

# Study program list

## Master Digital Transformation Technologies and Management (Study regulations 2024)

Die Lehrveranstaltungsform (bspw. Vorlesung/Übung), die Prüfungsform sowie weitere modulspezifische Informationen finden Sie im Modulhandbuch Masterstudiengänge – Fakultät für Empirische Humanwissenschaften und Wirtschaftswissenschaften – Abteilung Wirtschaftswissenschaft. Weitere Informationen hinsichtlich der Durchführung und Terminierung der Veranstaltungen können dem **LSF-Portal** (<https://www.lsf.uni-saarland.de/qjsserver/rds?state=user&type=0>) entnommen werden. Bitte beachten Sie, dass der Turnus einzelner Informatikveranstaltungen alternieren kann.

The type of course (e.g. lecture/exercise), the type of examination and other module-specific information can be found in the module handbook for Master's degree programs - Faculty of Empirical Human Sciences and Economics - Department of Economics. Further information regarding the implementation and scheduling of the courses can be found in the **LSF portal** (<https://www.lsf.uni-saarland.de/qjsserver/rds?state=user&type=0>). Please note that the rotation of individual computer science courses may alternate.

### Wichtige Links / Informationen – Important links and further information:

#### 1) Information about courses and lecture material

##### Moodle LMS

Moodle Learning platform Economics → no registration needed: <https://moodle.uni-saarland.de/login/index.php> → Login with HIZ-ID + password

##### LSF

Course catalogue Saarland University → no registration needed: <https://www.lsf.uni-saarland.de/qjsserver/rds?state=user&type=0> → Login with HIZ-ID + password

##### Moodle CMS

Moodle Learning platform Informatics → registration needed: [https://cms.sic.saarland/system/student\\_accounts/register](https://cms.sic.saarland/system/student_accounts/register), then you can follow the instructions about course registration and material for the computer science courses

#### 2) Module information

##### Business Science

[https://www.uni-saarland.de/fileadmin/upload/fakultaet-hw/vipa/modulhandbuecher/Archiv\\_MHB\\_Bachelor/MHB\\_Bachelor.pdf](https://www.uni-saarland.de/fileadmin/upload/fakultaet-hw/vipa/modulhandbuecher/Archiv_MHB_Bachelor/MHB_Bachelor.pdf)  
[https://www.uni-saarland.de/fileadmin/upload/fakultaet-hw/vipa/modulhandbuecher/Archiv\\_MHB\\_Master/MHB\\_Master.pdf](https://www.uni-saarland.de/fileadmin/upload/fakultaet-hw/vipa/modulhandbuecher/Archiv_MHB_Master/MHB_Master.pdf)

##### Computer Science

[https://www.uni-saarland.de/fileadmin/upload/studium/angebot/mhb\\_ba/2024/MHB\\_BA\\_Info24.pdf](https://www.uni-saarland.de/fileadmin/upload/studium/angebot/mhb_ba/2024/MHB_BA_Info24.pdf)  
[https://www.uni-saarland.de/fileadmin/upload/studium/angebot/master/MBH2023\\_2024/MHB\\_MA\\_Info24.pdf](https://www.uni-saarland.de/fileadmin/upload/studium/angebot/master/MBH2023_2024/MHB_MA_Info24.pdf)

### Struktur – Überblick

| I                         |           | II  |           | III                           |           | IV                     |           |
|---------------------------|-----------|---|-----------|-------------------------------|-----------|------------------------|-----------|
| <b>Digital Management</b> | <b>36</b> | <b>Digital Technologie and Infrastructure</b> | <b>36</b> | <b>European Collaboration</b> | <b>12</b> | <b>Scientific Work</b> | <b>36</b> |
| Unterbereiche 1-12        | 24        | Stammbereich                                  | 18        | Europäische Sprache           | 12        | Seminar Thesis         | 6         |
| Anwendungsmodul           | 6         | Anwendungsmodul                               | 6         | Europäische Kollaboration     |           | Master Thesis          | 30        |
| Aus beiden wählbar        | 6         | Aus beiden wählbar                            | 12        | Sprachtechnologie             |           |                        |           |

