**Checklist Master’s degree Industrial Engineering and Management, University of Groningen**

Name candidate:

**Fill out the table Content Bachelor’s Degree Programme**

In order to assess how the bachelor’s degree programme connects to the intended master’s degree programme please explain which elements/courses contributed to the mentioned IEM topics in the table.

In addition, please provide a course description of all courses you mention at the end of this document.

As an example the corresponding course units within the IEM bachelor’s degree programme of the University of Groningen have been placed between brackets. The content of these can be found online: [www.rug.nl/ocasys/](http://www.rug.nl/ocasys/) including the intended learning outcomes.

Table1: **Required Bachelor’s Degree Topics/Courses**

|  |  |
| --- | --- |
| **IEM topic**  (example course(s) with link) | **Contributing key elements/courses from your Bachelor Programme** |
| **IEM Core courses** | |
| **Calculus** [(Calculus 1 (for IEM)](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE003-05),  [Calculus 2 (for IEM)](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE017-05)) |  |
| **Linear Algebra**  ([Linear Algebra for IEM](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE009-05)) |  |
| **Programming**  ([Programming, Modelling and Simulation](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE008-05)) |  |
| **Basics Materials/Chemistry**  ([Materials and Molecules](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE023-05)) |  |
| **Operations Research**  ([Operations Research](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE007-05)) |  |
| **Design/Methodology**  ([Research and Design Methodology](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE015-05)) |  |
| **Fluid Dynamics/Mechanics**  ([Fluid Dynamics](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE004-05)) |  |
| **Systems**  ([System Dynamics](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE016-05) , [Dynamics of Engineering Systems](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE035-05)) |  |
| **IEM Management /Business courses** | |
| **Supply Chain Management**  ([Global Supply Chain](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE005-05)) |  |
| **Production Planning and Quality Control**  ([Production Planning and Quality Control](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE014-05)) |  |
| **Innovation/Entrepreneurship**  ([Outlining and implementing innovation strategy](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE013-05)) |  |
| **Organisational Behaviour**  ([Organizational Behaviour and Group Dynamics](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE012-05)) |  |
| **Other management/Business courses**  (such as marketing, accounting, business law) |  |
| **IEM Specialization courses SPE** | |
| **Mass transfer and Reactor Engineering**  ([Reactor Engineering](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE029-05) , [Gas-Liquid Mass Transfer](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE036-05)) |  |
| **Thermodynamics**  ([Technical Thermodynamics (IEM)](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE031-05)) |  |
| **Process and product Design**  ([Process Design and Equipment](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE039-05), [Product Technology (IEM)](https://www.rug.nl/ocasys/fwn/vak/show?code=WBIE028-05)) |  |
| **Physical Transport Phenomena**  ([Transport Phenomena 2](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE042-05)) |  |
| **IEM Specialization Courses PTL** | |
| **Signals and Systems**  ([Signals and Systems](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE030-05)) |  |
| **Control Theory**  ([Control Engineering](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE034-05)) |  |
| **Mechanics**  ([Mechanics for IEM](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE024-05)) |  |
| **Computer aided design/manufacturing**  ([Computer Aided Design and Manufacturing](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE033-05)) |  |
| **Complex networks** [(Modelling and analysis of complex networks](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE025-05)) |  |
| **Design and Production**  ([Production Techniques](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE040-05), [Design and Construction for IEM](https://www.rug.nl/ocasys/rug/vak/show?code=WBIE018-05)) |  |
| **Experience in practical courses**  explain experimental skills in practical courses |  |
| **Do you have individual research skills?**  For instance in a project, literature thesis or practical. Please elaborate |  |

**Course description**

Please provide clear and specific course descriptions of all the courses mentioned in the right-hand column of table 1. Provide name, ECTS/credits, learning outcomes, overview, hours per week, assessment form(s), literature used, etc. below.