

**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 first-year students:** Winter term 2014/15 onward  
**Version:** June 2014

Module	SRS	Courses (type of class)	SH W	CP <sup>1</sup> /WLH
TSM1	1.	<b>Basics I - Mathematics &amp; Physics</b> Mathematics and physics (SE) Mathematics and physics (TUT)	4 2 2	6/180
TSM2	1.	<b>Basics II - Biomechanics</b> Biomechanics (SE) Mechanobiology (SE) Ergonomy (SE) Biomechanics and Mechanobiology (TUT)	8 2 2 2 2	10/300
TSM3	1.	<b>Basics III - Data management &amp; analysis</b> Data management/programming (SE) Advanced statistics (SE) Data management/programming (TUT)	6 2 2 2	8/240
TSM4	1.	<b>Basics IV - Material &amp; construction</b> Materials and construction (SE) Materials and construction (TUT)	4 2 2	6/180
TSM5	2.	<b>Technology I - Orthopaedic technologies</b> (orthopaedic aids, prostheses, orthoses, exo skeletons, robots, joint replacements) Orthopaedic aids (SE) Joint replacements and implants (SE)	4 2 2	6/180
TSM6	2.	<b>Technology II - Footwear, apparel and playing surfaces</b> Footwear and playing surfaces (sports and rehabilitation)(SE) Apparel (sports and rehabilitation) (SE) Management (SE)	6 2 2 2	6/180
TSM7	2.	<b>Technology III - Sports equipment and instrumentation</b> Instrumentation technology (SE) Sports and rehabilitation equipment (SE)	4 2 2	6/180
TSM8	2.	<b>Technology IV - Modeling and simulation</b> Multi body modeling (SE) Finite element modeling (SE)	4 2 2	6/180
TSM9	2.	<b>Technology V - Performance diagnostics in sports, medicine and rehabilitation</b> Biomechanical and physiological diagnostics (SE) Biomedical diagnostics (TUT)	4 2 2	6/180
TSM10	3.	<b>Research methods and application</b> Ethics, technology and research in humans (SE) Research methods (SE)	4 2 2	6/180
TSM11	3.	<b>Project I - Sports technology project - applied research methods</b> Applied research methods (SE) Sports technology  <b>OR</b> <b>Project II -Technology in medicine project - applied research methods</b> Applied research methods (SE) Medical technology	8 2 6  2 6	12/360
TSM12	3.	<b>Internship (&gt; 12 weeks)</b>		12/360
TSM13	4.	<b>Master Thesis</b> Scientific paper writing (SE) Thesis	2 2	30/900
<b>Total</b>			<b>58</b>	<b>120/3600</b>

**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.

<sup>1</sup> 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.).