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
Elective Courses

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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
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:
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:
To be used as portals:
Perinorm: http://www.perinorm.com
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/
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
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
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:

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)
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:
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
  - 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
  - evolutioning to multichanneling
  - controlling multichanneling

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

Literature:
Bangs, David: Controlling Cash Flows, Boston 1989
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
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 electrical principles
- Competences of programming

Literature:
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:
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:
Bohne: Making things wearable, O`Reilly, 2012
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:
Keller, Kevin Lane; Apéria, Tony ;Georgson, Mats: Strategic Brand Management: A European Perspective, 2008