



**Master of Science (MSc)
International Food Business
& Consumer Studies**

– joint degree programme –



**Fulda University
of Applied Sciences**
Nutritional, Food and
Consumer Sciences

Kassel University
Organic Agricultural
Sciences

Module Handbook
Examination regulations 2024

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Compulsory modules

International organic food markets and marketing

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| Module number / code | E06 |
| Module name | International organic food markets and marketing |
| Type of module | Compulsory module |
| Learning outcomes, acquired competencies and qualification goals | <p>Students</p> <ul style="list-style-type: none"> • are able to describe international markets for organic food • know about international organic regulations • are able to outline the steps for developing a marketing strategy • know how to develop a marketing concept on international markets • acquire personal skills for oral and written presentations in teamwork. |
| Course types | Vorlesung 30h, Seminar 30h |
| Content | <ul style="list-style-type: none"> • Analysis of international markets for organic products • Organic regulations • Basics of food marketing for exporters • Oral and written presentation of marketing topic |
| Title of courses | International organic food markets and marketing |
| Teaching and learning methods | Vorlesung, Seminar |
| Usability in other programs | Obligatory module according to §7 (3) Examination Regulations Master IFBC Mandatory module according to §9 (8) Examination Regulations Master AGES |
| Duration | 1 Semester |
| Frequency of module offer | annually in summer semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Examination P1: Written test (90min) or Oral examination (30min) |

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| | Grade weighting P1: 60% Examination P2: Oral presentation and written report (appr. 20min and 2000 words) Grade weighting P2: 40% |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft,Int. Agrarentw.u.Ök.Landwirtschaft |
| Responsible person | Dr. B. Jahnke |
| Lecturer(s) | Dr. B. Jahnke |
| Media used | verschiedene |
| Recommended literature | Armstrong, G, Kotler, K., Opresnik, M.O. 2016: Marketing: An Introduction, 13th ed., Pearson, Harlow, UK. Hollensen, S., Opresnik, M.O. 2015: Marketing: A Relationship Perspective. Vahlen, Munich |

Consumer behaviour and consumer science

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|---|--|
| Module number / code | F30 |
| Module name | Consumer behaviour and consumer science |
| Type of module | Compulsory module |
| Learning outcomes, acquired competencies and qualification goals | <p>The students</p> <ul style="list-style-type: none"> • are aware of the important influence of cultural, social and psychological factors on consumer behaviour, • are qualified to identify these factors and apply this knowledge to product development, marketing and similar areas and • are able to apply empirical methods of lifestyle and consumer research as well as social and psychological models of consumer behaviour. • are also able to change and reflect on their own consumer behaviour, • can explain theories from social and lifestyle research as a basis for consumer behaviour • are able to explain the development of consumption and future trends and demonstrate various possibilities for consumer communication and ways of influencing consumer behaviour |
| Course types | Seminar (4 SWS) |
| Content | <ul style="list-style-type: none"> • Foundational concepts and perspectives on consumer behaviour and consumer science • Introduction to qualitative and quantitative research methods and specific methods for consumer science and behaviour research • Social, cultural and psychological perspectives on consumer behaviour |

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| | <ul style="list-style-type: none"> • Current research and case studies related to consumer behaviour and consumer science • Interdisciplinary perspectives on consumer behaviour and consumer science • Insights into the practice of consumer science and consumer behaviour |
| Title of courses | Consumer behaviour and consumer science |
| Teaching and learning methods | Lecture, learning by explaining and presenting, self-organised learning, problem-based learning, seminars including case study-based group work and exercises |
| Usability in other programs | Compulsory module according to §7(3) Examination regulations Master IFBC |
| Duration | 1 Semester |
| Frequency of module offer | annually in winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | S1: Oral presentation |
| Prerequisites for examination(s) | Course work S1 |
| Module examination(s) | Written report |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Fulda University of applied science |
| Responsible person | Prof. Dr. J. Allgaier |
| Lecturer(s) | Prof. Dr. J. Allgaier, L. Page |
| Media used | Teaching material is made available on the e-learning platform |
| Recommended literature | Will be announced at the beginning of the module |

International legislation on consumer protection and food

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| Module number / code | F31 |
| Module name | International legislation on consumer protection and food |
| Type of module | Compulsory module |
| Learning outcomes, acquired competencies and qualification goals | Students are able to |

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| | <ul style="list-style-type: none"> • find and understand documents on the legal regulations regarding consumer protection and food; • discuss the role of the main institutions and relevant administrative bodies; • describe important contents of European food law (e.g. labeling, hygiene); • evaluate the impact of relevant legislation and case law on food business operators and consumers; • describe the role of risk management and risk communication in food industry and for consumers; • discuss the role and effectiveness of legal regulations regarding consumer rights. |
| Course types | Lecture (2 SWS), Seminar (2 SWS) |
| Content | <ul style="list-style-type: none"> • Key institutions and related administrative bodies in the EU • Labelling of food products in EU • Relevant legislation for the production, distribution and sale of novel or functional foods and foods including genetically modified organisms • Risk management and risk communication / HACCP / food hygiene in the EU • Barriers to the free flow of goods across national boundaries • Exemplary national food control systems in Europe • Basics and historical development of consumer protection and consumer politics in the EU |
| Title of courses | International legislation on consumer protection and food |
| Teaching and learning methods | Instructions, seminar |
| Usability in other programs | Compulsory module according to §7(3) Examination regulations Master IFBC |
| Duration | 1 Semester |
| Frequency of module offer | annually in winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Oral exam or Oral presentation |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Fulda University of applied science |