### Structure – Overview

| I                         |           | II  |           | III                           |           | IV                     |           |
|---------------------------|-----------|---|-----------|-------------------------------|-----------|------------------------|-----------|
| <b>Digital Management</b> | <b>36</b> | <b>Digital Technologie and Infrastructure</b> | <b>36</b> | <b>European Collaboration</b> | <b>12</b> | <b>Scientific Work</b> | <b>36</b> |
| Sub-Areas 1-12            | 24        | Core Courses                                  | 18        | European Language             | 12        | Seminar Thesis         | 6         |
| Application Module        | 6         | Application Module                            | 6         | European Collaboration        |           | Master Thesis          | 30        |
| Optional out of both      | 6         | Optional out of both                          | 12        | Language Technology           |           |                        |           |

| Block  | Name Block / Prüfung  | ECTS | T   | L      | Person                        | P  | F |
|--|---|------|-----|--------|-------------------------------|----|---|
| <b>Digital Management</b>                    |   |      |     |        |                               | 36 |   |
| 1  | <b>Bankbetriebslehre – Banking Theory</b>                             |      |     |        |                               |    |   |
|  | 1.1. Bankenaufsicht   | 6    | S   | D      | Waschbusch                    |    |   |
|  | 1.2. Bankbilanzierung   | 6    | W   | D      | Waschbusch                    |    |   |
| 2  | <b>Betriebswirtschaftliche Steuerlehre – Taxes</b>                    |      |     |        |                               |    |   |
|  | 2.1. Betriebswirtschaftliche Steuerlehre A                            | 6    | S   | D      | Kussmaul                      |    |   |
|  | 2.2. Betriebswirtschaftliche Steuerlehre B                            | 6    | W   | D      | Kussmaul                      |    |   |
|  | 2.3. Steuerberatung und Unternehmensbesteuerung                       | 6    | S   | D      | Kussmaul                      |    |   |
|  | 2.4. Tax Systems around the World                                     | 6    | S   | E      | Ortmann                       |    |   |
| 3  | <b>Controlling – Accounting</b>                                       |      |     |        |                               |    |   |
|  | 3.1. Entscheidungsrechnungen im Controlling                           | 6    | S   | D      | Baumeister                    |    |   |
|  | 3.2. Koordinationskonzepte des Controlling                            | 6    | W   | D      | Baumeister                    |    |   |
|  | 3.3. Aktuelle Controlling-Themen aus der SAP-Praxis                   | 6    | S   | D      | Baumeister                    |    |   |
|  | 3.4. Business Analytics im Controlling mit R                          | 6    | S   | D      | Baumeister                    |    |   |
|  | 3.5. Controlling mit SAP S/4HANA2                                     | 6    | S   | D      | Baumeister                    |    |   |
|  | 3.6. Rechnergestütztes Controlling                                    | 3    | W   | D      | Baumeister                    |    |   |
|  | 3.7. SAP S/4HANA – Integration von Geschäftsprozessen (TS410)         | 3    | S/W | D      | Baumeister                    |    |   |
| 4  | <b>Entrepreneurship</b>   |      |     |        |                               |    |   |
|  | 4.1. Digital Entrepreneurship   | 6    | W   | E      | Schnellbacher                 |    |   |
|  | 4.2. Collaborative Development of Conversational Agents               | 6    | S/W | D      | Loos                          |    |   |
|  | 4.4. Corporate Entrepreneurship                                       | 6    | S   | D      | Heidenreich                   |    |   |
|  | 4.5. Unternehmergeist / Start-up spirit                               | 6    | W   | D/E    | Schnellbacher                 |    |   |
| 5  | <b>Handelsmanagement</b>  |      |     |        |                               |    |   |
|  | 5.1. Handelsmanagement  | 6    | W   | D      | Popp                          |    |   |
|  | 5.2. Geschäftsmodelle und Wertkreation im digitalisierten Handel      | 6    | S   | D      | Popp                          |    |   |
| 6  | <b>Marketing</b>  |      |     |        |                               |    |   |
|  | 6.1. Konsumentenverhalten   | 6    | S   | D      | Gröppel-Klein                 |    |   |
|  | 6.2. Marktforschung I   | 6    | W   | D      | Gröppel-Klein                 |    |   |
|  | 6.3. Marktforschung II: Strukturgleichungsmodellierung                | 3    | S   | D      | Heidenreich/Popp              |    |   |
