INTERNATIONAL SHIPPING & CHARTERING

Modulhandbuch

Module Descriptions

Studienverlaufsplan

Semester 1 *Winter*	Semester 2 *Summer*	Semester 3 *Winter*	Semester 4 *Summer*	Semester 5 *Winter*	Semester 6 *Summer*	Semester 7 *Winter*
1.1 Introduction to Management 6 ECTS	2.1 Cost Accounting 6 ECTS	3.1 Economics of Ship Operation 6 ECTS	4.1 Controlling 6 ECTS	5.1 Practical Semester 24 ECTS	6.1 Ship Finance & Ship Building Contracts 6 ECTS	7.1 Management Systems 6 ECTS
1.2 Introduction to Business Law & International Commercial Law 6 ECTS	2.2 Chartering & Agency Practice 6 ECTS	3.2 Maritime Transport Geography 6 ECTS	4.2 Maritime Logistics 6 ECTS		6.2 Maritime Arbitration 6 ECTS	7.2 Elective 2 6 ECTS
1.3 Blue Sciences Introduction 6 ECTS	2.3 Wahlmodul Bsp. Tanker Shipping 6 ECTS	3.3 Wahlmodul Bsp. Dangerous Cargo 6 ECTS	4.3 Wahlmodul Bsp. Dry Cargo Operations 6 ECTS		6.3 Elective 1 6 ECTS	7.3 Elective 3 6 ECTS
1.4 Maritime English 6 ECTS	2.4 Mathematics & Statistics 6 ECTS	3.4 Ship & Maritime Technology 6 ECTS	4.4 Marine Insurance & Large Casualty Handling 6 ECTS		6.4 Maritime Research 6 ECTS	7.4 Bachelor Thesis 12 ECTS
1.5 Maritime Economics 6 ECTS	2.5 Shipping Law & Environmental Liability 6 ECTS	3.5 Maritime HR 6 ECTS	4.5 Transport Law & Claim Handling 6 ECTS	5.2 Practical Semester Preparation & Evaluation 6 ECTS	6.5 Fleet Management 6 ECTS	

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1. Semester

1.1. Introduction to Management

1.1. Introduction to Management			
Module leader:	Professor "Maritime Management" Prof. Dr. Thomas Pawlik		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC, 1st Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions, offered once per academic year in the Winter Semester	**Self-study (h):**	120 h (including module related exercises)
Type of module and position in other study programs or continuing education offers:	The module may be offered within the Blue Sciences Teaching Cooperation. This module is also open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Describe what management is and what managers do;
- Discuss how environmental factors affect organizations;
- Explain the relevance of ethics and social responsibility in management;
- Differentiate between different management functions;
- Name different management principles.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply the principles in case studies and role plays.

Communication and cooperation

- Analyse and work in groups on management functions and strategies.

Course content:

- Definitions of management /Development of scientific management;
- Core Management Functions with a focus on Planning, Organizing, Leading, Controlling;
- Organizational Environments and Cultures;
- Ethics, Corporate Culture and Social Responsibility;
- Planning and Decision-Making Control;
- Management skills;
- Managing Information;
- Innovation and constant Change;
- Global Management with a focus on ports and shipping;
- Managing Human Resources;
- Managing Individuals and a Diverse Work Force.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.
Further information:	---

Courses of the module				
Course title	**Teaching staff**	**Contact hours per week**	**Learning and teaching methods**	**Examination method(s), scope and duration**
1.1.1. Introduction to Management	Prof. Dr. Iven Krämer	4	Seminar, Lectures	Summative Exam: ▪ KL or HA ▪ Minimum passing grade: 4.0 Formative Exam: ▪ At the start of the semester, the lecturer may determine a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exam(s) is a prerequisite for taking the summative exam.
1.1.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

