

Module handbook Master programme International Business, M.Sc.

**Faculty of Business and Social Sciences
Department of Business**

Authorized by the Faculty Board of the Faculty of Business and Social Sciences on 29.06.2023

Preamble

*The Hamburg University of Applied Sciences has the legal mandate to deliver **academic education on a scientific basis** (§ 4 Para. 2 Sentence 1 Hamburg University Act). The aim of the academic studies is to prepare students for professional fields of activity which require the independent application of **scientific methods and knowledge** (§ 3, Para. 1, Sentence 2 Hamburg University Act in conjunction with § 4, Para. 2, Sentence 2 Hamburg University Act). As a result, in addition to the mere transfer of knowledge in individually taught modules, the overarching goal of the degree programme is to enable graduates to conduct **independent scientific work and to solve problems at an academic level**.*

The Hamburg University of Applied Sciences uses the concept of academic competence orientation, which is concretised in the following five objectives (Schaper, Niclas, et al. Fachgutachten zur Kompetenzorientierung in Studium und Lehre. HRK projekt nexus (2012): P. 22 f.):

1. Reflexivity and explicitness

Aim of study: Ability to critically examine one's own professional actions and to analyse and precisely explain discipline-relevant problems

2. Cognitive orientation

Aim of study: Systematic, methodical, and theory-based analysis of problems

3. Disciplinary organisation

Aim of study: Orientation towards the specifics of the discipline with simultaneous openness to interdisciplinary aspects

4. Reference to complex new situations and tasks

Aim of study: Ability to connect to changing, demanding and non-standardised contexts of requirements through flexible adaptation of one's own knowledge or development of individual problem-solving strategies

5. Relevance to the field of activity

Aim of study: Ability to adapt to the requirements in a field related to the discipline

| No. | Name of module | Abbrev. | CP | Page |
|------------|--|----------------|-----------|-------------|
| M-11 | Corporate finance and financial markets | CFFM | 6 | 4 |
| M-12 | International business law | IBL | 6 | 7 |
| M-13 | International management and organisational research | IMOR | 6 | 9 |
| M-14 | Strategic management and strategic marketing | SMSM | 6 | 11 |
| M-15 | Management reporting and business intelligence | MRBI | 6 | 13 |
| M-21 | Advanced data and business analytics | ADBA | 6 | 16 |
| M-22 | Digital business model strategy and transformation | DBMST | 6 | 19 |
| M-23 | Financial modelling | FM | 6 | 21 |
| M-24 | Monetary economics | ME | 6 | 24 |
| M-25 | Multinational enterprises and the global economy | MNEGE | 6 | 26 |
| M-30 | Master-Thesis | MaTh | 30 | 28 |

Annex:

Excerpt from the general examination and study regulations of the Department of Business; § 10 (1) and (2) Performances (as amended on 9 December 2021)

| International Business, M.Sc. | |
|---|---|
| Corporate finance and financial markets (CFFM) | |
| Module number | M-11 |
| Person responsible | Prof. Dr. Christian Decker |
| Duration of the module | One semester |
| Semester | 1 st |
| Frequency of the module | Annually, winter semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | Fundamentals of accounting, finance, and capital budgeting |
| Teaching language | English |
| Competencies gained / Learning Outcome | <p>Students analyse financial problems based upon the theories, models, and techniques of corporate finance respectively financial markets in order to evaluate and/or create financial solutions by...</p> <ul style="list-style-type: none"> • describing and summarising the major issues of modern corporate finance, • applying the time value of money concept to valuation problems, • analysing the financial viability of projects and firms, • explaining and evaluating the relation between risk and return, • appraising the impact of capital structures and dividend policies on the value of a firm, • describing the structure of options and explaining the logic of hedging, • analysing and appraising different funding scenarios, • recognising and explaining the on-going emergence and disappearance of financial instruments, products, and concepts in the field of corporate finance. • reflecting on the theoretical foundations, agents, and instruments as well as the organisation and structure of financial markets. |

| | |
|--|--|
| Content of the module | The course focuses on the major issues and underlying concepts of modern and traditional corporate finance. Topics will be addressed from the perspective of large corporates with international activities, i.e., multinational enterprises. The core theories of corporate finance that can be used to develop and evaluate rules for financial decision-making will be studied in detail. The implications of these concepts for operational management problems and for strategic boardroom decisions will be discussed. Furthermore, the theoretical foundations, agents, and instruments as well as the organisation and structure of financial markets are addressed. |
| Applicability of the module | International Business, M.Sc. programme Recommended for 230 Financial modelling and 300 Master-Thesis |
| Requirements for the award of credit points (Study and exam requirements) | Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung) |
| Corresponding courses | Corporate finance and financial markets (CFFM) |
| Learning and teaching types | Regulatory learning and teaching type: <ul style="list-style-type: none"> • Tuition in seminars (Seminaristischer Unterricht) Learning types: <ul style="list-style-type: none"> • Platform-based self-learning programme • Collaborative research-based (team) learning Teaching types: <ul style="list-style-type: none"> • Asynchronous self-guided digital mastery learning • Synchronous online and classroom sessions |
| Literature (latest editions) | <p>Berk, J. B., & DeMarzo, P. M. <i>Corporate finance</i>.</p> <p>Bodie, Z., Kane, A., & Marcus, A. <i>Investments</i>. McGraw-Hill Education.</p> <p>Brealey, R. A., Myers, S. C., & Allen, F. <i>Principles of corporate finance</i>. McGraw-Hill Education.</p> <p>Brigham, E. F., & Ehrhardt, M. C. <i>Financial management: Theory and practice</i>. South-Western Cengage Learning.</p> <p>Fabozzi, F. J., & Jones, F. J. <i>Foundations of global financial markets and institutions</i>. MIT Press.</p> <p>Haan, J. de, Oosterloo, S., & Schoenmaker, D. <i>Financial markets and institutions: A European perspective</i>. Cambridge University Press.</p> <p>Hillier, D., Ross, S. L., Westerfield, R., Jaffe, J. F., & Jordan, B. D. <i>Corporate finance</i>. McGraw-Hill Education.</p> <p>Hillier, D., Ross, S. L., Westerfield, R., Jaffe, J. F., & Jordan, B. D. <i>Corporate Finance</i>. McGraw-Hill Education.</p> <p>Lumby, S., & Jones, C. M. <i>Corporate finance: Theory and practice</i>.</p> <p>Madura, J. <i>Financial institutions and markets</i>. South-Western.</p> <p>Mayo, H. B. <i>An introduction to institutions, management, & investments</i>. South-Western/Cengage Learning.</p> <p>Mishkin, F. S., & Eakins, S. G. <i>Financial markets and institutions</i>. Pearson.</p> |