|  | 6.4. Empirisches Projekt zum Dienstleistungsmanagement                | 3    | S   | D      | Popp                          |    |   |
|  | 6.5. Empirisches Projekt zum Handel                                   | 3    | W   | D      | Popp                          |    |   |
|  | 6.6. Empirisches Projekt zum Konsumentenverhalten                     | 3    | S   | D      | Gröppel-Klein                 |    |   |
|  | 6.7. Empirisches Projekt zum Marketing                                | 3    | W   | D      | Gröppel-Klein                 |    |   |
|  | 6.8. Markenführung am Point-of-Sale                                   | 3    | S   | D      | Gröppel-Klein                 |    |   |
|  | 6.9. Online Marketing & Online Retailing                              | 3    | S   | D      | Gröppel-Klein/Popp            |    |   |
| 7  | <b>Nationalökonomie – Wirtschaftstheorie – Economics</b>              |      |     |        |                               |    |   |
|  | 7.1. Spieltheorie   | 6    | S   | D      | Dimitrov                      |    |   |
|  | 7.2. Märkte und Strategien I  | 3    | W   | D      | Dimitrov                      |    |   |
|  | 7.3. Märkte und Strategien II   | 3    | S   | D      | Dimitrov                      |    |   |
| 8  | <b>Nationalökonomie – Wirtschaftspolitik – Economic policy</b>        |      |     |        |                               |    |   |
|  | 8.1. Political Economy  | 6    | W   | E      | Israel *(till winter term 24) |    |   |
|  | 8.2. Europäische Integration  | 6    | S   | D      | Israel *(till winter term 24) |    |   |
| 9  | <b>Rechnungswesen und Finanzwirtschaft – Finance</b>                  |      |     |        |                               |    |   |
|  | 9.1. Financial Reporting  | 6    | S   | D      | Knobloch                      |    |   |
|  | 9.2. Unternehmensfinanzierung und Kapitalmarkttheorie                 | 6    | W   | D      | Knobloch                      |    |   |
|  | 9.3. Bewertungs- und Optionspreistheorie                              | 3    | W   | D      | Knobloch                      |    |   |
|  | 9.5. Asset Pricing  | 6    | S   | E      | Hollstein                     |    |   |
|  | 9.6. Advanced Econometrics  | 6    | W   | E      | Hollstein                     |    |   |
|  | 9.7. Time-Series Econometrics   | 6    | S   | E      | Hollstein                     |    |   |
|  | 9.8. Risikomessung und Value at Risk                                  | 6    | W   | D      | Sanddorf-Köhle                |    |   |
| 10   | <b>Operations Management</b>  |      |     |        |                               |    |   |
| 10.1. Produktion und Supply Chain Management | 6   | W    | D   | Grosse |                               |    |   |
| 11   | <b>Technologie- und Innovationsmanagement – Innovation Management</b> |      |     |        |                               |    |   |
|  | 11.1. Innovationsmarketing  | 6    | S   | D      | Heidenreich                   |    |   |
|  | 11.2. Technologiemanagement   | 6    | W   | D      | Heidenreich                   |    |   |
|  | 11.3. Design und Analyse von Experimenten                             | 6    | S   | D      | Heidenreich                   |    |   |
|  | 11.4. Human-centered Information Systems                              | 6    | S   | E      | Morana                        |    |   |
|  | 11.5. Project Management and Execution                                | 6    | W   | D      | Loos                          |    |   |
|  | 11.6. Wirtschaftsinformatik I   | 6    | S/W | D      | Loos                          |    |   |
|  | 11.7. Wirtschaftsinformatik II  | 6    | S/W | D      | Loos                          |    |   |
|  | 11.8. Digital Human Resource Management I: Basics (DHRM I)            | 6    | W   | D/E    | Strohmeier                    |    |   |
| 12   | <b>Wirtschaftsprüfung – Auditing</b>                                  |      |     |        |                               |    |   |
|  | 12.1. Konzernrechnungslegung  | 6    | W   | D      | Olbrich                       |    |   |
|  | 12.2. Unternehmensbewertung   | 6    | S   | D      | Olbrich                       |    |   |
| 13   | <b>Anwendungsmodul(e) – Application Modules</b>                       |      |     |        |                               |    |   |
|  | 13.1. New Product Development   | 6    | S   | E      | Schnellbacher                 |    |   |
|  | 13.2. BioTech Entrepreneurship  | 6    | S   | E      | Schnellbacher                 |    |   |
|  | 13.3. Collaborative Business Process Management                       | 6    | S   | E      | Loos                          |    |   |
|  | 13.5. Studienprojekt  | 6    | S/W | D/E    | N.N.                          |    |   |