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| Responsible person | Prof. Dr. S. Lopp |
| Lecturer(s) | Prof. Dr. S. Lopp with additional lecturers as needed |
| Media used | - |
| Recommended literature | See seminar manual on e-learning platform |

Food product development

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|---|---|
| Module number / code | F37 |
| Module name | Food product development |
| Type of module | Compulsory module |
| Learning outcomes, acquired competencies and qualification goals | <p>The students</p> <ul style="list-style-type: none"> • know the stages of product development • can generate and evaluate new product ideas • can develop product concepts taking into account intercultural aspects and evaluate them using suitable consumer research methods • can develop food prototypes including product labelling and determine product shelf life • can take nutritional aspects and functional food ingredients into account during product development • can take into account other factors in addition to formulation and manufacturing processes such as product shelf-life requirements and the requirements of food law in product development. |
| Course types | Seminar (2 SWS) and Project Work (2 SWS) |
| Content | <ul style="list-style-type: none"> • Stages of product development • product formulations • food chemistry • food regulations • product testing • shelf-life studies • factors affecting shelf-life • Practical lab work |
| Title of courses | Food product development |
| Teaching and learning methods | Seminar/Lecture units, group work and laboratory work |
| Usability in other programs | Compulsory module according to §7(3) Examination regulations Master IFBC |
| Duration | 1 Semester |
| Frequency of module offer | annually in summer semester |
| Teaching language | Englisch |

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| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | S1: Laboratory work, Project report S2: Attendance seminar work and submission development project report |
| Prerequisites for examination(s) | Course work S2 |
| Module examination(s) | Project work |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Fulda University of applied science |
| Responsible person | Prof. Dr. J. Hampshire |
| Lecturer(s) | Prof. Dr. J. Hampshire, L. Page, Dr. A. Quadt |
| Media used | Power Point Presentation, video |
| Recommended literature | A reading list will be provided on the e-learning platform |

Quality management in the food business

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| Module number / code | F38 |
| Module name | Quality management in the food business |
| Type of module | Compulsory module |
| Learning outcomes, acquired competencies and qualification goals | <p>The students are able to</p> <ul style="list-style-type: none"> • describe the function of quality management and understand the main challenges in establishing an effective quality management system; • identify measures to ensure food safety according to international safety standards; • determine measures to ensure traceability in the food chain; • introduce a quality management system in accordance with the relevant food industry standards; • Implement an effective crisis management system in a food business. |
| Course types | Lecture (2 SWS), Seminar (2 SWS) |
| Content | <ul style="list-style-type: none"> • Food safety and HACCP • Process management • Statistical process control • Food chain traceability, crisis management • Quality management according to ISO 9001:2015 |

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| | <ul style="list-style-type: none"> • Food quality standards • Quality management tools |
| Title of courses | Quality management in the food business |
| Teaching and learning methods | Instructions, seminar |
| Usability in other programs | Compulsory module according to §7(3) Examination regulations Master IFBC |
| Duration | 1 Semester |
| Frequency of module offer | annually in summer semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | Module "International legislation on food and consumer protection" |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Oral examination or Oral presentation |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Fulda University of applied science |
| Responsible person | Prof. Dr. S. Lopp |
| Lecturer(s) | Prof. Dr. S. Lopp with additional lectures as needed |
| Media used | - |
| Recommended literature | See seminar manual on e-learning platform |

Trends in Food and Nutritional Sciences

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|---|---|
| Module number / code | F39 |
| Module name | Trends in Food and Nutritional Sciences |
| Type of module | Compulsory module |
| Learning outcomes, acquired competencies and qualification goals | <p>The students</p> <ul style="list-style-type: none"> • know the influence of food ingredients and processing methods on the quality of food • can evaluate different processing methods with regard to their effects on food quality and safety • are able to assess the effects of new findings in food and nutritional science on <ul style="list-style-type: none"> ○ the nutritional status of different population groups in different cultures and social environments |