| | |
|--|---|
| | <p>Saunders, A., & Cornett, M. M. <i>Financial markets and institutions</i>. McGraw-Hill Education.</p> |
|--|---|

Shiller, R. J. *Irrational exuberance*. Princeton University Press.

Tirole, J. *The theory of corporate finance*. Princeton University Press.

Welch, I. *Corporate finance: An introduction*. Pearson Education, Inc.

| International Business, M.Sc. | |
|---|---|
| International business law (IBL) | |
| Module number | M-12 |
| Person responsible | Prof. Dr. Michael Gille |
| Duration of the module | One semester |
| Semester | 1 st |
| Frequency of the module | Annually, winter semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | mandatory |
| Required prerequisites for the module | none |
| Recommended prior knowledge for the module | Contract law, international business and trade law, fundamentals of tax law |
| Teaching language | English |
| Competencies gained / Learning Outcome <i>(if this form is used, please delete the next line)</i> | <p>Students are able to evaluate cases and problems of the international business practice based on the legal and methodological principles of case handling and a deeper understanding of selected areas of international law in order to develop case solutions and avoid risks by</p> <ul style="list-style-type: none"> • explaining the objectives and basic implications of important legal and ethical norms pertaining to the planning, management, and operation of international businesses, • demonstrating a basic understanding of the regulatory environment for management decisions by means of case-based learning, • explaining core principles of, analyse, and reflect the regulation of important markets, • appreciating central legal questions of the EU single market, • analysing cases dealing with, e.g., competition law, IP-law and licensing, manager liability, investor relations, contracts, and standard trade terms, • evaluating the effectiveness of domestic and international law to regulate international business activities taking into account insights stemming from the economic analysis of law, • identifying information gaps, and research systematically relevant material making use of relevant sources including theoretical literature, on-line databases, and recent scientific research, • bringing forward and defending an argument, and inferring conclusions with reference to relevant evidence. |

| | |
|--|--|
| Content of the module | <p>This module provides a managerial approach to legal and ethical issues that come along with the operation of international businesses. The students gain expertise of the regulatory environment for management decisions by means of case-based learning. The cases address issues relating to selected areas of law such as the regulation of sustainability/ESG, EU single market, competition law, IP-law and li-censing, manager liability, investor relations/ad-hoc reporting obligations, corporate governance, the handling and management of contracts and standard trade terms, data protection law, etc. The students learn to apprehend markets and market institutions as regulatory constructs and become aware of the potential strategic relevance of policy decisions. The participants obtain a deeper understanding of essential legal institutions by deploying selected methods used by economic analysis of law.</p> <ul style="list-style-type: none"> • The regulation of management decisions (business judgment rule, duties of directors, liability, etc.) and ethical aspects, • Corporate governance, • The regulation of markets: competition law (horizontal and vertical restrictions, merger law), • The regulation of investor relations (ad-hoc reporting obligations, etc.), • The handling and management of contracts and standard trade terms, • Regulation of MNEs, • Economic analysis of law. |
| Applicability of the module | <p>International Business (M.Sc.) Recommended for 300 Master-Thesis</p> |
| Requirements for the award of credit points (Study and exam requirements) | <p>Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung)</p> <p>Further possible examination (EP): Written examination (Klausur)</p> <p>The type of examination will be announced by the lecturer at the beginning of the course.</p> |
| Corresponding courses | <p>International business law (IBL)</p> |
| Learning and teaching types | <p>Blended-learning, seminar teaching, exercises, case study discussion, flipped learning</p> |
| Literature | <p>Selected legal publications and journal articles Primary sources of national, supranational, and international origin Court decisions</p> |

| International Business, M.Sc. | |
|--|---|
| International management and organisational research (IMOR) | |
| Module number | M-13 |
| Person responsible | Prof. Dr. Natalia Ribberink |
| Duration of the module | One semester |
| Semester | 1 st |
| Frequency of the module | Annually, winter semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | Fundamentals of international management, and organisational theories |
| Teaching language | English |
| Competencies gained / Learning Outcome | <p>Students analyse international activities of small and medium-sized enterprises, and family businesses based upon selected theories, models, and instruments of international business research, to evaluate managerial decisions and/or business strategies by...</p> <ul style="list-style-type: none"> • describing and summarising major trends and issues of domestic and international business environment, • analysing and appraising international strategies of small and medium-sized enterprises, and family firms, • analysing and evaluating selected real life business cases, • reflecting on and appraising the impact of external framework, incl. legal, economic, and institutional factors on firm decisions, strategies, and operations. |
| Content of the module | The course focuses on the underlying concepts of international management and organisational theory. Topics are addressed from the perspective of small and medium-sized enterprises, and family businesses with international activities. Fundamental theories, and selected emerging concepts on internationalisation strategies, as well as industrial, and organisational (re)design, are studied in detail. Relevant implications for strategic and operational management decisions are discussed. Selected real life business cases are analysed and/or developed. |

