New York 1985/2004
Wynn/Kirkland/Hawkins/Nicholson: Clothing Retailers 2000 - The Source of Competitive Advantage, London 2000

WPF-MA-807 **Weft Knitting**
Strickerei Labor

Lecturer: Prof. Dr. Weber, Marcus

Credits: 3 Examination: Practical and theoretical Elaboration

HpW: 2 Course Type: L: 0 SL: 0 E: 2 P: 0

Content:

The participants learn to understand and handle e. g. flat knitting machines. Starting with manual machines for learning about the basic technology different selections can be made during the course depending on the preknowledge of the students.

Advanced and sophisticated pattern on manual knitting machines
e. g. cables, petinet, cardigan, starts, needle cut structures, needle selection

New pattern on Jacquard flat knitting machines
e. g. colour jacquard, structure jacquard

Analysis of pattern and knitting thereof

Literature:

Spencer, D. J., Knitting technology - a comprehensive handbook and practical guide, Woodhead Publishing, Cambridge England, 2001

Ray, C. S.: Fundamentals and advances in knitting technology. Woodhead Publishing India Pvt. Ltd. 2011

Au, K. F.: Advances in knitting technology. Woodhead Publishing Ltd. Cambridge 2011

Brackenbury, T.: Knitted Clothing Technology. Blackwell Science Ltd. Oxford 1992

Weber, M.; Weber, K. P.: Die Wirkerei und Strickerei. Deutscher Fachverlag GmbH, Frankfurt 2014 including English Index

Youtube Video Channel (<http://www.youtube.com/user/MarcusOliverWeber>)

www.groz-beckert.com Produkte & Services Knitting Mediathek Animationen zur Maschenbildung

www.stoll.com

Melliand Textilberichte International (MTBI)

Textile Research Journal (TRJ)

Asian Textile Journal

Fibers and Textiles in Eastern Europe

Journal of the Textile Institute (JTI)

WPF-MA-810 Coating and Lamination

Lecturer: Prof. Dr. Rabe, Maike

Credits: 3 Examination: Written Examination

HpW: 2 Course Type: L: 0 SL: 0 E: 2 P: 0

Content:

Technology, chemicals and machinery for coating and lamination of textiles in general.

Test methods to analyse coating pastes and the coated material will be presented (rheology, surface tension, delamination forces, bending stiffness)

Further more special research topics will be covered like plasma technology, surface functions, electroconductive coatings, photovoltaic coatings.

The theory is accompanied by experiments in the finishing lab.

Literature:

H.-K. Rouette: Handbuch Textilveredlung, Deutscher Fachverlag; Auflage: 15., überarb. u. erw. Aufl., 2006.

Autorenkollektiv: Veredlung von Textilien, VEB Fachbuchverlag, 1985.

H.-K. Rouette, M. Peter: Grundlagen der Textilveredlung, Deutscher Fachverlag, 1989.

H. Rath: Lehrbuch der Textilchemie, Springer Verlag, 1963 und 2011.

A. Giessmann: Substrat- und Textilbeschichtung, Springer Verlag Berlin, 2010.

J. Shore: Cellulosics Dyeing, Society of Dyers and Colourists, 1995.

D. Heywood: Textile Finishing, Society of Dyers and Colourists, 2003.

W. Perkins: Textile Coloration and Finishing, Carolina Academic Press, 1996

H.-K. Rouette: Encyclopedia of Textile Finishing, Vol. 1-3, Springer Verlag Heidelberg, 2001

WPF-MA-812 Retail Controlling

Lecturer: Prof. Dr. Schlick, Uwe

Credits: 3 Examination: Written Examination

HpW: 2 Course Type: L: 0 SL: 2 E: 0 P: 0

Content:

Content

Definitions, framework and understanding of controlling

Information supply in retailing

- daily sales report
- management p&l in retailing
- balance sheet in retailing

Operational Controlling

- controlling of the buying organisation/process
 - controlling gross profit I
 - controlling inventory
 - buying controlling report
 - controlling merchandise and supplier
- controlling of the sales organisation/process
 - controlling of gross sales
 - controlling of cost of sales personal
 - controlling of inventory differences
 - controlling of other sales income and cost of materials
 - controlling of rental contracts
 - controlling of sales floor
- controlling of e-business/multichannelling
 - value drivers in e-business
 - management p&l in e-business
 - evolving to multichanneling
 - controlling multichannelling

Corporate Controlling

- budgeting and forecasting
- 5-year-planning
- investment controlling

Literature:

Bangs, David: Controlling Cash Flows, Boston 1989

Fisher, M.L./Raman, A./Mc. Clelland, A.S.: Are you ready? Rocket science retailing is almost here, Harvard Business Review, 7/8 2000

Knebel, Michael: Planung und Controlling im Retail-Loop, Lohmar-Köln 2004

Saymer Ritchie: Retail Revelations - Strategies for Improving Sales, Margins, and Turnover, RMSA, Abridged 2015

Wynn, K./ Kirkland, K./Hawkins, N./Nickolson, C. : Clothing Retailers 2000 - The Source of Competitive Advantage, London 2000