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| | <ul style="list-style-type: none"> ○ the development of new products and their marketing to private and large households in different cultures ○ assess the sustainability of development in agriculture and the food industry • explain the development of consumption and the consumer market in order to derive future trends taking sustainability into account • can develop relevant research questions in groups, carry out qualified literature research, evaluate and present practice-relevant results |
| Course types | Seminar (4 SWS) |
| Content | <ul style="list-style-type: none"> • Recent scientific results on food constituents, their physiological effects, and their influence on the quality of raw material and processed foods • Assessment of the impacts of traditional and novel processing technologies on food quality and safety, and on sustainability (environmental and social aspects, economic resilience) |
| Title of courses | Trends in Food and Nutritional Sciences |
| Teaching and learning methods | Lecture, learning by explaining and presenting, self-organised learning, problem-based learning, seminars including case studybased group work and exercises |
| Usability in other programs | Compulsory module according to §7(3) Examination regulations Master IFBC |
| Duration | 1 Semester |
| Frequency of module offer | annually in summer semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | S1: Oral presentation |
| Prerequisites for examination(s) | |
| Module examination(s) | Written report |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Fulda University of applied science |
| Responsible person | Prof. Dr. M. Birringer |
| Lecturer(s) | Prof. Dr. M. Birringer, Prof. Dr. R. Pichner, Prof. Dr. A. Risius, Prof. Dr. L. Chalupová |

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| Media used | Teaching material is made available on the e-learning platform |
| Recommended literature | Will be announced at the beginning of the module |

Research methods in social sciences

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| Module number / code | F16 |
| Module name | Research methods in social sciences |
| Type of module | Compulsory module |
| Learning outcomes, acquired competencies and qualification goals | <p>The aims of the module are:</p> <ul style="list-style-type: none"> • To understand the philosophical bases of research in the social sciences; • To foster students' understanding of key techniques for collecting and analysing qualitative and quantitative data and their relative strengths and weaknesses; • To be aware of the linkages between theory, data, analysis and interpretation and of the role and impact of the researcher in the research process; • To improve accessibility of research material, such as, journal articles; • To provide more advanced skills in support of other modules and dissertation research involving quantitative and qualitative analysis. |
| Course types | Seminar 30h, Übungen 30h |
| Content | <ul style="list-style-type: none"> • Principles, practicalities and issues of using qualitative and quantitative research methods typically found in the social sciences; • Concepts (e.g. ontology, epistemology and methodology) and how these form research questions and data analysis; • Techniques for collecting and analysing qualitative data, e.g. inter-views and focus groups; • Techniques for collecting and analysing quantitative data, e.g. statistics, hypothesis testing, sample design, multiple regression analysis, multiple analysis of variance, factor analysis, cluster analysis. |
| Title of courses | Research methods in social sciences |
| Teaching and learning methods | Seminar, Übung |
| Usability in other programs | Compulsory elective module according to §7(3) Examination regulations Master IFBC Bridging module according to §10(5) Examination regulations Master AGES |
| Duration | 1 Semester |
| Frequency of module offer | annually in winter semester |

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| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Examination P1: Written report (appr. 750 words) Grade weighting P1: 25% Examination P2: Written test (appr. 120min) Grade weighting P2: 75% |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft,Int. Agrarentw.u.Ök.Landwirtschaft |
| Responsible person | Dr. T. Krikser |
| Lecturer(s) | Dr. T. Krikser |
| Media used | various |
| Recommended literature | Bryman, Alan 2012: Social research methods. 4. ed. Oxford: Oxford Univ. Press. Dillman, Don A.; Smyth, Jolene D.; Christian, Leah Melani 2009: Internet, mail, and mixed-mode surveys. The tailored design method. 3. ed. Hoboken, NJ: Wiley. Field, Andy 2018: Discovering statistics using IBM SPSS statistics. 5th edition. Los Angeles, London, New Delhi, Singapore, Washington DC, Melbourne: SAGE (SAGE edge). |

Research methods and data science in the life sciences

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| Module number / code | I29M |
| Module name | Research methods and data science in the life sciences |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | Students have an understanding of the methods of quantitative and qualitative data collection in the life sciences and the different sampling techniques and experimental designs. They are able to apply standard data analysis techniques. They understand the usefulness and limitations of selected multivariate approaches for regressions and pattern recognitions in the data science and learn the concepts of different machine learning approaches. They are able to apply the acquired skills in the analysis of their own MSc (and PhD) datasets. |
| Course types | Vorlesung 40h, Übungen 20h |

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| Content | <p><i>Research methods and standard analyses in the life sciences:</i></p> <ul style="list-style-type: none"> • Introduction to methods of quantitative and qualitative data collection in the life sciences • introduction to sampling techniques and experimental design • Description and exploration of data, visualization using univariate and bivariate plotting and application of standard statistical techniques (regressions and analyses of variance) <p><i>Data science in the life sciences:</i></p> <ul style="list-style-type: none"> • Application of multivariate approaches: principal component analysis (PCA) and regression (PCR), cluster analyses, factor analyses • Introduction to machine learning: perceptron, artificial neural networks, regression trees, rule-based models and support vector machine classification and regression |
| Title of courses | Research methods and data science in the life sciences |
| Teaching and learning methods | Lecture, exercisess |
| Usability in other programs | Bridging module according to §9(5) Examination Regulations Master AGES; Method module Compulsory elective module according to §7(3) Examination Regulations Master IFBC |
| Duration | 1 Semester |
| Frequency of module offer | annually in winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180 hours, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Oral test (30 min) |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft, Int. Agrarentw.u.Ök.Landwirtschaft |
| Responsible person | Prof. Dr. B. Ludwig |