| | |
|--|---|
| Applicability of the module | International Business, M.Sc. programme Recommended for 250 Multinational enterprises and the global economy and 300 Master-Thesis |
| Requirements for the award of credit points (Study and exam requirements) | Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung) |
| Corresponding courses | International management and organisational research (IMOR) |
| Learning and teaching types | Regulatory learning and teaching type: <ul style="list-style-type: none"> • Tuition in seminars (Seminaristischer Unterricht) Learning types: <ul style="list-style-type: none"> • Platform-based self-learning programme • Collaborative research-based (team) learning • Case-based learning Teaching types: <ul style="list-style-type: none"> • Asynchronous self-guided digital mastery learning • Synchronous online and classroom sessions |
| Literature (latest editions) | Luthans, F., Doh, J. <i>International Management: Culture, Strategy, and Behavior</i> . McGraw-Hill Education Newton, C., Knight, R. <i>Handbook of Research Methods for Organisational Culture</i> . Edward Elgar Publishing Selected journal articles, cases, and institutional publications |

| International Business, M.Sc. | |
|--|---|
| Strategic management and strategic marketing (SMSM) | |
| Module number | M-14 |
| Person responsible | Programme coordinator |
| Duration of the module | One semester |
| Semester | 1 st |
| Frequency of the module | Annually, winter semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | Fundamentals of management and marketing |
| Teaching language | English |
| Competencies gained / Learning Outcome | Students analyse business problems based upon the theories, models and techniques of strategy and marketing to evaluate and/or create international business and brand strategies. |
| Content of the module | <p>International Strategic Management</p> <p>As potential strategists in an international Corporation students detect strategic business opportunities, create a related customer-centric value proposition based on an external and internal environmental analysis.</p> <p>International Strategic Marketing</p> <p>As potential marketing manager in an international enterprise or entrepreneur students develop an international brand strategy as well as creative and innovative marketing solution according to the business strategy and its value proposition. Students evaluate and calculate the market and target group potential.</p> |
| Applicability of the module | International Business, M.Sc. programme Recommended for 220 Digital business model strategy and transformation and 300 Master-Thesis |

| | |
|--|---|
| Requirements for the award of credit points (Study and exam requirements) | <p>Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung)</p> <p>Further possible examination (EP): Written examination (Klausur)</p> <p>The type of examination will be announced by the lecturer at the beginning of the course.</p> |
| Corresponding courses | <p>Strategic management and strategic marketing (SMSM)</p> |
| Learning and teaching types | <p>Regulatory learning and teaching type:</p> <ul style="list-style-type: none"> • Tuition in seminars (Seminaristischer Unterricht) <p>Learning types:</p> <ul style="list-style-type: none"> • Platform-based self-learning programme • Case-based learning • Collaborative research-based (team) learning <p>Teaching types:</p> <ul style="list-style-type: none"> • Asynchronous self-guided digital mastery learning • Synchronous online and classroom sessions |
| Literature (latest editions) | <p>Bartlett, C. A. <i>Transnational Management</i>. Mc-Graw-Hill.</p> <p>Barney, J. B. <i>Gaining and Sustaining Competitive Advantage</i>. Pearson.</p> <p>De Wit, B., Meyer, R. <i>Strategy – Process, Content, Context</i>. West Publishing.</p> <p>Hollensen, S. <i>Global Marketing</i>. Pearson.</p> <p>Hooly, G., et al. <i>Marketing Strategy and Competitive Positioning</i>. Pearson.</p> <p>Keller, K. L., et al. <i>Strategic Brand Management</i>. Pearson.</p> <p>Kotler, P.; Berger, R; Bickhoff, N. <i>The Quintessence of Strategic Management</i>. Springer.</p> <p>Reader with selected journal articles, cases and book chapters.</p> |

| International Business, M.Sc. | |
|---|---|
| Management reporting and business intelligence (MRBI) | |
| Module number | M-15 |
| Person responsible | Prof. Dr. Nuran Fazlioglu-Adal |
| Duration of the module | One semester |
| Semester | 1 st |
| Frequency of the module | Annually, winter semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | Fundamentals of accounting, controlling, and reporting |
| Teaching language | English |
| Competencies gained / Learning Outcome <i>(if this form is used, please delete the next line)</i> | <p>Students analyse, evaluate and design BI and management reporting applications based upon the theoretical foundations and practical aspects of information systems in order to support managerial decisions by...</p> <ul style="list-style-type: none"> • analysing the business strategy and IS strategy, • describing the current key information technology and management issues, • understanding challenges in designing, implementing, and managing company-wide information systems infrastructure in global environments, • recognising and explaining management issues (e.g., project management and change management) in implementing information systems in global environments, • reflecting with critical thinking, problem-solving and questioning in working on unstructured and complex problems, integrating knowledge of business, strategy, and information technologies, • creating visuals to support business decisions, • gathering and filtering information to gain knowledge, • summarizing the findings, conclusions, and questions clearly, logically, and persuasively in oral and written communication, and • demonstrating and enhancing soft skills such as communication, co-operation, ownership, and teamwork. |

