

MODULE DESCRIPTIONS

MASTER PROGRAMME

“OPERATION AND MANAGEMENT OF MARITIME SYSTEMS”

Version: 22. February 2012



PM 01 – Safety, Security and Ecology in Maritime Systems	4
PM 02 – Integrated Manoeuvring/Propulsion and Navigation Systems	6
PM 03 – Human Resource Management/Organization Management	8
PM 04 – Maritime Business Communication	10
PM 05 – Maritime Management/Port Operations	12
PM 06 – Management and Business Simulation	14
WPM 01 – Maritime Law	16
WPM 02 – Integrated Manoeuvring/Propulsion and Navigation Systems	18
WPM 03 – Operation, Monitoring & Maintenance of Technical Systems	20
WPM 04 – Operational and Strategic Management in Shipbuilding.....	22
PM 07 – Master-Thesis and Kolloquium	24

Curriculum

Curriculum

Module		1. Semester		2. Semester		3. Semester		Σ	
		SWS	CR	SWS	CR	SWS	CR	CR	CR
PM 01	Safety, Security and Ecology in Maritime Systems	7 SU	10						10
PM 02	Technical Aspects and Simulation of Maritime Systems			5 SU 1 Si	9				9
PM 03	Human Resources/Organisational Management			4 SU	6				6
PM 04	Maritime Business Communication	3 S	5	2 S	4				9
PM 05	Maritime Management/Port Operations	6 SU	9						9
PM 06	Management and Business Simulation			3 SU	5				5
WPM 01	Maritime Law	2 SU	3	2 SU	3				6
WPM 02	Integrated Manoeuvring/Propulsion and Navigation Systems	1 SU 1 Si	3	2 SU	3				6
WPM 03	Operation, Monitoring & Maintenance of Technical Systems	2 SU	3	2 SU	3				6
WPM 04	Operational & Strategic Management in Shipbuilding	2 SU	3	2 SU	3				3
PM 07	Master-Thesis							30	30
	Total	20	30*	19	30*			30	90

Explanations:

According to the ECTS-System the workload within one semester shall be 30 credits.

*) Calculating the credits only two elective modules were taken into account.

The elective modules give the possibility to deepen and to complement the curriculum to the individual focus. Alternatively to the given elective module other module from other master programmes of the Hochschule Wismar can be chosen if there is a functional connection to this curriculum. The examination board has to approve this other modules in advance.

An elective module will be on if at least four students have chosen this module.

Abbreviations:

PM	Compulsory module
WPM	Elective module
SWS	Contact hours
SU	Seminaristic Lesson
S	Seminar
Si	Simulator exercise

For a better readability in the following module descriptions only the male form is used when describing gender-related terms. This form is to understand gender-neutral; women are naturally include.

PM 01 – Safety, Security and Ecology in Maritime Systems

Name of Module	PM 01 – Safety, Security and Ecology in Maritime Systems
Responsible Persons	Prof. Dr.-Ing. Sven Dreeßen Prof. Dr.-Ing. Thomas Böcker
Contents	<p>Socio-technical Systems and Risk: Risk theory, risk assessment, risk acceptance, risk analyses, men and management as risk factors in complex systems, reliability, availability.</p> <p>Safety analysis methods and formal safety assessment (FSA): Probabilistic approach and computer-based methods, special methods e.g. HRA, FMEA, HEP, HEART; examples.</p> <p>Traffic safety and security: Legal frame, methods: active/passive protection, emergency response management.</p> <p>Maritime accident response and salvage: Analysis and classification of ship accidents, methods for accident response and salvage, examples and case studies.</p> <p>Maritime surveying: Organisation, technical basics, types of surveys (safety, hull etc.), special surveys.</p> <p>Quality management and safety management systems: ISO-standards as basis for quality assurance (ISO 9000/14000), theoretical basics, total quality management, key performance indicators, quality objectives, continuous improvement process, document management, examples and studies.</p> <p>Complex safety related communication: Standardized safety related communication based on IMO-SMCP, formatted and IMO-SMCP unformatted VTS communication, casualty reporting.</p> <p>Maritime environmental protection and disaster control on selected examples in laboratories and in simulators.</p>
Skill Objectives	<p>The students consider the operational risk as criteria for the safety in complex systems. They know analysing methods and the formal safety assessment (FSA).</p> <p>Students can consult in the evaluation and assessment of maritime systems. They gain advanced knowledge about quality assurance in maritime systems and can develop, evaluate and improve maritime systems.</p> <p>Students are qualified to efficiently handle the IMO-SMCP in order to ensure a reliable safety related communication and VTS communication; they are enabled to precisely report about safety/security problems and shipping casualties.</p>