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| Lecturer(s) | Prof. Dr. B. Ludwig and staff |
| Media used | diverse |
| Recommended literature | <p>Everitt B., Hothorn T. P. 2011: An Introduction to Applied Multivariate Analysis with R. Springer, New York</p> <p>Glaz, B. Yeater, K.M. 2020: Applied Statistics in Agricultural, Biological, and Environmental Sciences. John Wiley & Sons</p> <p>Holmes D., Moody P., Dine D., Trueman L. 2017. Research Methods for the Biosciences. Oxford University Press</p> <p>Touchon J.C. 2021: Applied Statistics With R: A Practical Guide for the Life Sciences. Oxford University Press</p> <p>Wehrens R. 2020: Chemometrics with R, Springer</p> |

Applied research project

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| Module number / code | F22 |
| Module name | Applied research project |
| Type of module | Compulsory module |
| Learning outcomes, acquired competencies and qualification goals | Students are enabled to independently plan, document, evaluate and carry out complex projects related to companies and institutions in the food industry, taking into account research and development as well as consumer studies. |
| Course types | Seminar (2 SWS), Project work (6 SWS) |
| Content | <ul style="list-style-type: none"> • Intercultural communication and dialogue • Working with conflicts and resistance • Project management • Advanced methods of social/basic research and development as well as statistics • Marketing research, management research, communication tools and scientific writing |
| Title of courses | Applied research project |
| Teaching and learning methods | Lecture units, seminar, project seminar, working with external partners |
| Usability in other programs | Compulsory module according to §7(3) Examination regulations Master IFBC |
| Duration | 2 Semester |
| Frequency of module offer | Summer und winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |

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| Student workload | 540h, of which 120h contact hours |
| Required course work | S1: Presentations S2: Participation in the seminars Intercultural communication, Project management and Scientific writing |
| Prerequisites for examination(s) | Course work S2 |
| Module examination(s) | Portfolio exam |
| Credit points (ECTS) | 18 cp |
| Teaching unit | Landwirtschaft,Int. Agrarentw.u.Ök.Landwirtschaft and Fulda University of applied science |
| Responsible person | M.A. H. Keil |
| Lecturer(s) | One lecturer of the Master program |
| Media used | - |
| Recommended literature | Project based materials |

Master thesis incl. colloquium

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| Module number / code | - |
| Module name | Master thesis incl. colloquium |
| Type of module | Compulsory module |
| Learning outcomes, acquired competencies and qualification goals | Students are able to <ul style="list-style-type: none"> • independently realize a research project on a topic related to inter- national food business and consumer studies with relevance to international research • apply theories, concepts and methods acquired during the study programme, to document the application and reflexion of research methods as well as to generate and discuss own theses and reflect them within the international research context • present and explain the planning and progress of the thesis and the methodological background • present and defend the thesis in the colloquium. |
| Course types | Thesis work |
| Content | Topic and contents shall be agreed upon with the supervisors. |
| Title of courses | Master thesis incl. colloquium |
| Teaching and learning methods | Independent project, research and data analysis, scientific writing |
| Usability in other programs | Comulsory module according to §8 Joint Examination Regulations Master IFBC |
| Duration | 1 Semester |

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| Frequency of module offer | Summer und winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | |
| Required prerequisites for participation | At the time of application for the Master thesis max. 12 credits can be open according to §8 Examination Regulations Master IFBC |
| Student workload | 900h, of which 90h contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Examination P1: Written thesis Grade weighting P1: 75% Examination P2: Colloquium (60min) Grade weighting P2: 25% |
| Credit points (ECTS) | 30 cp |
| Teaching unit | Landwirtschaft,Int. Agrarentw.u.Ök.Landwirtschaft and Fulda University of applied science |
| Responsible person | MSc U. Gilles |
| Lecturer(s) | Two lecturers of the Masterprogram |
| Media used | - |
| Recommended literature | Relevant scientific literature based on the topic chosen |