| | |
|--|--|
| Content of the module | <p>The course offers a systematic approach to business intelligence and management reporting systems. BI terms, concepts, and architectures are presented.</p> <p>Key words are e.g., SQL&NoSQL Databases, OLAP (OnLine Analytical Processing), OLTP (OnLine Transactional processing), In memory, Data Warehousing (Top-Down Approach), ETL (Extraction, Transformation, Loading), Data Lake (Bottom-up Approach), ELT (Extraction, Loading, Transformation), Data Ingestion, reporting, dashboards, Management Information Systems (MIS), Decision Support Information Systems (DSS), Executive Information Systems (EIS).</p> <p>Current subjects concerning Big Data Ecosystem, Storage and analysis at internet scale (e.g., Apache Hadoop) and Business Analytics are also to be discussed. Methods are introduced from an application-oriented perspective in order to show how to design a BI application.</p> |
| Applicability of the module | <p>International Business, M.Sc. programme Recommended for 300 Master-Thesis</p> |
| Requirements for the award of credit points (Study and exam requirements) | <p>Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung)</p> |
| Corresponding courses | <p>Management reporting and business intelligence (MRBI)</p> |
| Learning and teaching types | <p>Regulatory learning and teaching type:</p> <ul style="list-style-type: none"> • Tuition in seminars (Seminaristischer Unterricht) <p>Learning types:</p> <ul style="list-style-type: none"> • Platform-based self-learning programme • Collaborative problem-/case-based (team) learning <p>Teaching types:</p> <ul style="list-style-type: none"> • Asynchronous self-guided digital mastery learning • Synchronous online and classroom sessions |
| Literature (latest editions) | <p>Adamson, C. <i>Star Schema-The Complete Reference</i>. McGraw-Hill Education.</p> <p>Eichler, T., Emler, M., & Martykan, T. <i>Digital Performance Management</i>. Horvath & Partners.</p> <p>Galliers, R.D., & Leidner, D.E. <i>Strategic Information Management: Challenges and Strategies in Managing Information Systems</i>. Routledge.</p> <p>Healy, K. <i>Data Visualization: A Practical Introduction</i>. Princeton University Press.</p> <p>Howson, C. <i>Successful Business Intelligence: Unlock The Value of BI & Big Data</i>. McGraw-Hill Education.</p> <p>Kimball, R., & Ross, M. <i>The Data Warehouse Toolkit</i>. Wiley.</p> <p>Laudon, K.C., & Laudon, J.P. <i>Management Information Systems – Managing the Digital Firm</i>. Pearson.</p> <p>Nussbaumer Knaflic, C. <i>Storytelling with Data: A Data Visualization Guide for Business Professionals</i>. Jon Wiley & Sons.</p> <p>Rausch, P., Sheta, A.F., & Ayesh, A. <i>Business Intelligence and Performance Management – Theory, Systems and Industrial Applications</i>. Springer, London.</p> <p>Sharda, R., Delen, D., & Turban, E. <i>Business Intelligence, Analytics, and Data Science: A Managerial Perspective</i>. Pearson.</p> <p>Wilke, C. <i>Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures</i>. O'Reilly.</p> |

| | |
|--|--|
| | Wexler, S. et al. <i>The big book of dashboards</i> . Wiley. |
|--|--|

| International Business, M.Sc. | |
|--|---|
| Advanced data and business analytics (ADBA) | |
| Module number | M-21 |
| Person responsible | Prof. Dr. Stefan Tuschl |
| Duration of the module | One semester |
| Semester | 2 nd |
| Frequency of the module | Annually, summer semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | Fundamentals of descriptive and inferential statistics, basics of multivariate statistics, fundamentals of computer-based data management and data analysis by a statistical software programme |
| Teaching language | English |
| Competencies gained / Learning Outcome | <p>Students solve complex data problems based upon the theories, models and techniques of advanced business analytics and multivariate statistics using statistical software to support business decisions by</p> <ul style="list-style-type: none"> • developing empirical research processes aimed at collecting or retrieving business relevant data. • creating an adequate and correctly designed analysis plan incorporating all appropriate quantitative statistical methods to answer a business problem. • developing their own fundamental data literacy skills to apply them to organize and to evaluate multidimensional data. • carrying out exploratory data analytics regarding information content and distribution of multidimensional data. • reflecting the importance of data quality for valid and reliable analytical outcomes. • differentiating between various types of data quality issues, assessing the size of their impact on planned statistical computations, and developing appropriate measures to solve them. • selecting, comparing, and combining multivariate statistical methods and data mining techniques and carrying them out on different types of data bases (e.g., market research data, customer data, company data). • critically evaluating analytical results generated by advanced statistical modelling from different management perspectives. |

| | |
|--|---|
| | <ul style="list-style-type: none"> • elaborating concise and valuable summaries of complex statistical computations and outcomes, deriving essential conclusions from them and giving most relevant recommendations for supporting business decisions. • applying state-of-the-art data visualization and reporting techniques and harnessing their potential to creatively represent key characteristics of statistical data and analytical outcomes. |
| Content of the module | <p>The course offers a systematic approach to the theory and practical application of advanced statistical methods and data mining techniques to quantitative data collected through different research processes. Current subjects regarding digitalisation, data science, machine learning and big data are enlarging the methodological focus.</p> <p>Key concepts, methods and challenges for carrying out quantitative empirical research projects incorporating the application of advanced statistical analytics are discussed: constituent topics along the research process are e.g. sources of business relevant data, primary and secondary data collection, data understanding and processing, complex data analytics and modelling, communication of analytical proceedings and outcomes to academic and business audiences, platform based reporting of analytical results.</p> <p>Various advanced statistical methods are introduced and consecutively deepened in theory and practical application using case studies supported by data sets stemming from real business problems. Analytical computations, modelling and programming are performed with state-of-the-art statistical software.</p> <p>Special emphasis is put on ways of processing relevant information in the context of complex statistical data analysis as well as on summarizing and visualizing analytical results in order to gain new insights relevant for strategic objectives and decision support of a company. Actual developments in data visualization and information design are also addressed.</p> |
| Applicability of the module | International Business, M.Sc. programme Recommended for 300 Master-Thesis |
| Requirements for the award of credit points (Study and exam requirements) | <p>Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung)</p> <p>Further possible forms of examination (EP): Written examination (Klausur)</p> <p>The type of examination will be announced by the lecturer at the beginning of the course.</p> |
| Corresponding courses | Advanced data and business analytics (ADBA) |
| Learning and teaching types | <p>Regulatory learning and teaching type:</p> <ul style="list-style-type: none"> • Tuition in seminars (Seminaristischer Unterricht) <p>Learning types:</p> <ul style="list-style-type: none"> • Platform-based self-learning programme • Collaborative research and case study-based (team) learning <p>Teaching types:</p> <ul style="list-style-type: none"> • Synchronous online and classroom sessions • Asynchronous self-guided digital mastery learning |
| Literature | <p>Backhaus K. et al. <i>Multivariate Analysis</i>. SpringerGabler.</p> <p>Berthold, M. R. et al. <i>Guide to intelligent data science</i>. Springer.</p> |