1.2. Introduction to Business & International Commercial Law

1.2. Introduction to Business & International Commercial Law			
Module leader:	Professor "Maritime Law" Prof. Dr. Suzette V. Suarez, LLM		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 1st Semester	**Contact hours (h):**	60h + 15h (lecture and module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	The module may be offered within the Blue Sciences Teaching Cooperation. This module is also open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Remember, identify and explain the relevant chapters of the German Civil Code, part of Commercial Code and German Company law for shipping and maritime business;
- Describe the structure and role of national and international relations in trade and shipping;
- Discuss different forms of contracts of national and international business#,
- Differentiate between the relevant national and international legal systems and the instruments of settlement of disputes (e.g. international arbitration / mediation / court proceedings);
- Name and describe different definitions and trade customs (e.g. representation and Incoterms).

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Use, discuss and apply legal rules for working on practical selected cases.

Communication and cooperation

- Interpret rules of national and international laws and their relevance for maritime business

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals;
- Reflect critically on the relevance of maritime and commercial laws on the maritime industry and on maritime professions.

Course content:

- National legal systems (civil law and common law);
- Selective complex of topics of the German Civil Code (BGB), with focus on contractual law (requirements for conclusion of contract; obligations under a contract; consequences of disturbances and breach of obligation) and overview on other parts of national law (law of tort, property law);
- Overview on relevant parts of the German Commercial Code (HGB) as well as company law;
- Overview of international commercial law;
- International organizations and economic institutions in international trade and shipping;

- International Sales contracts under consideration of The Convention on the International Sale of Goods (CISG); INCOTERMS 2010 and successors;
- International Payment instruments (e.g. letter of credit with first overview on bills of lading);
- International Private Law (Freedom of Choice of law);
- Overview of commercial dispute resolution mechanisms including arbitration;

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.
Further information:	--

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
1.2.1. Introduction to Business & International Commercial Law	Prof. Dr. Elke Wietoska	4	Seminar, Lectures	Summative exam: ▪ KL, HA, R or PF ▪ Related to entire course content. ▪ Minimum passing grade: 4.0 Formative exam: ▪ At the start of the semester, the lecturer may determine a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
1.2.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

1.3. Blue Sciences

1.3. Blue Sciences			
Module leader:	ISSC Course Director Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC, 1st Semester	**Contact hours (h):**	60h + 15h (lecture + module related exercises)
Scope und frequency of teaching:	Block seminars and excursions offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	The module may be offered within the Blue Sciences Teaching Cooperation.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Demonstrate an understanding of the concept of Blue Sciences as minor study;
- Classify the contents and objectives of the minor study in the cluster "Blue Sciences" within the context of the main studies;
- Explore and gain an introductory knowledge of the various professional opportunities in the maritime industry;
- Learn the fundamentals of university and scientific learning, library research, written and oral presentation.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Use and apply written and oral presentation skills;
- Undertake a library-based research on a current topic in the maritime industry.

Communication and cooperation

- Develop skills in critical thinking and problem-solving by systematically reflecting on their motivations and personal interests towards a profession or career in Blue Sciences;
- Demonstrate an understanding of their personal interests, abilities, strengths and weaknesses with respect to their chosen studies;
- Describe and understand the requirements of professional practice;
- Interact, discuss and network with industry leaders and colleagues.

Reflection of academic and professional identity

- Evaluate their personal decision on the minor's own professional orientation;
- Develop an appreciation of the international and global nature of professional opportunities in Blue Sciences study programs, including an appreciation of English as language of studies and professional development;
- Develop professionalism and ownership of growth and learning by organizing and implementing their studies;
- Develop an awareness of the importance of scientific work to their studies;

- Reflect on the fundamental role of professionals in the maritime industry in light of their significant role in ensuring the sustainability of the marine environment and marine resources.

Course content:

- Introduction to the concept of Blue Sciences;
- Overview of the contents and requirements of the main studies;
- Learning goals and study approaches and how to achieve them;
- Introduction to the minor subjects;
- Explore the various professional and technical areas and opportunities of the study programs;
- Introduction to scientific work, library research and development of presentation and research skills;
- Excursions or study visits.