PM 01 – Safety, Security and Ecology in Maritime Systems

Language	English
Teaching Methods	Seminaristic Lessons
Entry Requirements	None
Recommended Requirements	None
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	1 Semester with 7 SWS (7 SWS Seminaristic Lessons)
Cycle	Yearly in Winter term
Expenditure of Work	300 hours 112 hours presence, 188 hours private studies
Credits	10
Requirements for Awarding of Credits	Examination: Written test (180 Min.) or oral examination (30 Min.) or alternative examination
Literature	<p>CLARK, Ian C.: <i>The management of merchant ship stability, trim & strength</i>. London: The Nautical Institute, 2008.</p> <p>ZOLLONDZ, Hans-Dieter: <i>Grundlagen Qualitätsmanagement : Einführung in Geschichte, Begriffe, Systeme und Konzepte</i>. München: Oldenbourg, 2009.</p> <p>GEIGER, Walter ; KOTTE, Willi: <i>Handbuch Qualität : Grundlagen und Elemente des Qualitätsmanagements: Systeme, Perspektiven</i>. Wiesbaden: Friedr. Vieweg & Sohn Verlag GWV Fachverlage GmbH, Wiesbaden, 2008.</p> <p>IMO: <i>The IMO-SMCP</i>. London 2002.</p> <p>In-house papers/handouts</p>

PM 02 – Technical Aspects and Simulation of Maritime Systems

Name of Module	PM 02 – Technical Aspects and Simulation of Maritime Systems
Responsible Persons	Prof. Dr.-Ing. habil. Knud Benedict, Prof. Dr.-Ing. Achmed Omar, Prof. Dr.-Ing. Michael Rachow
Contents	<p>Energy management</p> <ul style="list-style-type: none"> – Heat and power management – Fluid and energy flow – Technical and economical benchmarking – Simulation of complex processes – Design and analysis of simulator exercises (at example). <p>Modelling and Simulation of Maritime Systems</p> <ul style="list-style-type: none"> – Principles and Overview on Simulation and Application – Modelling of systems, relevant elements and parameters and simulation methods – Mathematical solution/solvers – Maritime Simulators and application of simulation in maritime systems (example: Offshore Exploration Platform). <p>Analysis of systems operating behaviour for Simulation & Optimisation:</p> <ul style="list-style-type: none"> – Investigation methods and simulation of maritime operational systems; characteristic maps and performance diagrams – Computerised procedures for analysis of operating behaviour and identification of operating conditions of technical plants – Mathematical optimisation and application to maritime models and problems – Techniques and methods to solve large systems of equations in conjunction with simulation problems.
Skill Objectives	<p>Enlarging the ability of students for energetic and economic evaluation of complex systems and processes.</p> <p>Conveying knowledge and skills on analysing and assessing problems regarding maritime systems;</p> <p>Extending environment and holistic system relevant views as well as insight into the prospective of simulation methods and the opportunities of Simulator application.</p>