| Digital Technology and Infrastructure |   |   |   |   |      |              | 36 |    |                      |
|---------------------------------------|---|---|---|---|------|--------------|----|----|----------------------|
| II                                    | 1   | <b>Stammbereich – Core course *Achtung / Please note*</b> |   |   |      |              | 18 | 12 |                      |
|                                       |   | 1.1.  | Business Analytics I: Basic Analyt.(äq. zu D HRM III: Basic Analyt.)      | 6 | D/E  | W            |    |    | Strohmeier           |
|                                       |   | 1.2.  | Business Analytics II: Advan. Analyt. (äq. zu D HRM IV: Advanced Analyt.) | 6 | D/E  | S            |    |    | Strohmeier           |
|                                       |   | 1.3.  | Data Science  | 6 | E    | S            |    |    | Maass                |
|                                       |   | 1.4.  | Digital Management Research (äquivalent zu Digital HRM II: Research)      | 6 | D/E  | W            |    |    | Strohmeier           |
|                                       |   | 1.5.  | Predictive Analytics with R   | 6 | E    | S            |    |    | Loos                 |
|                                       |   | 1.6.  | Process Management & Analytics  | 6 | E    | S            |    |    | Loos                 |
|                                       |   | 1.7.  | Process Mining  | 6 | E    | W            |    |    | Loos                 |
|                                       |   | 1.8.  | Artificial Intelligence   | 9 | E    | W            |    |    | Hoffmann             |
|                                       |   | 1.9.  | Automated Reasoning   | 9 | E    | W            |    |    | Waldmann et al.      |
|                                       |   | 1.10.   | Big Data Engineering (früher: Informationssysteme)                        | 6 | D/E  | S            |    |    | Dittrich             |
|                                       |   | 1.11.   | Complexity Theory   | 9 | E    | S/W          |    |    | Bläser               |
|                                       |   | 1.12.   | Computer Graphics   | 9 | E    | W            |    |    | Slusallek            |
|                                       |   | 1.13.   | Consulting  | 6 | D    | W            |    |    | Loos                 |
|                                       |   | 1.14.   | Data Networks   | 9 | E    | S            |    |    | Feldmann             |
|                                       |   | 1.15.   | Generative AI for Data Insights on SAP BTP                                | 6 | D    | S            |    |    | Loos                 |
|                                       |   | 1.16.   | eGovernment – Geschäftsprozesse i.d.ö.Verw.                               | 6 | D    | S            |    |    | Loos                 |
|                                       |   | 1.17.   | Explainable Artificial Intelligence for Business Analytics                | 6 | E    | S            |    |    | Loos                 |
|                                       |   | 1.18.   | Human Computer Interaction  | 9 | E    | W            |    |    | Schmitz              |
|                                       |   | 1.19.   | Image Processing and Computer Vision                                      | 9 | E    | S            |    |    | Weickert             |
|                                       |   | 1.20.   | Introduction to Computational Logic                                       | 9 | E    | S            |    |    | Smolka               |
|                                       |   | 1.21.   | Elements of Machine Learning  | 6 | E    | W            |    |    | Valera Martinez      |
|                                       |   | 1.22.   | New Work – Neue Arbeitswelten durch Digitalisierung                       | 3 | D    | W            |    |    | Loos                 |
|                                       |   | 1.23.   | Programmierung I  | 9 | D/E  | W            |    |    | Hack                 |
|                                       |   | 1.24.   | Programmierung II   | 9 | D/E  | S            |    |    | Hermanns             |
|                                       |   | 1.25.   | Security  | 9 | E    | W            |    |    | Holz                 |
|                                       |   | 1.26.   | Semantics   | 9 | E    | W            |    |    | Dreyer               |
|                                       |   | 1.27.   | Service Engineering   | 6 | E    | W            |    |    | Maass                |
|                                       |   | 1.28.   | Software Engineering  | 9 | E    | S            |    |    | Apel                 |
|                                       |   | 1.29.   | Systemarchitektur   | 9 | D    | S            |    |    | Reineke              |
|                                       |   | 1.30.   | Verification  | 9 | E    | S            |    |    | N.N.                 |
|                                       |   | 1.31.   | Operating Systems   | 9 | E    | S            |    |    | Kaufmann             |
|                                       |   | 1.32.   | Optimization  | 9 | E    | W            |    |    | Flaßkamp             |
|                                       |   | 1.33.   | Deep learning system design (Kaunas university)                           | 6 | E    | W            |    |    | Saudargienė          |
|                                       |   | 1.34.   | Digital transformation and ICT infrastructure (Kaunas university)         | 6 | E    | S            |    |    | Vitkutė-Adžgauskienė |
|                                       |   | 1.35.   | IT governance (Kaunas university)   | 6 | E    | S            |    |    | Balvocius            |
|                                       | 1.35.   | Social media analytics (Kaunas university)                | 6   | E | S    | Kasperuniene |    |    |                      |
| 1.36.                                 |   |   |   |   |      |              |    |    |                      |
| 2                                     | <b>Anwendungsmodul(e) – Application modules</b> |   |   |   |      | 6            |    |    |                      |
| 2.1.                                  | Studienprojekt                                  |   |   |   | N.N. |              |    |    |                      |

