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**- Courtesy Translation -
The German version shall prevail!**

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Program-Specific Study and Examination Regulations (PSSER) for the Masters's degree program in Operations Research and Business Analytics dated 25.03.2024

On the basis of §§ 13 paragraph 1 sentence 1, 67a paragraph 2 no. 3a and 77 paragraph 2 of the Saxony-Anhalt Higher Education Act as published in the announcement dated 01 July 2021 (Law & Ordinance Gazette LSA 368, 369), Otto von Guericke University Magdeburg has enacted the following *program-specific Study and Examination Regulations (PSSER)* as a statute, which is a binding supplement to the *General Study and Examination Regulations (GSER) for the Bachelor's Degree Programs of the Faculty of Economics & Management*.

I. General Section

§ 1

Scope

These *program-specific Study and Examination Regulations* for the Masters's degree program in Operations Research and Business Analytics supplement (S) and/or flesh out (F) the *General Study and Examination Regulations (GSER)* for the Masters's degree programs offered by the Faculty of Economics & Management at Otto von Guericke University Magdeburg as follows:

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§ 2

Program-specific educational objectives

(6) S: Graduates of this interdisciplinary Master's program acquire competencies in both the field of business administration and in data management and data analysis. To achieve this, students gain fundamental methodological skills in computer science and mathematics, and are then specifically trained in two specialization areas to apply these methods to business administration issues in the focus areas of Supply Chain Management and Financial Engineering.

(7): S: Students acquire qualifications in terms of scientific methods for analyzing and optimizing complex business processes and for critically evaluating decision alternatives. Even with incomplete or limited information, graduates can make scientifically sound decisions while considering the social, scientific, and ethical insights that arise from the application of knowledge and the decisions made. They are provided with in-depth problem knowledge from relevant application fields (e.g., Supply

Chain Management, Operations, Logistics, Capital Markets, Financial and Risk Management), enabling them to make significant contributions to the development of independent solutions for strategic, tactical, and operational issues within a company.

(8) S: Students are equipped, on one hand, with the skills to use scientific methods to prepare and analyze large datasets and to use the data for forecasting or for creating decision–support models. Besides providing input data for business planning models, students also learn to develop mathematical models, apply algorithms for calculating solutions, and, if necessary, develop new methods. This way, the students' analytical abilities are further developed, and their practical problem–solving skills are enhanced.

(9) S: The program specifically aims to achieve the following learning objectives:

- Students are capable of processing, analyzing, and further utilizing large datasets with the help of IT systems.
- Students can analyze business administration issues (focusing on Supply Chain Management, Operations, Logistics, Capital Markets, Financial and Risk Management) and quantitatively model them using Operations Research approaches, including software solutions.
- Students can determine forecasts and input parameters for economic planning models based on data and by applying specialized software.
- Students can analyze business administration issues (focusing on Supply Chain Management, Operations, Logistics, Capital Markets, Financial and Risk Management) and quantitatively model them using Operations Research approaches, including software solutions.
- Students are capable of implementing these methods in practice and successfully using them for problem–solving.

(10) S: The training in the Operations Research and Business Analytics program enables graduates to undertake leadership roles or staff positions in private and public companies, as well as in consulting firms, banks, and insurance companies, irrespective of the industry. Examples of private companies include industrial enterprises (production of goods, production of capital goods, energy sector), trade companies (wholesale, mail order), and service companies (transportation, logistics, distribution, waste management). Graduates can be employed particularly in application areas such as Supply Chain Management, Operations, Logistics, Capital Markets, and Financial and Risk Management, as well as in sectors where data plays a crucial role in decision–making. In addition to specialist and managerial tasks within companies, independent activities, roles in IT companies, or academic positions are also possible.

II. Scope and Progression of Course

§ 5

Admission requirements

(2) F + S: Requirements for admission to a Master's degree program include the following

a) A degree program is relevant if in this

- at least 20 credit points in courses in the field of quantitative methods and at least 45 credit points in courses in economics have been earned.

- at least 65 credit points in courses in the field of quantitative methods have been earned.

If the ECTS system is not applied in the applicant's bachelor's degree program [outside the European Higher Education Area], a degree program is considered relevant if

- at least 4 courses in the field of quantitative methods and at least 9 courses in economics courses have been completed.
- at least 13 courses in the field of quantitative methods and at least 9 courses in economics courses have been completed.

d) In accordance with the language of instruction and examination specified in § 7 para. 2 GSER, adequate English language skills must be demonstrated, generally at least at level C1 of the Common European Framework of Reference for Languages. Suitable forms of proof of language skills will be published on the faculty website following a decision by the Faculty Council.

e) Submission of a relevant letter of motivation in English. The letter must not be longer than 450 words and must include information about the topic of the Bachelor's thesis and the methods applied therein. The letter must also clearly express interest in this Master's program. The online-provided template must be used for the letter of motivation.

f) Proof of previous work experience and, if applicable, relevant internships in a tabular CV.

(3) F: The special qualification is determined on the basis of the result of the final examination in accordance with paragraph (2c) GSER and requires that the previous Bachelor's degree program was completed with an average grade of at least "2.9".

(8) F: The number of study places is limited. In order to take into account the special requirements of the degree program, the applicant must have successfully participated in the internal university selection procedure specific to the degree program. If the applicant is invited to an interview as part of the internal university selection process, participation in and passing the interview is a prerequisite for consideration in the ranking. Only those who achieve a rank in the ranking list that is sufficient according to the available study places are considered to have successfully participated in the selection process. The procedure and evaluation criteria for the selection decision are regulated in the statutes for the implementation of the internal university selection process in the Master's program Operations Research and Business Analytics.