Bridging modules

Management and management accounting

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| Module number / code | E17M |
| Module name | Management and management accounting |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | <p>Die Studierenden</p> <ul style="list-style-type: none"> • können zentrale Theorien, Konzepte und verschiedene Praxisbeispiele des Managements/Management Accounting erklären und die damit verbundenen ökologischen, ökonomischen und sozialen Aspekte zuordnen und diskutieren. • können verschiedene theoretische Perspektiven des Managements und des Management Accountings einschließlich der impliziten Annahmen dieser einzelnen Perspektiven und deren Implikationen für die Managementpraxis und -forschung unterscheiden. • wenden konzeptuelle und praktische Kompetenzen und Fähigkeiten an, um die Unternehmenspraxis und Managemententscheidungen zu verstehen und kritisch zu analysieren. • erweitern und nutzen ihre Kenntnisse des Nachhaltigkeitsmanagements und der nachhaltigen Rechnungslegung, um aktuelle Beispiele zu analysieren, zu erklären und Lösungen zu entwickeln. verstehen, warum die traditionelle Rechnungslegung und Rechenschaftspflicht Managern und anderen Unternehmens-Stakeholdern nur bedingt hilft, der Nachfrage nach gesellschaftlicher Verantwortung, Rechenschaftslegung und Transparenz nachzukommen. |
| Course types | Seminar 60h |
| Content | <p>The main aim of the module is to acquaint students with the theory and practice of management and management accounting, with a focus on the role of environmental, social and governance issues therein.</p> <p>Further aims of the module include:</p> <ul style="list-style-type: none"> • To provide students with insights into different theoretical perspectives; an understanding of the implicit assumptions held by each perspective as well as the implications of these perspectives for management practice and research; • To provide students with the conceptual and practical skills necessary to effectively understand and critically analyse management/corporate practice; • To provide students with practical experience in and knowledge about “managing and accounting for sustainability”; • To enable students to understand why traditional accounting and accountability do not serve managers and other corporate stakeholders well in the light of increasing demands for social accountability, transparency and social responsibility. |

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| Title of courses | Management and management accounting |
| Teaching and learning methods | Seminar |
| Usability in other programs | Bridging module according to §7 (3) Examination Regulations Master IFBC Elective module according to §9 (8) Examination Regulations Master AGES; Method module |
| Duration | 1 Semester |
| Frequency of module offer | annually in winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Examination P1: Oral presentation with written outlet (ca. 15min, ca. 600 words) Grade weighting P1: 40% Examination P2: Written test (90 min) or Oral test (30min) Grade weighting P2: 60% |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft,Int. Agrarentw.u.Ök.Landwirtschaft |
| Responsible person | Prof. Dr. B. König |
| Lecturer(s) | Prof. Dr. B. König |
| Media used | Lecture slides, multimedia, case studies, guest lectures |
| Recommended literature | A reading list will be provided on the e-learning platform |

Principles of organic farming

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|---|---|
| Module number / code | F17 |
| Module name | Principles of organic farming |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | <p>Students are able to describe</p> <ul style="list-style-type: none"> • the principles and structures as well as functions of agricultural ecosystems in general • nutrient cycles and their management in agriculture • systems of land use and their ecological impact • nutrient management as based on cropping techniques in organic agriculture • principles of organic pest management • principles of organic animal husbandry |
| Course types | Seminar 60h |
| Content | <ul style="list-style-type: none"> • Various relevant theories of low-input and intensive organic agriculture • Structures and functions of agricultural ecosystems in general • Development, evaluation and comparison of ecological crop management systems on the background of various natural, economic and socio-cultural circumstances • Principles of pest management and fertilisation in organic agricultural systems • Principles of animal husbandry in organic agricultural systems • The biodynamic approach – an integral basis of organic agriculture and differentiation of organic and conventional food quality on the example of milk and effects on human health |
| Title of courses | Principles of organic farming |
| Teaching and learning methods | Presentations, discussions and conclusions in form of closing sessions in plenum |
| Usability in other programs | <p>Bridging module according to §7(3) Examination Regulations Master IFBC</p> <p>Bridging module according to §9 (5) Examination Regulations Master AGES</p> |
| Duration | 1 Semester |
| Frequency of module offer | annually in winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |

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| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Examination P1: Oral presentation (appr. 10min) Grade weighting P1: 40% Examination P2: Written report (appr. 3500 words) Grade weighting P2: 60% |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft, Int. Agrarentw. u. Ök. Landwirtschaft |
| Responsible person | Prof. Dr. M. Athmann |
| Lecturer(s) | Prof. Dr. M. Athmann, Prof. Dr. U. Niggli, Dr. D. Kusche |
| Media used | verschiedene |
| Recommended literature | Lecture based materials |

Food processing

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|---|--|
| Module number / code | I33 |
| Module name | Food processing |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | <p>Students can:</p> <ul style="list-style-type: none"> • Describe the basic processes and systems of food processing • Derive quality-relevant steps, raw material and product properties • Discuss the differences between industrial and artisanal production • Classify the production of food in the wider context of sustainable development |
| Course types | Lecture 45h, seminar 15h |
| Content | <p>Students gain in-depth knowledge of the production of the most important food product groups and the chemical reactions that take place. Furthermore, a principle knowledge of analytical methods for quality and authenticity testing of these product groups will be provided.</p> <p>Animal foodstuffs: milk and dairy products; eggs and egg products; meat and meat products; fish and fish products. Plant foods: vegetable fats and oils; fruit and fruit products; vegetables and vegetable products; Legumes; cereals and cereal products; sugar, cocoa and chocolate; coffee and tea; Alcoholic beverages: beer, wine and spirits; Flavors and spices</p> |
| Title of courses | Food processing |