| | |
|--|---|
| | <p>Fields, A. <i>Discovering Statistics Using SPSS</i>. SAGE Publications.</p> <p>Fields, A. et al. <i>Discovering Statistics Using R</i>. SAGE Publications.</p> <p>Hair, J.F. et al. <i>Essentials of Business Research Methods</i>. M.E. Sharpe.</p> <p>Hair, J.F. et al. <i>Multivariate data analysis</i>. Pearson New International Edition.</p> <p>Jones, B. <i>Communicating data with Tableau</i>. O'Reilly Media.</p> <p>Malhorta, N.K. et al. <i>Marketing Research – An applied approach</i>. Pearson.</p> <p>Mertler, C. A., Vannatta R. A. <i>Advanced and Multivariate Statistical Methods</i>. Routledge.</p> <p>Murray, D.G. <i>Tableau your data</i>. Wiley.</p> <p>Nussbaumer Knaflic, C. <i>Storytelling with Data: A Data Visualization Guide for Business Professionals</i>. Jon Wiley & Sons.</p> <p>Shmueli, G. et al. <i>Data Mining for Business Analytics. Concepts, Techniques and Applications in R</i>. Wiley.</p> <p>Tufte, E. R. <i>The visual display of quantitative information</i>. Graphics Press.</p> <p>Wexler, S. et al. <i>The big book of dashboards</i>. Wiley.</p> <p>Witten, I.H. et al. <i>Data Mining. Practical Machine Learning Tools and Techniques</i>. Morgan Kaufmann.</p> |
|--|---|

| International Business, M.Sc. | |
|--|---|
| Digital business model strategy and transformation (DBMST) | |
| Module number | M-22 |
| Person responsible | Programme coordinator |
| Duration of the module | One semester |
| Semester | 2 nd |
| Frequency of the module | Annually, summer semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | Strategic management and strategic marketing |
| Teaching language | English |
| Competencies gained / Learning Outcome | Students analyse and evaluate innovative digital technologies and digital transformation opportunities based on strategic analysis, business modelling concepts and transformation theory to create digital business models and societal value. |
| Content of the module | In the “Strategic lab” students take over the role of managers in an international enterprise or entrepreneurs. Students set up an own strategic business model process and thereby develop the managerial and entrepreneurial skills. |
| Applicability of the module | International Business, M.Sc. programme Recommended for 300 Master-Thesis |
| Requirements for the award of credit points (Study and exam requirements) | Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung) |
| Corresponding courses | Digital business model strategy and transformation (DBMST) |
| Learning and teaching types | Regulatory learning and teaching type: <ul style="list-style-type: none"> Tuition in seminars (Seminaristischer Unterricht) Learning types: <ul style="list-style-type: none"> Platform-based self-learning programme |

| | |
|--|--|
| | <ul style="list-style-type: none"> • Collaborative research-based (team) learning • Reciprocal transformation in an experimental case-based or research-based setting <p>Teaching types:</p> <ul style="list-style-type: none"> • Asynchronous self-guided digital mastery learning • Synchronous online and classroom sessions |
| <p>Literature (latest editions)</p> | <p>Burgelman, R. A. et al. <i>Strategic Management of Technology and Innovation</i>. International Edition, McGraw-Hill.</p> <p>Hayes, R. et al. <i>Operations, Strategy, and Technology – Pursuing the Competitive Edge</i>. Wiley.</p> <p>Osterwalder, A. <i>Business Model Generation</i>. Wiley.</p> <p>Osterwalder, A. <i>Value Proposition Design</i>. Wiley.</p> <p>Trott, P. <i>Innovation Management and New Product Development</i>. Pearson.</p> <p>Wirtz, B. W. <i>Business Model Management – Design, Process, Instruments</i>. Springer.</p> <p>Reader with selected journal articles, cases and book chapters</p> |

| International Business, M.Sc. | |
|---|--|
| Financial modelling (FM) | |
| Module number | M-23 |
| Person responsible | Prof. Dr. Christian Decker |
| Duration of the module | One semester |
| Semester | 2 nd |
| Frequency of the module | Annually, summer semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | CFFM, MRBI |
| Teaching language | English |
| Competencies gained / Learning Outcome | <p>Students analyse financial problems based upon the techniques and principles of financial modelling in order to evaluate and/or support corporate financial decisions by...</p> <ul style="list-style-type: none"> • designing various types of templates with Microsoft Excel applying the major • describing and summarising the major principles of financial modelling, • principles of financial modelling, • creating financial models that are based on a theoretical framework, • pointing out limitations and restrictions of their financial models, • preparing financial projections applying the logic of integrated planning, • appraising the financial viability of projects and firms using spreadsheet software, • analysing the inherent risk of a given problem set using sensitivities and other • means of risk analysis, • interpreting and critically reflecting their modelling outcome. |