PM 02 – Technical Aspects and Simulation of Maritime Systems

Language	English
Teaching Methods	Seminaristic Lessons, Simulator
Entry Requirements	None
Recommended Requirements	None
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	1 Semester with 6 SWS (5 SWS Seminaristic Lessons, 1 SWS Simulator)
Cycle	Yearly in Summer term
Expenditure of Work	270 hours 96 hours presence, 174 hours private studies
Credits	9
Requirements for Awarding of Credits	Examination: Written test (120 Min.) or oral examination (30 Min.) or alternative examination
Literature	<p>BERTRAM, Volker: <i>Practical Ship Hydrodynamics</i>. Oxford: Butterworth-Heinemann, 2000.</p> <p>MEIER-PETER, Hansheinrich ; ACKERMANN, Günter: <i>Compendium Marine Engineering</i>. Hamburg: Seehafen Verl., 2009.</p> <p>ANGERMANN, Anne: <i>MATLAB - Simulink – Stateflow</i>. München: Oldenbourg, 2009</p> <p>BRONŠTEJN, Ilja N.: <i>Handbook of Mathematics</i>. Berlin: Springer, 2007.</p> <p><i>Script Modelling and Simulation of Maritime Systems</i> (Benedict, 2011)</p> <p><i>Script Energy management and Simulation</i> (Rachow, 2011)</p>

PM 03 – Human Resource Management/Organization Management

Name of Module	PM 03 – Human Resource Management/Organization Management
Responsible Persons	Prof. Dr. Joachim Winkler
Contents	<p>Social Science Basics:</p> <ul style="list-style-type: none"> - Social competence and social intelligence - Conflict solution - Organizational psychology - Organization Theory. <p>Human Resource Management and Development:</p> <ul style="list-style-type: none"> - Leadership - Motivation - Communication - Management Training. <p>Organization Development:</p> <ul style="list-style-type: none"> - Organizational Crisis and Change - Phases of Organization Planning - Intervention and Evaluation - Techniques of Organization Management. <p>Project Management:</p> <ul style="list-style-type: none"> - Basics of Project Management - Planning and Controlling - Organization Projects.
Skill Objectives	Sensitization of students for the background of leading employees, leading projects and developing Organizations and qualifying the students to fill leading positions, to work in projects and to organize.

PM 03 – Human Resource Management/Organization Management

Language	English
Teaching Methods	Seminaristic Lessons, Simulator
Entry Requirements	None
Recommended Requirements	None
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	1 Semester with 4 SWS (4 SWS Seminaristic Lessons)
Cycle	Yearly in Summerterm
Expenditure of Work	180 hours 64 hours presence, 116 hours private studies
Credits	6
Requirements for Awarding of Credits	Examination: Written test (120 Min.) or oral examination (20 Min.) or alternative examination
Literature	<p>BODDY, David: <i>Management: an introduction</i>. Harlow: Financial Times Prentice Hall, 2005.</p> <p>DESSLER, Gary: <i>Human resource management</i>. Upper Saddle River, NJ: Prentice Hall/Pearson Education International, 2003.</p> <p>EGGERT, Max A.; FALZON, Wendy: <i>Resolving Conflict</i>. Hampshire: Management Pocketbooks, 2004</p> <p>PEDLER, MIKE; BURGOYNE, JOHN; BOYDELL, TOM: <i>A Managers's Guide to Leadership</i>. London: McGraw-Hill, 2004.</p>

PM 04 – Maritime Business Communication

Name of Module	PM 04 – Maritime Business Communication
Responsible Persons	Uta Buttler
Contents	<p>Complex Administrative Communication:</p> <p>English Business Communication</p> <p>Written administrative communication:</p> <ul style="list-style-type: none"> - Handling administrative correspondence: E-mails/letters/memos: layout and forms - Business vocabulary on organizations and financing - Reports on incidents and preparations of comments - Company publications: profiles, balance, prospects, reports and presentations - Publications on business plans and marketing. <p>Oral administrative communication:</p> <ul style="list-style-type: none"> - Negotiations and discussions (leading and participation) - Handling complaints and superiors - Telephoning - Company presentations: Portfolio discussion and presentation (PowerPoint).
Skill Objectives	<p>The students is to understand, handle as well as react appropriately to specific text types of written business correspondence combined with the relevant communication processes. Also, the student it to be enabled to take part in as well as to control discussions and negotiations under usage of the appropriate language strategies and means.</p>

