Master degree programme Applied Physics
Appendices to the Teaching and Examination Regulations

Appendix I Teaching outcomes of the degree programme (art. 1.3)
The degree programme aims to train the students in such a way that they acquire the insight, skills and knowledge that allows the recipient of the degree to establish a professional career in the field of Applied Physics.

Appendix II Specializations of degree programme (art. 2.2)
The degree programme has no particular specialization, but participates in the track Advanced Materials of the Physics and Chemistry master degree programmes.

Appendix III Content of degree programme (art. 2.3)

Module	ECTS	Assessment	Practical	Prerequisites
Computational Physics	5	Assignments, reports	X	
Mechanical Properties	5	Assignments		
Mesoscopic Physics	5	written exam, presentation, report		
Cross-disciplinary Materials Science	5	Report		
Structure at Macro, Micro and Nano Scale	5	Written exam, report/assignment		
Functional Properties	5	Written exam, mandatory homework		
Characterisation of Materials	5	Written exam		
Courses in Business and Management	5	See appendix IV	see app. IV	
Optional courses in Science & Engineering	15	See appendix IV	see app. IV	
Internship in Industry	20	Assessment of performance, report, presentation		Passed 35 ECTS of the masters's degree programme
Applied Physics Research	45	Assessment of performance, report, presentation, attendance general physics colloquium		Passed 35 ECTS of the masters's degree programme

Appendix IV Optional Modules (art. 2.4)

Optional Courses in Science & Engineering

Module	ECTS	Assessment	Practical
Advanced Quantum Mechanics	5	Written exam	
Statistical Signal Processing	5	Written exam, homework assignments, project	x
Calculus of Variations and Optimal Control	5	Written exam, assignments	
Computational Fluid Dynamics	5	Oral exam, practical exam	x
Computational Methods of Science	5	Written exam, practical exam	x
Technical Thermodynamics	5	Written exam	
Functional Analysis	5	Homework assignments, oral exam	
Mechatronics	5	Written exam	
Micromechanics	5	Oral exam, assignments and/or paper	
Molecular Dynamics	5	Assignments	
Modern Laser Microscopy	5	Written exam	
Non Linear Optics	5	Written exam	
Numerical Mathematics 2	5	Written exam, practical exam	

Physics of Lasers	5	Written or Oral exam	
Polymer Physics	5	Written exam, oral presentation	
Radiation Physics	5	Written exam, oral presentation	
Robotics	5	Written exam	
Statistical Methods in Physics	5	Written exam	
Surfaces and Interfaces	5	Written exam	
Theoretical Condensed Matter Physics	5	Written exam, assignments	
Ultrafast Time-Resolved Spectroscopy	5	Written exam, report	
Courses in Applied Physics or Quantum Universe, on individual approval of the Board of Examiners (max. of 10 ECTS)		As indicated in appendix III or IV of the corresponding programme	See app. III or IV of the corresponding programme

Optional Business courses

Module	ECTS	Assessment	Practical
Environmental and Resource Economics	5	Written exam	
Global Change A	5	Written exam, assignments	x
Process Improvement & Quality Control	5	Written exam, assignments, presentation	
Strategic Management & Technology	5	Assignments, presentation	
Sustainability for Engineers	5	Practical exam	x
Other courses in Business and Management on individual approval of the Board of Examiners	5	As indicated in appendix III or IV of the corresponding programme	See app. III or IV of the corresponding programme

Appendix V Entry requirements (art. 3.2)

For students admitted to the programme there are no entry requirements for the individual Modules.

Appendix VI Admission to the degree programme and different specializations (art. 4.1.1 and 4.2)

Holders of the following Bachelor's degrees from the University of Groningen are considered to have sufficient knowledge and skills and will be admitted to the Master's degree programme in Applied Physics on that basis:

- BSc Technische Natuurkunde