Language of teaching:	English (on excursions also use of German)
Prerequisites:	*None*
Preparation/literature:	*Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.*
Further information:	▪ *Lectures by a team of Professors of the Blue Sciences Study Courses* ▪ *Different excursions*

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
1.3.1. Blue Sciences Introduction	Prof. Suarez and different lecturers	2	Seminar, Lectures	Summative exam (Modulprüfung): ▪ Exercises related to module content ▪ Pass or fail
1.3.2. Blue Sciences Project (Excursion)	Prof. Suarez and different lecturers	2	Project	Summative exam (Modulprüfung): ▪ Participation in a Blue Science project or excursion ▪ Related to entire content of the lecture ▪ Pass or fail
1.3.3. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

1.4. Maritime English

1.4. Maritime English			
Module leader:	Professor "Maritime Management" Prof. Dr. Thomas Pawlik		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 1st Semester	**Contact hours (h):**	60h + 15h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	May be open to Erasmus Students		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Recall maritime and technical vocabulary;
- Describe the structure and role of international organizations in trade and shipping;
- Discuss different forms of contracts for international commerce;
- Differentiate between the relevant national legal systems;
- Name and describe different definitions (e.g. Incoterms);
- Interpret excerpts from contracts, shipping documents, insurance policies and maritime law texts.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Use and analyse English language documents, including documents used in the maritime industry;
- Use and exercise negotiation techniques.

Communication and cooperation

- Formulate technical and factual problem solutions with colleagues in the maritime industry;
- Reflect and take into account different views and interests of other stakeholders in the international maritime industry.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals;
- Reflect on the relevance and role of the English language for the maritime industry and for maritime professionals who come from different jurisdictions, backgrounds and cultures.

Course content:

- Basic review of English grammar in use and exercises to enhance proficiency;
- Shipping English: maritime and technical vocabulary, commercial correspondence, shipping documents and current maritime issues in specialized literature;
- Sea Story Writing Competition – applied use of grammar and maritime vocabulary;
- Application of acquired knowledge of shipping vocabulary, maritime expressions and basic business skills in role plays, meetings, negotiations and presentations;

▪ Analysis and use of the English language in excerpts from contracts, shipping documents, insurance policies and maritime law texts; ▪ Become familiar with the application of negotiation techniques and the diplomatic use of the English language when dealing with foreign cultures; ▪ Exercise technical terms in law and economics and their practical application (ship – shore communication); ▪ Use of relevant phrases, expressions and abbreviations on board and in ports.	
Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
1.4.1. Maritime English	Ms Verena Beckhusen	4	Seminar, Lectures	Summative exam: ▪ KL or HA ▪ Minimum passing grade: 4.0 Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
1.4.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

1.5. Maritime Economics

1.5. Maritime Economics			
Module leader:	Professor "Maritime Economics" Prof. Dr. Burkhard Lemper		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory module, ISSC 1st Semester	**Contact hours (h):**	60h + 15h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module is also a compulsory module of ISMN First Semester students. This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- List and use basic principles of economic thinking;
- Summarize the way shipping markets are organized commercially;
- Predict how shipping market participants will respond to different freight rates in the short, medium and long-term;
- List and identify stages of shipping cycles;
- Classify differences between shipping markets and other industries;
- Classify different types of organisation of shipping companies;
- Assess the particular elements that shape todays general cargo shipping industry.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Carry out simple demand and supply-side analyses for shipping markets and judge the future market outlook.