PM 04 – Maritime Business Communication

Language	English
Teaching Methods	Seminars
Entry Requirements	None
Recommended Requirements	None
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	2 Semesters with 3 and 2 SWS (3 SWS Seminars and 2 SWS Seminars)
Cycle	Yearly in Summer term
Expenditure of Work	270 hours 80 hours presence, 190 hours private studies
Credits	9
Requirements for Awarding of Credits	Examination: Written test (120 Min.) or oral examination (30 Min.) or alternative examination
Literature	<p>RICHARDSON Karen; SYDES John; KAVANAGH Marie; ALLISON John; EMERSON Paul: <i>Business Pre-intermediate: Student's Book</i>. Macmillan Education, 2008.</p> <p>ASHFORD Stephanie; SMITH Tom: <i>Business Proficiency: Wirtschaftsenglisch für Hochschule und Beruf</i>. Ernst Klett Schulbuchverlag; Auflage, 2009.</p> <p>Dedicated teacher's material, available online</p>

PM 05 – Maritime Management/Port Operations

Name of Module	PM 05 – Maritime Management/Port Operations
Responsible Persons	Prof. Dr. Prause, Prof. Dr. Reise
Contents	<p>Maritime Management and Economics:</p> <ul style="list-style-type: none"> - Advanced Business Administration - Maritime Finance and Accounting - Maritime Marketing - Maritime strategic Management - Maritime IT-Systems - Multimodal Transport chains and case studies - Operative Controlling. <p>Modern Port Operations:</p> <ul style="list-style-type: none"> - Meaning and functions of ports and terminals in supply chains - Characteristics of cargoes and their influence on the design of turnover processes - Types of container terminals - Operative and administrative processes of a container terminal - Processes of bulk and break-bulk terminals - Basics of port- and terminal planning.
Skill Objectives	Enlargement and deepening of skills and knowledge in maritime Management and Economics including Port Operations.

PM 05 – Maritime Management/Port Operations

Language	English
Teaching Methods	Seminaristic Lessons
Entry Requirements	None
Recommended Requirements	Basic knowledge in business administration and maritime logistics.
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	1 Semesters with 6 SWS (6 SWS Seminaristic Lessons)
Cycle	Yearly in Winterterm
Expenditure of Work	270 hours 96 hours presence, 174 hours private studies
Credits	9
Requirements for Awarding of Credits	Examination: Written test (120 Min.) or oral examination (30 Min.) or alternative examination
Literature	<p>BIEBIG, Peter ; ALTHOF, Wolfgang ; WAGENER, Norbert: <i>Seeverkehrswirtschaft: Kompendium</i>. 4., bearb. und aktualisierte Aufl. München: Oldenbourg Verlag, 2008.</p> <p>STOPFORD, Martin: <i>Maritime economics</i>. London: Routledge, 2009.</p> <p>WINTER, Henning: <i>Grundlagen der Schiffsfinanzierung</i>. Frankfurt am Main: Frankfurt School Verl., 2008.</p>

PM 06 – Management and Business Simulation

Name of Module	PM 06 – Management and Business Simulation
Responsible Persons	Prof. Dr. Prause
Contents	<p>Management:</p> <ul style="list-style-type: none">- Controlling- Business Strategies- Special Aspects in Management. <p>Business Simulation Game LUDUS:</p> <ul style="list-style-type: none">- Introduction to LUDUS- Business Simulation- Business Reporting.
Skill Objectives	Enlargement and deepening of skills and knowledge in business management by using business simulation.

PM o6 – Management and Business Simulation

Language	English
Teaching Methods	Seminaristic Lessons
Entry Requirements	None
Recommended Requirements	Basic knowledge in business administration and accounting.
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	1 Semesters with 3 SWS (3 SWS Seminaristic Lessons)
Cycle	Yearly in Summer term
Expenditure of Work	150 hours 48 hours presence, 102 hours private studies
Credits	5
Requirements for Awarding of Credits	Examination: Written test (120 Min.) or oral examination (30 Min.) or alternative examination
Literature	LUDUS Game Manual