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| Teaching and learning methods | Lecture, seminar |
| Usability in other programs | Bridging module according to §7(3) Examination Regulations Master IFBC Compulsory elective module according to §10(7) Examination Regulations Master AGES |
| Duration | 1 Semester |
| Frequency of module offer | annually in winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | Basic knowledge in chemistry |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Written test (appr. 90min) 100% or Oral examination (appr. 20min) 100% |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft,Int. Agrarentw.u.Ök.Landwirtschaft |
| Responsible person | Prof. Dr. F. Weber |
| Lecturer(s) | Prof. Dr. F. Weber |
| Media used | diverse |
| Recommended literature | |

Compulsory elective modules “Business”

Marketing research

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| Module number / code | E05M |
| Module name | Marketing research |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | <p>Students</p> <ul style="list-style-type: none"> • are able to describe how marketing research relates to the marketing concept • are able to outline the steps in the marketing research process and show how the steps are interrelated • know the factors to consider in defining the marketing problem or opportunity • are able to develop a research design • are able to state the specific advantages of the most important methods of data collection • know the different types of statistical analysis techniques |
| Course types | Vorlesung 30h, Seminar 30h |
| Content | <ul style="list-style-type: none"> • Tasks and management of marketing research • Methods of data collection • Methods of data analysis • Presentation of market research results for decision support • Methods of development prognoses |
| Title of courses | Marketing research |
| Teaching and learning methods | Vorlesung, Seminar |
| Usability in other programs | Compulsory elective module according to §7(3) Examination regulations Master IFBC; Business module Compulsory elective module according to §9(8) Examination regulations Master AGES; Method module |
| Duration | 1 Semester |
| Frequency of module offer | annually in summer semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | |

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| Prerequisites for examination(s) | |
| Module examination(s) | Examination P1: Written test (90min) or Oral examination (30min) Grade weighting P1: 60% Examination P2: Oral presentation with outlet (appr. 20min, 2.000 words) Grade weighting P2: 40% |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft, Int. Agrarentw. u. Ök. Landwirtschaft |
| Responsible person | Prof. Dr. K. Zander |
| Lecturer(s) | Prof. Dr. K. Zander |
| Media used | verschiedene |
| Recommended literature | Aaker, D.A., Kumar, V., Leone, R.P., Day, G.S. 2013: Marketing research. 11th ed., Hoboken: Wiley; Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. 2014: Multivariate data analysis, 7th ed., Harlow: Pearson Education; Malhotra, N.K., Birks, D.F., Wills, P. 2012: Marketing research, 4th ed., Harlow: Pearson Education. |

Strategic management

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| Module number / code | E15 |
| Module name | Strategic management |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | The aims of the module are: <ul style="list-style-type: none"> • To deepen the students' understanding of the unique aspects of food and agricultural production systems, processing, distribution, wholesaling and markets and their relationships with strategy and sustainability; • To familiarize students with the development of strategies within a changing environment, to meet stakeholders' interests; • To provide students with the knowledge and process competencies to make strategic business and sustainability decisions and reflect them; • To raise critical awareness of strategic decision-making in agrifood organisations. |
| Course types | Seminar 60h |
| Content | <ul style="list-style-type: none"> • The contents and framework of strategic management; • An introduction to organisational & business strategies; • The importance of values and purpose in defining organisation's strategic goals; • The management of stakeholder relations; • Performance management and strategic control; • The management of strategic change; • Strategy-as-practice. |

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| | <ul style="list-style-type: none"> • Sustainability strategy and practise • Strategy and sustainability as process |
| Title of courses | Strategic management |
| Teaching and learning methods | Seminar |
| Usability in other programs | Compulsory elective module according to §7(3) Examination regulatins Master IFBC; Business module |
| Duration | 1 Semester, annually |
| Frequency of module offer | annually in summer semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, within 60h contact time |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Examination P1: Oral presentation with outline (appr. 15min, 600 words) Grade weighting P1: 40% Examination P2: Written exam (90min) Grade weighting P2: 60% |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft,Int. Agrarentw.u.Ök.Landwirtschaft |
| Responsible person | Prof. Dr. B. König |
| Lecturer(s) | Prof. Dr. B. König and staff |
| Media used | Lecture slides, multimedia, case studies, guest lectures |
| Recommended literature | A reading list will be provided on the e-learning platform |

Sustainable food systems and management

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| Module number / code | E47 |
| Module name | Sustainable food systems and management |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | The aims of the module are: |