WPF-MA-820 Textile Wearables*Textilintegrierte Computer*

Lecturer: Prof. Dr. Breckenfelder, Christof

Credits: 3 Examination: Practical and theoretical Elaboration

HpW: 2 Course Type: L: 0 SL: 2 E: 0 P: 0

Content:

Information and communication technology (ICT) interfuses our daily life. Today it is understood, that we check Email in the train or use a navigation system driving by car. Mobile or Wearable computers are the precondition techniques to take part in the new ICT world. Apparel and textile deliver an advantageous environment for embedding ICT-systems, because of its high availability in mobile context. The basic concept, construction and functionality of Wearable Textiles will be given in the lecture. Diverse sections of this subject will deal with aspects of computing. The lecture will involve aspects of programming and the design of the electric schematic including textile sensor integration. The participants have the opportunity to realize own solutions on the Lilypad Arduino®.

Lecture content:

- Principle and function of Wearable Texe
- Knowledge of physics and electcal principles
- Competencs of programming

Literature:

Bohne, R.: Making Things Wearable. O'Reilly 2012

WPF-MA-822 Treatment of Textile Waste Water

Lecturer: Prof. Dr. Rabe, Maike

Credits: 3 Examination: Written Examination

HpW: 2 Course Type: L: 0 SL: 2 E: 0 P: 0

Content:

The students will learn about the relevance of treating textile waste water and about the various possibilities for such treatment. With many videos and animation the theory is elaborated. In between, all theoretical topics can be tried individually in the practical lessons in the lab with the highlight of constructing a lab-scale effluent treatment plant. The students will have the chance to see the University Compact Effluent Plant in operation and visit a huge municipal sewage plant.

Contents:

- What is water quality?
- Which regulations do we find in different countries?
- Which possibilities exist for the treatment of textile waste waters?
- Which effluent parameters are particularly relevant in the textile industry?
- How are various parameters of water/ effluent tested?
- What problems can occur in effluent treatment plants?

The theoretical lecture is accompanied by a practical session in the lab, constructing a small scale effluent treatment plant

Literature:

WPF-MA-823 Smart Textiles Showroom Class

Masterklasse intelligente Textilien

Lecturer: Prof. Dr. Schwarz-Pfeiffer, Anne

Credits: 6 Examination: Practical and theoretical Elaboration

HpW: 4 Course Type: L: 0 SL: 4 E: 0 P: 0

Content:

Aims:

Upon successful completion of the course students have gained a practical insight into materials used for smart textiles, their properties and processability by concepting and developing their own smart textile.

They overlook different components of a smart textile system, consisting of sensor, actuator, data transmission, data processing and energy supply.

Content:

- Introduction to the world of smart textiles using practical application samples
- Introduction of different components of a smart textile system
- Basics of electronic circuit design for electronic textiles
- Introduction of different technologies used for smart textile products
- Creating of own smart textile product
- Practical realization of concept

Literature:

Kirstein: Handbook for Smart Textiles Developers, Woodhead Publishing, Cambridge, 2013

Schwarz, Van Langenhove, Guermonprez, Deguillemont: A roadmap on smart textiles, Textile Progress, Vol. 2, 2010

Bohne: Making things wearable, O`Reilly, 2012

WPF-MA-825 Brand and Product Management for Textile and Fashion

Marken- und Produktmanagement für Textil und Bekleidung

Lecturer: Prof. Bühs, Claus

Credits: 3 Examination: Written Examination

HpW: 2 Course Type: L: 2 SL: 0 E: 0 P: 0

Content:

A Brand or Product Manager in the Textile and Clothing Business must be able to identify different applications of textile products, to develop products according to the different requirements of various stakeholders.

In this lecture students will learn methods and instruments which allows to structure the process of product development and product marketing during the entire life cycle of textile products.

Different types of organization of Brand and Product Marketing will be discussed as well as main challenges which are caused by an increasing trend of Omnichannel approaches in fashion business. The focus of the course is on business developments, management and trade needs and knowledge, not on technical aspects.

Topics:

- Targets, Definitions and procedures
- Application oriented research
- Stakeholders in Product Development and Brand Management (Who has requirements to products?)
- Brand and Product Management as part of Value and Supply Chain
- Organizational aspects of Brand and Product Management
- Product Manager as part of internal organization (roles and responsibilities)
- Reasons for the research of requirements
- Application sectors of textiles
- Research on product requirements
- Competition aspects / Market Analysis
- Product Targets as driver for application oriented processes
- Effects on product development
- Omnichannel developments and effects on Brand and Product Management
- Skill requirements for Brand and Product Manager in Textile and Fashion

Literature:

Koppelman, Udo: Produktmarketing: Entscheidungsgrundlagen für Produktmanager, Berlin, 2013

Keller, Kevin Lane; Apéria, Tony ;Georgson, Mats: Strategic Brand Management: A European Perspective, 2008

Temporal, Paul: Advanced Brand Management: Managing Brands in a Changing World, 2nd edition, Singapore 201