Modulbezeichnung	WPM 01 – Maritime Law (in German language only)
Modulverantwortliche	Prof. Dr. jur. Frank Ziemer
Inhalt	<p>Seerechtliches Risiko- und Ereignismanagement in Deutschland:</p> <ul style="list-style-type: none"> – Nationale Systeme zur Regelung seerechtlicher Ereignisse – Kollision, Strandung, Meeresverschmutzung sowie Bergung und Hilfeleistung, Große Haverei, Verklarung nach deutschem Recht – Transformation der Streitfallregelung seerechtlicher Ereignisse – Schiedsgerichte, Seeunfalluntersuchung, Internationaler See-gerichtshof, Internationaler Gerichtshof und deren Bedeutung für die maritime Wirtschaft in Deutschland. <p>Haftung im Transport und Umweltschäden in Deutschland:</p> <ul style="list-style-type: none"> – Haftungsregelungen für Schadstoffeinleitungen in die See – Haftungssysteme für Meeresverschmutzung – Regelungen zur Reederhaftung – Haftung für Gefahrstoffe – Rechtsprobleme beim Ballastwassermanagement. <p>Versicherung der maritimen Wirtschaft in Deutschland:</p> <ul style="list-style-type: none"> – Transportversicherung – Kaskoversicherung – P&I-Clubs. <p>Probleme der maritimen Raumordnung in Deutschland:</p> <ul style="list-style-type: none"> – Landesrechtliche Genehmigungsverfahren – Raumordnung des Bundes in der deutschen AWZ – Umweltverträglichkeitsprüfungen. <p>Fallstudienauswertung.</p>
Qualifikationsziele	Befähigung der Studenten den Zusammenhang von internationalen Regelungen und nationaler Transformation in der Praxis effektiv zur Problembewältigung zu nutzen.

Sprache	Deutsch
Lehr- und Lernformen	Seminaristischer Unterricht
Voraussetzungen für die Teilnahme	Keine
Empfohlene Voraussetzungen	Seerechtliche Vorbildung auf dem Niveau Bachelor STCW.
Verwendbarkeit des Moduls	Das Modul ist im Master-Studiengang „Operation and Management of Maritime Systems“ verwendbar.
Dauer	2 Semester mit jeweils 2 SWS (2 SWS Seminaristischer Unterricht)
Angebotsturnus	Jährlich zum Wintersemester
Arbeitsaufwand	180 Stunden 64 Stunden Präsenz, 116 Stunden Selbststudium
Leistungspunkte	6
Voraussetzungen für die Vergabe von Leistungspunkten	Modulprüfung: Klausur (120 Minuten) oder mündliche Prüfung (30 Minuten) oder alternative Prüfungsleistung
Literaturangaben	Aktuell im Lern-Management-Systems Stud.IP abrufbar.

WPM 02 – Integrated Manoeuvring/Propulsion and Navigation Systems

Name of Module	WPM 02 – Integrated Manoeuvring/Propulsion and Navigation Systems
Responsible Persons	Prof. Dr.-Ing. habil. Knud Benedict Prof. Dr.-Ing. Reinhard Müller-Demuth
Contents	<p>Integrated Manoeuvring/Propulsion Systems:</p> <ul style="list-style-type: none"> - Azimuth-Propeller/Azipods - Voith Propeller and rotating rudder propellers - Waterjet-Thrusters - Wing-in-Ground Effect Vessels - Propulsion systems based on alternative Energy - Sails, kites - Flettner Rotors, others - Simulation exercises and case studies for those specific vessels. <p>Integrated Navigation and Bridge Systems:</p> <ul style="list-style-type: none"> - Extended functionality by integration of systems - Function interdependency analysis in INS - Switched nets redundancy on board - Modern technical ship's bridge design - Back up scenarios and handling in the navigational process.
Skill Objectives	Enabling students to widely understand the principles of modern propulsion/manoeuvring systems as well as integrated navigation systems with respect to technical concepts, characteristics and range of application, discussion of pros & cons in relation to complex analyses of energy, environmental and safety aspects.