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| | <ul style="list-style-type: none"> • To deepen the students' understanding of the role of food business and other actors in the food system in society and the social responsibility and accountability issues that arise in a global business setting; • To familiarize students with the concepts and frameworks used in responsible and sustainable food business, to meet stakeholders' interests; • To provide students with the knowledge and confidence to critically reflect corporate practice and companies' use of different sustainability concepts and claims; • To raise awareness for different perspectives which provide contrasting and competing ways of making sense of sustainable food systems and responsible food business practices therein. |
| Course types | Seminar 60h |
| Content | <ul style="list-style-type: none"> • Food systems and societies; • Intercultural aspects and outcomes of food systems; • Organisation types and sustainability in food systems; • Corporate social responsibility, governance and accountability; • International developments in and governance of environmental and social reporting; • The management of global value chains in the agri-food sector; • Social and environmental responsibility in supply chain management; • The management and reporting of environmental and social information in different complex organisational and interorganisational settings); • The contrasting perspectives in social responsibility and accountability of business across borders. |
| Title of courses | Sustainable food systems and management |
| Teaching and learning methods | Lecture, seminar, group work |
| Usability in other programs | Compulsory elective module according to §7(3) Examination regulations Master IFBC; Business module Compulsory elective module according to §9(8) Examination regulations Master AGES |
| Duration | 1 Semester |
| Frequency of module offer | annually in winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |

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| Student workload | 180h, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Examination P1: Oral presentation with outlet (appr. 15min, 600 words) Grade weighting P1: 40% Examination P2: Written report (appr. 6000 words) or Oral test (appr. 30min) Grade weighting P2: 60% |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft,Int. Agrarentw.u.Ök.Landwirtschaft |
| Responsible person | Prof. Dr. B. König |
| Lecturer(s) | Prof. Dr. B. König, Dr. E. Kissi |
| Media used | Lecture slides, multimedia, case studies, guest lectures |
| Recommended literature | A reading list will be provided on the e-learning platform |

Innovation management in the food sector

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| Module number / code | F44 |
| Module name | Innovation management in the food sector |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | Students can <ul style="list-style-type: none"> differentiate, select and evaluate the aspects, types and models of innovation, understand and explain the management and innovation process, assess innovation types and potentials in companies in the food industry and analyse the factors that affect them and apply and differentiate between (innovation) management tools and techniques in real-life situations in the food industry. Assess innovations in the context of sustainable development |
| Course types | Seminar (4 SWS) |
| Content | <ul style="list-style-type: none"> Definitions, concept and types of innovation management Innovation potential and factors affecting it Models of innovation Management and innovation process Benefits and barriers towards innovation |

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| | <ul style="list-style-type: none"> (Innovation) Management tools and techniques, incl. idea generation and creativity techniques |
| Title of courses | Innovation management in the food sector |
| Teaching and learning methods | Seminar, learning by explaining and presenting, group work and exercises, case-studies, self-organised learning |
| Usability in other programs | Compulsory elective module according to §7(3) Examination regulations Master IFBC; Business module |
| Duration | 1 Semester |
| Frequency of module offer | annually in summer semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | S1: Oral presentation |
| Prerequisites for examination(s) | Course work S1 |
| Module examination(s) | Written report or Portfolio exam |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Fulda University of applied science |
| Responsible person | Prof. Dr. L.Chalupová |
| Lecturer(s) | Prof. Dr. L. Chalupová, L. Page |
| Media used | E-learning platform |
| Recommended literature | Lecture based materials |

Digital transformation in the food sector

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| Module number / code | F50 |
| Module name | Digital transformation in the food sector |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | <p>The students</p> <ul style="list-style-type: none"> have an overview of information systems in the food industry, are aware of the influence of new information systems and digital technologies in the context of the food industry and the resulting changes, |

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| | <ul style="list-style-type: none"> • are able to reflect on and analyse digital developments and communication in the food industry and deal with current developments in this area, • are able to evaluate the potentials and problems of digitalization in the food industry and are able to develop solutions to problems, • are able to formulate their own ideas for digitalization in the food industry and evaluate them analytically. |
| Course types | Seminar (4 SWS) |
| Content | <ul style="list-style-type: none"> • Exemplary information systems and digital technologies in the food sector • Problems and risks specific to the food system • Current case studies related to the digital transformation of the food system • Interdisciplinary perspectives on digital technology and digital transformation • Research on critical aspects of digital transformation in the food system |
| Title of courses | Digital transformation in the food sector |
| Teaching and learning methods | Instructions, seminar, exercises guest lecturer |
| Usability in other programs | Compulsory elective module according to §7(3) Joint Examination Regulations Master IFBC; Business module |
| Duration | 1 Semester |
| Frequency of module offer | annually in winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Written report |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Fulda University of applied science |
| Responsible person | Prof. Dr. J. Allgaier |
| Lecturer(s) | Prof. Dr. J. Allgaier |
| Media used | E-learning platform |
| Recommended literature | Lecture based materials |

Compulsory elective modules “Food”