| | |
|--|--|
| Content of the module | The course enables students to develop financial models that support management decisions. The theoretical framework is based on the principles of modern managerial and financial accounting. Focus will be on financial analysis, integrated planning of financial forecasts as well as on valuation. Technical aspects of spreadsheet modelling will be addressed. Objects to be studied are corporates and projects in the form of foreign direct investments whereby greenfield and brownfield projects will be touched upon. Modelling options and underlying theoretical concepts will be discussed and their impact on model outcome studied. Topics to be addressed include inter alia discounted cash flow models in the form of the weighted average cost of capital approach, the flow to equity approach and the income approach as well as valuations based on economic value added and cash flow value added. The course is designed to develop an individual approach to economic problems while strengthening technical skill sets. |
| Applicability of the module | International Business, M.Sc. programme Recommended for 300 Master-Thesis |
| Requirements for the award of credit points (Study and exam requirements) | Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung) |
| Corresponding courses | Financial modelling (FM) |
| Learning and teaching types | Regulatory learning and teaching type: <ul style="list-style-type: none"> • Tuition in seminars (Seminaristischer Unterricht) Learning types: <ul style="list-style-type: none"> • Platform-based self-learning programme • Collaborative problem-/case-based (team) learning Teaching types: <ul style="list-style-type: none"> • Asynchronous self-guided digital mastery learning • Synchronous online and classroom sessions |
| Literature (latest editions) | Benninga, S. <i>Financial modeling</i> (Fourth edition). The MIT Press. Bodmer, E. <i>Corporate and project finance modeling: Theory and practice</i> . Wiley. Day, A. L. <i>Mastering financial modelling in Microsoft Excel</i> . Pearson. Fairhurst, D. S. <i>Financial modeling in Excel</i> . John Wiley & Sons, Inc. Fairhurst, D. S. <i>Using Excel for business and financial modelling: A practical guide</i> . Wiley. FAST Standard Organisation (Ed.). <i>The FAST Standard. Practical, structured design rules for financial modelling</i> . Helbæk, M., Løvaas, R., & Mjølhus, J. <i>Financial modelling and asset valuation with Excel</i> . Routledge. Lynch, P. <i>Financial modelling for project finance</i> . Euromoney Books. Lynch, P. <i>Financial Modelling for Project Finance: Pre-financial close cash-flow modelling in Excel</i> (LAC published version). Lynch-Ayerst Publishing. |

| | |
|--|--|
| | <p>Moschella, J. <i>Financial Modeling For Equity Research: A Step-by-Step Guide to Earnings Modeling and Stock Valuation for Investment Analysis</i>. Independently published.</p> <p>Oluwa, S. <i>Hands-on financial modeling with Microsoft Excel 2019: Build practical models for forecasting, valuation, trading, and growth analysis using Excel 2019</i>.</p> <p>Pignataro, P. <i>Financial modeling and valuation: A practical guide to investment banking and private equity</i>. Wiley.</p> <p>Rees, M. <i>Financial modelling in practice: A concise guide for intermediate and advanced level</i>. Wiley.</p> <p>Rees, M. <i>Principles of financial modelling: Model design and best practices using Excel and VBA</i>. Wiley.</p> <p>Sengupta, C., & Sengupta, C. <i>Financial analysis and modeling using Excel and VBA</i>. Wiley.</p> <p>Soubeiga, E. <i>Mastering financial modeling: A professional's guide to building financial models in Excel</i>. McGraw-Hill.</p> <p>Staiger, R. P. <i>Foundations of real estate financial modelling</i>. Routledge.</p> <p>Swan, J. <i>Practical financial modelling: The development and audit of cash flow models</i>. Elsevier.</p> <p>Swan, J. & Chartered Institute of Management Accountants. <i>Practical financial modelling: A guide to current practice</i>. Elsevier/CIMA Pub.</p> |
|--|--|

| International Business, M.Sc. | |
|---|--|
| Monetary economics (ME) | |
| Module number | M-24 |
| Person responsible | Prof. Dr. Stephan Boll |
| Duration of the module | One semester |
| Semester | 2 nd |
| Frequency of the module | Annually, summer semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | Micro-economics, Macro-economics, International Economics |
| Teaching language | English |
| Competencies gained / Learning Outcome | <p>Students analyse the functioning of monetary systems and their connections with the overall economy and with a company's activities, in particular its financial conditions. To do so, they apply more recent model-based approaches to the macro-economic analysis of money and financial flows and monetary policy decisions. As an outcome,</p> <ul style="list-style-type: none"> • they are able to describe basic concepts of money, banking, monetary economics and monetary policy, • they possess an integrated view on the interaction between monetary authorities, financial markets and international corporations, • they draw research-based conclusions about the impact that monetary policy decisions can have on financial markets and the real economy, • they incorporate the understanding of monetary flows into the perspective of decision-making bodies in international companies and organisations. |
| Content of the module | The course covers fundamental aspects of money, prices, interest rates, foreign exchange markets and the impact of monetary policies. Moreover, issues related to the economics of monetary union are analysed. Also, causes and consequences of recent developments on foreign exchange and capital markets and an outlook on future developments are addressed. Contemporary model-based approaches for the analysis of monetary flows and their impact are studied. Implications of the model outcomes for strategic decision-making in international companies are analysed. |

| | |
|--|--|
| Applicability of the module | International Business, M.Sc. programme |
| Requirements for the award of credit points (Study and exam requirements) | <p>Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung)</p> <p>Further possible examination (EP): Report: presentation based on a research paper (Referat)</p> <p>The type of examination will be announced by the lecturer at the beginning of the course.</p> |
| Corresponding courses | Monetary economics (ME) |
| Learning and teaching types | <p>Regulatory learning and teaching type:</p> <ul style="list-style-type: none"> • Tuition in seminars (Seminaristischer Unterricht) <p>Learning types:</p> <ul style="list-style-type: none"> • Platform-based self-learning programme • Collaborative research-based (team) learning <p>Teaching types:</p> <ul style="list-style-type: none"> • Asynchronous digital teaching content • Synchronous classroom sessions |
| Literature (latest editions) | <p>Bindseil, U. <i>Monetary Policy Operations and the Financial System</i>. Oxford University Press.</p> <p>Grauwe, P. de. <i>Economics of Monetary Union</i>. Oxford University Press.</p> <p>Krugman, P. R., Obstfeld, M., Melitz, M.J. <i>International Economics, Theory and Policy</i>. Pearson.</p> <p>Rostagno, M. et al. <i>Monetary Policy in Times of Crisis</i>. Oxford University Press.</p> <p>Walsh, C. E. <i>Monetary Theory and Policy</i>. MIT Press.</p> |