| European Collaboration |   |   |   |   |     |      | 12   |
|------------------------|---|---|---|---|-----|------|------|
| III                    | 1   | <b>Europäische Sprachen – European Languages</b>                      |   |   |     |      | Tba. |
|                        | 1.1   | Deutsch als Fremdsprache A1 / A2 – German as foreign language A1 / A2 | 6 | D | S/W | SZSB |      |
|                        | 1.2   | Other foreign language A1/ A2/ B1/ B2**                               | 6 |   | S/W | SZSB |      |
|                        | 2   | <b>Europäische Kollaboration – European Collaboration</b>             |   |   |     |      | Tba. |
|                        |   | Introduction to European Cultures and Intercultural Communication     | 3 | E | W/S |      |      |
| 3                      | <b>Sprachtechnologien – Language Technologies</b> |   |   |   |     | Tba. |      |

| Wissenschaftliches Arbeiten – Scientific Work |  |  |         | 36 |
|---|--|--|---------|----|
| 1   | <b>Seminar – Thesis ***</b>  |  | D/E S/W | 6  |
| 2   | <b>Master – Thesis ***</b>   |  | D/E S/W | 30 |
| IV  | <b>Hinweis:</b> Bitte beachten Sie, dass das Absolvieren von Seminar- und Abschlussarbeiten ausschließlich an den Lehrstühlen der Fakultät für Empirische Humanwissenschaften und Wirtschaftswissenschaften – Abteilung Wirtschaftswissenschaft möglich ist. |  |         |    |
|   | <b>Note:</b> Please note that the completion of seminar papers and theses is only possible at the chairs of the Faculty of Empirical Human Sciences and Economics – Department economics.  |  |         |    |

#### LEGENDE / LEGEND:

T = Semester / Term, L = Sprache / Language, P = Pflicht / Mandatory, F = Frei wählbar aus Unterbereich / Selectable out of subarea, D = Deutsch / German, E = Englisch / English, S = Sommersemester / Summer term, W = Wintersemester / Winter term

#### \*Hinweis / Note\*

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Bitte beachten Sie die abweichenden Prüfungszeiträume und -rhythmen der **Fakultät für Mathematik und Informatik**. Ebenso sollte darauf geachtet werden, dass die hier gelisteten Prüfer variieren können, da ein semesterspezifischer Wechsel bei manchen Prüfungen erfolgen kann. Über die aktuell zugeordnete Person gibt das LSF semestersweise Aufschluss.

Please note the different examination periods and rhythms of the **Faculty of Mathematics and Computer Science**. You should also note that the examiners listed here may vary, as there may be a semester-specific change for some examinations. The LSF provides information on the currently assigned person on a semester-by-semester basis.

**\*\* Except Mother tongue and English  
Each Level (A1, A2, B1, B2) 6 CP**

**\*\*\* Students who are currently studying abroad at Vytautas Magnus University (VMU) are permitted to complete their Scientific Work (36 ECTS), including the Seminar Thesis (6 ECTS) and the Master Thesis (30 ECTS), while remaining at VMU. This regulation has been agreed upon with our partner universities. Therefore, it is possible to conduct your Seminar, Project, and Master Thesis at VMU or at Saarland University. Please note, however, that students are responsible for arranging the supervision and all organizational matters directly with VMU.**