§ 6

Commencement and duration of studies

(1) F: Enrollment for the first semester is possible for only the winter semesters.

§ 7

Organization and scope of studies

(2) F: The main language of instruction and assessment for the Master's degree program in Operations Research and Business Analytics is English.

§ 8

Program structure

(1) F: The program is divided into two foundational areas: "Operations Research" with a minimum of 15 CP and "Business Analytics" with a minimum of 15 CP, an elective area with at least 60 CP, and the compulsory module "Master's Thesis" (30 CP).

In compulsory elective modules, 60 CP must be obtained. Of these

- 5 CP in the area of "Scientific work" and
- at least 50 CP in the area of specialization, whereby
 - at least 10 CP must be obtained through seminar work and exactly one scientific project amounting to 15 CP or
- Up to 5 CP can be obtained in the area of "CoMeT – Competencies and Methods Training.

The courses and examinations in the compulsory and compulsory elective modules are generally held in English in accordance with § 7 (2) para. up to four modules may be taken in German. Module examinations must be taken in the language of the respective course.

IV. Master's Thesis

§ 27

Registration and admission to the compulsory module "Master's thesis", Issuance of the topic

(3) F: Admission to the compulsory module "Master's thesis" is only granted to students who have at least 75 CP including

- at least 15 CP in each of the two foundational areas,
- 5 CP in the area of "scientific work" and
- seminar assessments worth 10 CP.

§ 28

Submission of Master's thesis

(8) F: The examinations and assessments pursuant to § 20 para. 2 GSER may only be undertaken in the English language.

§ 36

Validity

The provisions of these *program-specific Study and Examination Regulations* apply to all students who enroll for the first time on the Master's program in Operations Research and Business Analytics at Otto von Guericke University Magdeburg from the 2024/2025 winter semester.

§ 37

Entry into Force

These program-specific Study and Examination Regulations enter into force on the day after publication in the Official Announcements of Otto von Guericke University in conjunction with the currently applicable General Study and Examination Regulations of the Master's degree programs offered by the Faculty of Economics and Management.

Issued by virtue of the resolution of the Faculty Council of the Faculty of Economics and Management dated 06.03.2024 and the statement of the Senate of Otto von Guericke University dated 20.03.2024.

Magdeburg, 25.03.2024

Professor Dr.-Ing. Jens Strackeljan

Rector

of Otto von Guericke University Magdeburg

Anlage 1: Regelstudienplan / Standard Study Plan Operations Research and Business Analytics – Studienbeginn Wintersemester

Nr.	Module / Modules	1. Semester (WS)			2. Semester (SS)			3. Semester (WS)			4. Semester (SS)		
		SWS	PL	CP	SWS	PL	CP	SWS	PL	CP	SWS	PL	CP
1a.	Wahlpflichtmodule im Grundlagenbereich "Business Analytics" / Compulsory Elective Modules on Business Analytics												
1.1	Modul I	*	*	5									
1.2	Modul II	*	*	5									
1.3	Modul III				*	*	5						
1b.	Wahlpflichtmodule im Grundlagenbereich "Operations Research" / Compulsory Elective Modules on Operations Research												
1.5	Modul IV	*	*	5									
1.6	Modul V				*	*	5						
1.7	Modul VI				*	*	5						
2.	Wahlpflichtmodule im Vertiefungsbereich / Compulsory Elective Modules in Specialization												
2.1	Modul VII	*	*	5									
2.2	Modul VIII	*	*	5									
2.3	Modul IX				*	*	5						
2.4	Modul X ¹⁾							*	*	5			
2.5	Modul XI							*	*	5			
2.6	Modul XII							*	*	5			
2.7	Seminar				2S+*	*	10						
2.8	Wissenschaftliches Projekt / Scientific Project							2PS+*	*	15			
3.	Allgemeine Schlüsselqualifikationen / Schlüsselqualifikationen / General Key Qualifications												
3.1	Wissenschaftliches Arbeiten / Scientific Work	*	*	5									
4.	Pflichtmodul „Masterarbeit“ / Compulsory Module „Master Thesis“												30
4.1	Kolloquium / Colloquium										2K	P/V	
4.2	Schriftliche Arbeit / Written Thesis Paper											sA	
	Summe / Total	~24		30	~20		30	~16		30	2		30

Key to standard study plan:

* regarding the scope and types of course as well as scope and type of the continuous module-related assessments, see the module descriptions for the modules that may be selected for this study program

1) Instead of an elective module in the specialization area worth 5 CP, a module in the "CoMeT - Competencies and Methods Training" area worth 5 CP may be completed.

CP	= Credit Points
C	= Colloquium as per § 9 para. 7 GSER
P	= Presentation as per § 14 para. 9 GSER
SP	= Scientific Project as per § 9 para. 5 GSER
CA	= Continuous module-related assessment(s) as per § 14 para. 2 of the General Study and Examination Regulations (GSER)
S	= Seminar as per § 9 para. 4 GSER
WT	= Written thesis as per § 14 para. 7 GSER
SHW	= Semester hours per week
T	= Tutorial as per § 9 para. 6 GSER
D	= Defending as per § 14 para. 14

In accordance with § 7 para. 7 of the General Study and Examination Regulations (GSER), for each module, the module coordinator may specify binding participation requirements, which must be satisfied before the start of participation in the module.

In accordance with § 7 para. 8 of the General Study and Examination Regulations (GSER), for each module, the module coordinator may specify pre-examination requirements in the form of un-graded continuous module-related assessments, which are necessary as a binding requirement for admission to another assessment or written examination for this module.