| International Business, M.Sc. | |
|---|--|
| Multinational enterprises and the global economy (MNEGE) | |
| Module number | M-25 |
| Person responsible | Prof. Dr. Natalia Ribberink |
| Duration of the module | One semester |
| Semester | 2 nd |
| Frequency of the module | Annually, summer semester |
| Credits (CP) | 6 CP |
| Semester hours per week (SHW) | 4 SHW (4 * 45 minutes = 180 minutes) |
| Workload | 180 h (6 CP * 30 h) Contact hours: 4 SHW * 45 min * 17 weeks = 51 h Self-study: 180 h – 51 h = 129 h |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | Fundamentals of international management, economics, and trade |
| Teaching language | English |
| Competencies gained / Learning Outcome | <p>Students analyse international activities of multinational enterprises based upon selected theories, models, and techniques of international business research, to evaluate corporate decisions and/or performance by...</p> <ul style="list-style-type: none"> • describing and summarising major trends and issues of international business environment, • analysing and appraising global and regional strategies of multinational firms, • explaining and evaluating the interplay between home and host country institutions, • appraising the impact of regulatory framework and exogenous factors on corporate strategies and performance, • recognising and reflecting on evolving frameworks, and instruments assessing interdependencies, and economic impact of multinational activity regionally and/or globally. |
| Content of the module | <p>The course focuses on the underlying concepts of international business theory on multinational enterprises, and their evolving position in the global economy. The core theoretical frameworks on multinational enterprises, the interplay between home and host country institutions, as well as regional and global interdependencies are studied in detail. Relevant implications for strategic and operational management decisions are discussed. Furthermore, the theoretical foundations, and selected approaches assessing economic impact of corporate activity on home and host country locations are addressed.</p> |

| | |
|--|---|
| Applicability of the module | International Business, M.Sc. programme Recommended for 300 Master-Thesis |
| Requirements for the award of credit points (Study and exam requirements) | Regular form of module examination (EP): Portfolio examination (Portfolio-Prüfung) |
| Corresponding courses | Multinational enterprises and the global economy (MNEGE) |
| Learning and teaching types | Regulatory learning and teaching type: <ul style="list-style-type: none"> • Tuition in seminars (Seminaristischer Unterricht) Learning types: <ul style="list-style-type: none"> • Platform-based self-learning programme • Collaborative research-based (team) learning • Case-based learning Teaching types: <ul style="list-style-type: none"> • Asynchronous self-guided digital mastery learning • Synchronous online and classroom sessions |
| Literature (latest editions) | Dunning, J., Lundan, S. <i>Multinational Enterprises and the Global Economy</i> . Edward Elgar Publishing Worthington, I., Britton, C., Thompson, E. <i>The Business Environment: A Global Perspective</i> . Pearson Selected journal articles, cases, and institutional publications |

| International Business, M.Sc. | |
|---|--|
| Master thesis (MaTh) | |
| Module number | M-30 |
| Person responsible | Prof. Dr. Christian Decker (programme coordinator) together with all full-time instructors |
| Duration of the module | One semester |
| Semester | 3 rd |
| Frequency of the module | Every semester |
| Credits (CP) | 30 CP |
| Semester hours per week (SHW) | Not applicable |
| Workload | 900 h (30 CP * 30 h) Contact hours: Not applicable Self-study: 900 h (Coaching by thesis advisor included) |
| Type of module | Mandatory |
| Required prerequisites for the module | None |
| Recommended prior knowledge for the module | All analytical assignments and term papers in the modules of the first two semesters should have been successfully completed. |
| Teaching language | English |
| Competencies gained / Learning Outcome | <p>Students deduce, document, and present a proposed explanation for a research question based upon the techniques and principles of academic research and writing to derive an answer for an identified research problem by...</p> <ul style="list-style-type: none"> • identifying a topic/title and developing a corresponding research aim of a given research problem, • conducting literature research and evaluating the quality of sources of information, • deducing an interpretation of a topic from a theoretical perspective and/or against the background of a given problem setting, • developing a structure of a thesis that corresponds with the interpretation, • conducting an empirical analysis or applying other suitable methods to support their research project, • paraphrasing literature and applying rules of referencing and citation in a consistent way, • applying the principles of academic language and writing, • organising their research project and presenting and debating their findings with other students and the instructor. |

| | |
|--|--|
| Content of the module | The thesis project enables students to demonstrate that they can resolve independently a research problem that is linked to their field of studies and has a sufficient complexity. Research, documentation, and presentation must be based upon the formal research and citation rules of the department. |
| Applicability of the module | International Business, M.Sc. programme |
| Requirements for the award of credit points (Study and exam requirements) | Passed master thesis |
| Corresponding courses | ./. |
| Learning and teaching types | Research-based learning |
| Literature (latest editions) | <p>American Psychological Association (Ed.). <i>Publication manual of the American Psychological Association</i>. American Psychological Association.</p> <p>Bailey, S. <i>Academic writing: A handbook for international students</i>. Routledge/Taylor & Francis Group.</p> <p>Briggle, A., & Mitcham, C. <i>Ethics and science: An introduction</i>. Cambridge University Press.</p> <p>Bryman, A., Bell, E., & Harley, B. <i>Business research methods</i>. Oxford University Press.</p> <p>Creswell, J. W. <i>Research design: Qualitative, quantitative, and mixed methods approaches</i>. SAGE Publications.</p> <p>D'Angelo, J. <i>Ethics in science: Ethical misconduct in scientific research</i>. Taylor & Francis.</p> <p>Decker, C., & Werner, R. <i>Academic research and writing: A concise introduction</i>. iCADEMICUS.</p> <p>Denscombe, M. <i>The Good Research Guide: For small-scale social research projects</i>. Open University Press.</p> <p>Easterby-Smith, M., Thorpe, R., & Jackson, P. <i>Management research: Mark Easterby-Smith, Richard Thorpe and Paul Jackson</i>. SAGE.</p> <p>Saunders, M. N. K., Lewis, P., & Thornhill, A. <i>Research methods for business students</i>. Pearson.</p> <p>Yin, R. K. <i>Case study research and applications: Design and methods</i>. SAGE.</p> |

Annex

Excerpt from the general examination and study regulations of the Department of Business

§ 10 (1) and (2) Performances

(1) The performances are either in the form of examination performance (EP) or study performance (SP) examination type. Examination performances are evaluated and marked. Study performances are only evaluated as pass or fail.

