## Curriculum schedule

### Study programme
M.Sc. Human Technology in Sports and Medicine (M.Sc. TSM)

### Examination regulations by:
2007/04/01 in its respectively valid version

### Valid for:
Students who started winter term semester 2017/18

### Version:
July 2017

### Module | SRS | Courses (type of class) | SHW | CP/WLH
---|---|---|---|---
TSM1 | 1. | Basics I – Mathematics & Physics | 4 | 6/180
  1.1 Seminar: Mathematics and physics (SE) | 2
  1.2 Tutorial: Mathematics and physics (TUT) | 2

TSM2 | 1. | Basics II – Biomechanics | 8 | 10/300
  2.1 Seminar: Biomechanics (SE) | 2
  2.2 Seminar: Mechanobiology (SE) | 2
  2.3 Seminar: Ergonomy (SE) | 2
  2.4 Tutorial: Biomechanics and Mechanobiology (TUT) | 2

TSM3 | 1. | Basics III – Data management &-analysis | 7 | 8/240
  3.1 Seminar: Data management/programming (SE) | 2
  3.2 Statistics lecture series (LEC) | 1
  3.3 Seminar: Advanced statistics (TUT) | 2
  3.4 Tutorial: Data management/programming (TUT) | 2

TSM4 | 1. | Basics IV – Material & construction | 4 | 6/180
  4.1 Seminar: Materials and construction (SE) | 2
  4.2 Tutorial: Materials and construction (TUT) | 2

TSM5 | 2. | Technology I - Orthopaedic technologies | 4 | 6/180
  (orthopaedic aids, prostheses, orthoses, exo skeletons, robots, joint replacements) | 2
  5.1 Seminar - Orthopaedic aids (SE) | 2
  5.2 Seminar - Joint replacements and implants (SE) | 2

TSM6 | 2. | Technology II - Footwear, apparel and playing surfaces | 6 | 6/180
  6.1 Seminar: Footwear and playing surfaces (sports and rehabilitation) (SE) | 2
  6.2 Seminar Apparel (sports and rehabilitation) (SE) | 2
  6.3 Seminar: Management (SE) | 2

TSM7 | 2. | Technology III - Sports equipment and instrumentation | 4 | 6/180
  7.1 Seminar: Instrumentation technology (SE) | 2
  7.2 Seminar: Sports and rehabilitation equipment (SE) | 2

TSM8 | 2. | Technology IV - Modeling and simulation | 4 | 6/180
  8.1 Seminar: Multi body modeling (SE) | 2
  8.2 Seminar: Finite element modeling (SE) | 2

TSM9 | 2. | Technology V - Performance diagnostics in sports, medicine and rehabilitation | 4 | 6/180
  9.1 Seminar: Biomechanical and physiological diagnostics (SE) | 2
  9.2 Tutorial: Biomedical diagnostics (TUT) | 2

TSM10 | 3. | Research methods and application | 4 | 6/180
  10.1 Seminar: Ethics, technology and research in humans (SE) | 2
  10.2 Seminar: Research methods (SE) | 2

TSM11 | 3. | Project I - Sports technology project – applied research methods | 8 | 12/360
  11.1-I Seminar: Applied research methods (SE) | 2
  11.2-I Project: Sports technology | 6
  OR
  Project II -Technology in medicine project – applied research methods | 8
  11.1-II Seminar: Applied research methods (SE) | 2
  11.2-II Project: Medical technology | 6

TSM12 | 3. | Internship (> 12 weeks) | | 12/360

TSM13 | 4. | Master Thesis | 2 | 30/900
  13.1 Seminar: Scientific paper writing (SE) | 2
  13.2 Thesis | 2

### Abbreviations:
- TSM = Human Technology in Sports and Medicine, SRS = subject-related semester, SHW = semester hours per week, CP = credit points, WLH = workload hours, LEC = lecture, SE = seminar, TUT = exercise/tutorial, FT = field trip

### Comments:
The specifications regarding the academic performances and examination results as well as the attendance requirements are listed in the module handbook.

1 A credit point corresponds to a workload of 30 hours, which can be achieved by attendance of lectures, seminars and courses as well as by means of self-study (e.g. preparatory- and follow-up work, tutorials etc.).