WPM 02 – Integrated Manoeuvring/Propulsion and Navigation Systems

Language	English
Teaching Methods	Seminaristic Lessons, Simulation
Entry Requirements	None
Recommended Requirements	None
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	2 Semesters with 2 SWS each (1 SWS Seminaristic Lessons and 1 SWS Simulation; 2 SWS Seminaristic Lessons)
Cycle	Yearly in Winter term
Expenditure of Work	180 hours 64 hours presence, 116 hours private studies
Credits	6
Requirements for Awarding of Credits	Examination: Written test (120 Min.) or oral examination (30 Min.) or alternative examination
Literature	<p>BERTRAM, Volker: <i>Practical ship hydrodynamics</i>. Oxford: Butterworth-Heinemann, 2000.</p> <p>BRIX, Jochim E.: <i>Manoeuvring technical manual</i>. Hamburg: Seehafen-Verl., 1993.</p> <p>HOFMANN-WELLENHOF, Bernhard; LICHTENEGGER, Herbert ; WASLE, Elmar: <i>GNSS - Global Navigation Satellite Systems: GPS, GLONASS, Galileo, and more</i>.</p> <p>WEINTRIT, Adam: <i>The Electronic Chart Display and Information System (Ecdis): An Operational Handbook</i>. Crc Pr Inc; Auflage: 1 Har/Cdr, 2009.</p> <p>TUZLUKOV, Vjačeslav P.: <i>Signal and image processing in navigational systems</i>. Boca Raton, Fla.: CRC Press, 2005</p>

WPM 03 – Operation, Monitoring & Maintenance of Technical Systems

Name of Module	WPM 03 – Operation, Monitoring & Maintenance of Technical Systems
Responsible Persons	Prof. Dr.-Ing. Frank Bernhardt
Contents	<p>Overview:</p> <ul style="list-style-type: none"> - Elementary supervision stages: <ul style="list-style-type: none"> • Design, manufacturing and testing, primary acceptance, putting into service, maintenance and repair as well as recurrent in-service supervision. • Basic theoretical and practical aspects of international methods and requirements of plant supervision. <p>Maintenance:</p> <ul style="list-style-type: none"> - Advantages and disadvantages of different maintenance strategies; - Availability and reliability; - Optimisation methods. <p>Technical Diagnostic:</p> <ul style="list-style-type: none"> - Theoretical Aspects and methods of Technical Diagnostic; - Selection of special diagnostically tools and processes; - Web based services and long time analysis. <p>Applications & Tools:</p> <ul style="list-style-type: none"> - TITAN und GLSM. <p>Classification:</p> <ul style="list-style-type: none"> - Condition based Survey. <p>Specific Samples:</p> <ul style="list-style-type: none"> - Fired and unfired pressure equipment plants with respect to economic aspects.
Skill Objectives	<p>The students know how to prepare, perform and documented a standard-compliant put into service, supervision as well as safety and environment relevant assessment of technical plants,</p> <p>They have the knowledge to optimize around the availability and reliability. The students are familiar with advantages and disadvantages of the various maintenance strategies trust and by specific application of methods of the technical diagnosis the advantages of the condition based maintenance can be realized.</p>

WPM 03 – Operation, Monitoring & Maintenance of Technical Systems

Language	English
Teaching Methods	Seminaristic Lessons
Entry Requirements	None
Recommended Requirements	None
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	2 Semesters with 2 SWS each (2 SWS Seminaristic Lessons)
Cycle	Yearly in Winter term
Expenditure of Work	180 hours 64 hours presence, 116 hours private studies
Credits	6
Requirements for Awarding of Credits	Examination: Written test (120 Min.) or oral examination (30 Min.) or alternative examination
Literature	<p>MEIER-PETER, Hansheinrich ; ACKERMANN, Günter: <i>Compendium Marine Engineering</i>. Hamburg: Seehafen Verl., 2009.</p> <p>ADAMS, Heinz W. ; SLAGHUIS, Herbert: <i>Was der Instandhalter vom Recht wissen muß</i>. Köln: Verl. TÜV Rheinland, 1997.</p> <p>HARTMANN, Edward H.: <i>TPM : effiziente Instandhaltung und Maschinenmangement</i>. München: mi-Fachverl., 2007.</p> <p>WARNECKE, Hans-Jürgen: <i>Handbuch Instandhaltung Teil: 1: Instandhaltungsmanagement</i>. Köln: Verl. TÜV Rheinland, 1992.</p> <p>MOUBRAY, John; LANTHIER, J. R. Paul: <i>Reliability-Centered Maintenance</i>. Butterworth-Heinemann Ltd, 2012.</p> <p>All relevant technical, safety and environmental standards (German and international); laws and regulations.</p>