Reflection of academic and professional identity

- Reflect on the relevance of economics on the shipping industry

Course content:

- Basics in Economic theory;
- Sea Transport and the Global Economy;
- The Organization of the Shipping Market;
- Shipping Market Cycles;
- Supply, Demand and Freight Rates;
- The four shipping markets;
- The transport of general cargoes:
  - Project cargo shipping;
  - Container shipping.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be announced at the start of the semester; ▪ Some indicative literature proposals are: - Maritime Economics; Stopford, M.; 3rd edition 2009; - The Blackwell Companion to Maritime Economics; Talley, W.,T.; 2012; - The Handbook of Maritime Economics and Business; Grammenos, C. T.; 2nd edition, 2010. ▪ Slides and exercises relating to the lecture will be provided in pdf-format via the online class-room. ▪ Contemporary and easily accessible reading materials (e.g. UNCTAD studies) may be announced via online class-room to reflect up to date developments shaping the discipline of maritime economics; ▪ Other study courses: no prerequisites.
Further information:	

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
1.5.1 Maritime Economics	Prof. Dr. Burkhard Lemper	4	Seminar, Lectures	Summative exam: ▪ R or KL ▪ Related to entire content of lecture. ▪ Minimum passing grade: 4.0 Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
3.3.2. Module Related Exercises	Prof. Dr. Burkhard Lemper	(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

2. Semester

2.1. Cost Accounting

2.1. Cost Accounting			
Module leader:	Professor "Maritime Management" Prof. Dr. Thomas Pawlik		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 2nd Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module may be offered within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Summarise criteria that will affect the classification of costs as direct or indirect;
- Classify cost items as fix or variable as well as direct or indirect with regard to a cost driver and cost object.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Carry out job-costing computations;
- Execute process-costing computations using both FiFo and weighted average methodology;
- Perform joint-cost-situation computations after selecting a suitable method;
- Conduct computations to allocate costs between different cost centers after selecting a suitable methodology;
- Carry out cost-volume-profit ("break-even")-computations in single case scenarios.

Communication and cooperation

- Organize teamwork to solve the module related exercises.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals;
- Reflect on the role of Cost Accounting for the operations of businesses in the maritime industry.

Course content:

- Differences of financial accounting, management accounting and cost accounting;
- Introduction to cost terms and purposes;
- Job-costing;
- Process-costing;
- Cost allocation among cost centers;
- Joint-cost situations;
- Cost-volume-profit relationships.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be announced at the start of the semester; some indicative literature proposals are: - Management and Cost Accounting; Bhimani, A. et al; 6th edition 2015; chapters 1-8, - Slides and exercises surrounding the lecture units will be provided in pdf-format via the online class-room
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
2.1.1. Cost Accounting	Mr. Michael Tasto	4	SU	Summative exam: ▪ KL ▪ Minimum passing grade: 4.0 Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
2.1.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

2.2. Chartering & Agency Practice

2.2. Chartering and Agency Practice			
Module leader:	Professor "Maritime Law" Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 2nd Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module may be offered within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Explain different types of charter contracts;
- Explain different types of shipping services;
- Discuss charter contracts and selected clauses;
- Differentiate agency contracts and rights of representation;
- Name and describe additional safeguard clauses.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Perform exercises in laytime and demurrage organization and calculation;
- Perform voyage calculations on break-even basis;
- Outline stevedore damages, including strategies and behavior in case of claims/damages;
- Exercise charter party negotiations

Communication and cooperation

- Analyse and discuss risks arising from different contractual arrangements.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals;
- Undertake professional activities with theoretical and methodical knowledge of chartering and agency practice.

Course content:

- Types of charter contracts (voyage, time, bareboat charter);
- Types of services (liner services, semi-liner services, tramp services);
- Standard charter contracts and selected clauses / abbreviations of charter contracts (GENCON, CONLINE, NYPE, BALTIME);
- Charter party negotiations (difference between indication, firm bid and firm offer plus counter acc/exc until fixing main terms, sub further details);
- Agency contracts and rights of representation (ostensible authority);
- Delivery and supply/loading and discharging (cancelling date and delivery date);

▪ Instructions to Master and signing the Bill of Lading (B/L); ▪ Stevedore damages, including strategies and behavior in case of claims/damages; ▪ Exercises in laytime and demurrage, including dispatch (i.e. reversible, averagable – total hours, different loading/ discharging rates); ▪ Lien on the ship and cargo (prohibition of lien clauses); ▪ Additional safeguard clauses; ▪ Re-delivery.	
Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
2.2.1. Chartering and Agency Practice	Mr. Alexander Bröhldick	4	Seminar, Lectures	Summative exam: ▪ KL or R (15min) ▪ Related to entire course content. ▪ Minimum passing grade: 4.0. Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
2.2.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