Quality management and certification of organic products

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| Module number / code | F46 |
| Module name | Quality management and certification of organic products |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | <p>The students</p> <ul style="list-style-type: none"> • have knowledge of the legal regulations and principles of organic agriculture and food production. • they can develop and apply methods of quality management, certification and marketing. |
| Course types | Seminar 50, Exkursion 10h |
| Content | Experts dealing with QM in food companies as well as experts being engaged in the certification/accreditation process for organic foods share their knowledge with students, presenting principles regarding legal requirements for QM and certification and practical examples. To apply the gained knowledge students (in groups) work on case studies. |
| Title of courses | Quality management and certification of organic products |
| Teaching and learning methods | Seminar, Exkursion |
| Usability in other programs | Compulsory elective module according to 7(3) Examination regulations Master IFBC; Food module |
| Duration | 1 Semester, annually |
| Frequency of module offer | annually in winter semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | - |
| Student workload | 180h, within 60h contact time |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | <p>Examination P1: Written exam (appr. 90min) Grade weighting P1: 40% Examination P2: Written report (appr. 8.000 words) Grade weighting P2: 60%</p> |
| Credit points (ECTS) | 6 cp |

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| Teaching unit | Landwirtschaft,Int. Agrarentw.u.Ök.Landwirtschaft |
| Responsible person | Prof. Dr. K. Zander |
| Lecturer(s) | Prof. Dr. K. Zander, Dipl. Ing. U. Dietrich, Dipl. Ing M. Buley |
| Media used | verschiedene |
| Recommended literature | Will be presented e-learning platform |

Assessing food quality

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| Module number / code | F55 |
| Module name | Assessing food quality |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | <p>Students can:</p> <ul style="list-style-type: none"> • Reproduce and categorize the essential aspects of food quality • Derive the quality-determining properties of a product • Draw up a test plan for the analytical or sensory assessment of food quality • Carry out selected analytical and sensory tests themselves |
| Course types | Seminar 30h, Laborübung 30h |
| Content | <p>General definitions of food quality, special emphasize on organic food quality, Sensory evaluation techniques in quality assessment, general methods of food analysis</p> <p>Practical Part: Examples of Sensory and analytical Quality assessment</p> |
| Title of courses | Assessing food quality |
| Teaching and learning methods | Seminars include research-based learning elements such as case studies and research activities involving students giving short presentations, Practical Lab course including supervised working on analytical devices and running sensory sessions |
| Usability in other programs | Compulsory elective module according to §7(3) Examination regulations Master IFBC; Food module |
| Duration | 1 Semester |
| Frequency of module offer | annually in summer semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | Module Food processing |
| Required prerequisites for participation | - |

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| Student workload | 180h, of which 60 contact hours |
| Required course work | S1: Active participation in the lab course |
| Prerequisites for examination(s) | Course work S1 |
| Module examination(s) | Written exam (90min) or Oral exam (20min) depending on number of participants |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Landwirtschaft, Int. Agrarentw. u. Ök. Landwirtschaft |
| Responsible person | Prof. Dr. F. Weber |
| Lecturer(s) | Prof. Dr. F. Weber |
| Media used | verschiedene |
| Recommended literature | |

Innovative product development

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| Module number / code | F64 |
| Module name | Innovative product development |
| Type of module | Elective module |
| Learning outcomes, acquired competencies and qualification goals | <p>The students</p> <ul style="list-style-type: none"> • can analyse problems in the phases of product development, • assess the needs of different consumer groups and implement these in product development, • can apply innovative methods for the development of sustainable products, • analyse the sustainability of product development using selected indicators, • take relevant legislation into account during the product development process, • develop and carry out sensory tests as part of product development, • apply software for sensory and consumer research, • present a product concept and develop optimization proposals, • work in project groups during the product development process, • reflect on their own learning process. |
| Course types | E-learning (2 SWS), Lab work (2 SWS) |
| Content | <ul style="list-style-type: none"> • Special aspects of innovation and product development process • Special aspects of sustainable product development • Special aspects of sensory and consumer studies • Training on sensory and consumer research software |

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| | <ul style="list-style-type: none"> Laboratory work in teams |
| Title of courses | Innovative product development |
| Teaching and learning methods | Enriched-virtual: e-learning, final laboratory work |
| Usability in other programs | Compulsory elective module according to §7(3) Examination regulations Master IFBC; Food module |
| Duration | 1 Semester |
| Frequency of module offer | annually in summer semester |
| Teaching language | Englisch |
| Recommended (knowledge) prerequisites | - |
| Required prerequisites for participation | Module Food product development |
| Student workload | 180h, of which 60 contact hours |
| Required course work | |
| Prerequisites for examination(s) | |
| Module examination(s) | Oral exam or Oral presentation |
| Credit points (ECTS) | 6 cp |
| Teaching unit | Fulda University of applied science |
| Responsible person | M. H.Edu L. Page |
| Lecturer(s) | M. H.Edu L. Page |
| Media used | E-learning platform |
| Recommended literature | Fuller, G.W. 2011: New Food Product Development - From Concept to Marketplace. CRC Press. Boca Raton, London, New York; Moskowitz, H.; Becklay, J.; Resurrection, A.V.A. 2006: Sensory and Consumer Research in Food Product Design and Development. Blackwell Pub. Ames, Iowa. |