WPM 04 – Operational and Strategic Management in Shipbuilding

Name of Module	WPM 04 – Operational and Strategic Management in Shipbuilding
Responsible Persons	Prof. Dr. Prause
Contents	<p>Operations Management in Shipbuilding:</p> <ul style="list-style-type: none"> - Project management in Shipbuilding - Procurement in Shipbuilding - Intra-Logistics - Supply Chain Management - Process Management in Shipbuilding - Production processes in Shipbuilding - ERP-Systems. <p>Strategic Management in Shipbuilding:</p> <ul style="list-style-type: none"> - Management of Shipyards - Controlling - Shipbuilding Markets and Product Marketing - Business Strategies in Shipbuilding - R&D and Innovation Management in Shipbuilding - Outsourcing - Networking & Global Sourcing.
Skill Objectives	Enlargement and deepening of skills and knowledge in maritime Management and Economics including Port Operations.

WPM 04 – Operational and Strategic Management in Shipbuilding

Language	English
Teaching Methods	Seminaristic Lessons
Entry Requirements	None
Recommended Requirements	Basic knowledge in business administration, ship design and construction, and naval mechanical engineering.
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	2 Semesters with 2 SWS each (2 SWS Seminaristic Lessons)
Cycle	Yearly in Winter term
Expenditure of Work	180 hours 64 hours presence, 116 hours private studies
Credits	6
Requirements for Awarding of Credits	Examination: Written test (120 Min.) or oral examination (30 Min.) or alternative examination
Literature	<p>STOPFORD, Martin: <i>Maritime economics</i>. London: Routledge, 2009.</p> <p>HEIZER, Jay ; RENDER, Barry: <i>Operations Management</i>. Prentice Hall International, 2010.</p> <p>DOKKUM, Klaas van: <i>Ship knowledge: ship design, construction and operation</i>. Enkhuizen: DOKMAR, 2008.</p> <p>MAYER, Claus F. ; MARQUARDT, Ralf S.: <i>Schiffstechnik und Schiffbautechnologie</i>. Hamburg: Seehafen-Verl., 2006.</p>

PM 07 – Master-Thesis and Colloquium

Name of Module	PM 07 – Master-Thesis and Colloquium
Responsible Person	All teaching personnel in Master programme
Contents	<p>The thematic assignment of the master thesis is processed between student and tutor and takes into account following particulars:</p> <ul style="list-style-type: none"> – subsumption in the programme – outline and complexity – scientific standard – relevance to practice <p>In the colloquium the topic of the master thesis and adjacent subjects are being discussed and actual issues highlighted.</p>
Skill Objectives	<p>The student shall prove that he is able to apply the gained knowledge and skills to actual topics and problems in and of maritime systems with scientific methods. He can discuss the results with scientifically and integrate it into the practical routine in maritime systems.</p> <p>The master thesis is completed with the colloquium. The student shall prove that he is able to present and discuss his thesis.</p>

Language	English
Teaching Methods	Self study
Entry Requirements	60 Credits
Recommended Requirements	None
Usability of Module	The module is usable in the Master-Programme Operation and Management of Maritime Systems
Duration	19 weeks
Cycle	free
Expenditure of Work	900 hours
Credits	30
Requirements for Awarding of Credits	Evaluation of the master thesis; In case of positive evaluation (“passed”) colloquium with 30 to 45 minutes presentation and discussion) The quota for the colloquium in the grade for the master thesis is 30 %.
Literature	Own enquiry