(2) Performances are achieved along with the studies via the following forms of examination:

1 Test (T)

A test is a piece of work to be produced under supervision in which the students process the task given on their own and independently, without the use of aids or using the admissible aids. The duration of a test amounts to a minimum of 60 minutes but no more than 240 minutes. A test may wholly or partially consist of selective exercises (cf. section 5). If a written examination is conducted as an online examination by means of video supervision in accordance with § 10 d, the student assures in writing or in electronic form that he/she has written the performance independently, within the scheduled processing time and using no other than the specified permitted aids.

2 Oral examination (O)

An oral examination is an assessment interview in which the students have to demonstrate in free speech that they have a good command of the examination topics. It usually lasts 15 to 45 minutes per student tested. Oral examinations can be carried out as individual examinations or as group examinations. The test is to be implemented in the presence of an observer. The latter must be one of the persons entitled to examining students according to § 9, section 1. The performance in the oral examination is only assessed and, if applicable, marked by the responsible examiner. The main objects and results of the oral examination are to be recorded in a protocol. This protocol is signed by the examiner and remains attached to the examination file. Members of the Hamburg University of Applied Sciences are admitted as audience to oral examinations in accordance with the free spaces available. Here, students who wish to take the same examination during the next examination period are to be preferred. The admission does not apply to the consultation and the publication of the examination results. Upon a corresponding request by the student, the public will be excluded.

3 Colloquium (Coll)

The colloquium is an assessment interview which also aims at determining if an examination performance which has not been rendered under supervision has been achieved independently by the student. The duration of the colloquium amounts to at least 15 but not more than 45 minutes per student to be examined. The provisions for the oral examination apply correspondingly.

4 Report (Rep)

A report is a lecture of 15 to 45 minutes based on a written elaboration produced by the student themselves. In the written elaboration, the most important results are summarized which are to be presented in free speech in the presentation and to be represented in the subsequent discussion – which is held by the moderator of the discussion. Together with the presentation, a written declaration is to be submitted which indicates that the work – in the case of group work, the correspondingly marked parts of the work (§ 17, section 1) – has been created independently and without the help of others and that only the indicated sources and aids have been used. The written elaboration as well as the presentation and graphics used in the lecture are to be submitted in written and electronic form.

5 Term paper (TP)

A term paper is a piece of work to be produced without supervision, applying scientific methods and findings by means of which the student verifies the independent processing of a stipulated subject matter. The time given for producing a term paper amounts to a maximum of six weeks and it is to be submitted at the end of the respective module. The term paper can be completed with a colloquium or a presentation. Together with the term paper, a written declaration is to be submitted according to which the piece of work - in the case of group work, the correspondingly marked parts of the piece of work (§ 17, section 1) - has been created independently without any help and that only the indicated sources and aids have been used. The term paper may also be created in the lecture-free period.

6 Laboratory tutorial (LT)

In a laboratory tutorial, the students have to successfully execute the tasks stipulated by the examiner and/or verify their knowledge via accompanying colloquiums and/or by means of protocols and/or by a written/electronic task solution. The written elaborations are to be submitted within a period stipulated by the examiner.

7 Project report (P)

A project report is an interdisciplinary task from the respective occupational field of the degree programme which is to be processed. The processing time amounts to a maximum of 24 weeks and ends with the completion of the respective module, at the latest. The project is completed with a colloquium.

8 Practical course report (PracR)

The practical course report is an elaboration to be written without supervision via which the student verifies the independent demonstration of the occupational activities and tasks in the framework of the practical phase, which is completed with a presentation. The processing time for the practical course report including preparing and holding the presentation amounts to four weeks.

9 Take-Home Examination (THP)

A take-home examination consists of the independent processing of one or more specified examination tasks, which is carried out by the student independently of location with the aid of approved aids within the specified processing time. The examination tasks are issued and the solutions are submitted in electronic form. The processing time is a minimum of 60 and a maximum of 300 minutes. The duration of the examination is made up of the processing time and the time allowed to students for the creation and downloading and uploading of the examination documents. The examination is conducted via the software, collaboration, video conferencing systems or learning platforms provided by the university. Students should be given the opportunity to familiarize themselves with the software, collaboration, video conferencing systems or learning platforms prior to the examination as part of the course. When handing in the work, the student assures in writing or in electronic form that he/she has written the work independently, within the time allowed and using no other than the specified approved aids.

10 Portfolio Examination (PP)

A portfolio examination is a form of examination consisting of a maximum of four examination elements. At least two different forms of examination are to be used for the portfolio examination. The possible forms of examination that can be used are derived from the forms of examination mentioned in § 10, paragraph 2, as well as from semester-long exercises. The examiner determines at the beginning of the course which examination elements and with which weighting for the individual examination elements the portfolio examination should take place. In the case of an examination performance, the individual examination elements result in an overall grade for the respective portfolio examination according to their weighting. The total scope of the portfolio examination in terms of workload and degree of difficulty may not exceed the scope of the examination form if it were to be selected as the sole examination element."