2.3. Elective Import Minor 1

2.3. Elective Import Minor 1			
Module leader:	ISSC Course Director Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory elective module ISSC, 2nd Semester	**Contact hours (h):**	60h + 15h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions or block seminar offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	ISSC students may choose among the minor modules offered within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Students are obliged to take the Minor Import Module to deepen own interests.
The learning outcomes are described in the module description of each specific minor.
This module description explains the general objectives of the minor modules.

Example ISMN Minor Module 2.3 Tanker Shipping

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Classify types of tankers and their cargoes;
- Explain the market specific requirements;
- Describe audit and vetting systems;
- Give examples about the properties of specific liquid cargoes;
- Discuss the equipment for carriage, loading and discharging;
- Describe the procedures of safe loading and discharging;
- State basics of the maintenance requirements for cargo equipment.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply the major regulations concerning tanker safety;
- Determine tank atmospheres, tank cleaning and safety issues.

Communication and cooperation

- Be convinced of the necessity of imposing requirements on human resources concerning tanker operations;
- Accept tanker specific working procedures.

Reflection of academic and professional identity

- Reflect on the responsibility of crew for safe tanker operations.

Course content:

Course content is as described in the module description of the chosen minor module.

Example ISMN Minor Module 2.3 Tanker Shipping
Tanker Business (36 contact hours):

- Tanker markets and logistic chain;
- International organizations responsible for tanker and cargo safety;
- Economical aspects;
- Human resources and their requirements;
- Audits and vettings.

Tanker Cargo Operations (Basic Training 24 contact hours):

- Types of oil, chemical and liquefied gas tankers;
- Tanker design and equipment for cargo operations;
- Oil, chemicals and liquefied cargoes and their properties (scientific basics);
- Safe operation of tanker (oil, chemicals, liquefied gas);
- Loading and discharging, tank cleaning;
- Hazards to persons, ship and environment;
- Risk Management to minimize risks on tankers;
- Occupational health and safety precautions and measures;
- Safety equipment and personal protection;
- Prevention of environmental pollution;
- Emergency management on tankers.
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Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be announced at commencement of lecture **Example ISMN Minor Module 2.3 Tanker Shipping** ▪ IMO Model Courses 1.01 Basic Training for Oil And Chemical Tanker Cargo Operations ▪ IMO Model Course 1.04 Basic Training for Liquified Gas Tanker Cargo Operations
Further information	

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
2.3.1. Elective Import Minor 1	Lecturer/Professor from other study programs within the Blue Sciences Cooperation **ISMN Tanker Shipping:** Mr. Heinrich Braun	4	Seminar, Lectures	Summative exam (Modulprüfung): ▪ R or KL ▪ Related to entire content of lecture ▪ Minimum passing grade:4.0 **ISMN Tanker Shipping** Summative exam (Modulprüfung): ▪ R or KL ▪ Related to entire content of lecture ▪ Passing grade: at least a grade of 4.0 Formative exam (Studienleistungen): ▪ mandatory exercises to participate in summative

				examination (Liquid Cargo Simulator) ▪ SL: Cargo Operations KL (written test, 60 min) ▪ passed or failed
2.3.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

2.4. Mathematics & Statistics

2.4. Mathematics & Statistics			
Module leader:	Professor "Maritime Management" Prof. Dr. Thomas Pawlik		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 2nd Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:			

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Understand how to build mathematical models to solve economic questions and problems;
- Apply geometrical laws, trigonometrical calculations, and methods of analytical geometry;
- Build economic models by use of functions their derivatives and integrals;
- Understand how analysis of probabilities and conditional probabilities can help to forecast;
- Discuss and interpret statistical graphs and tables.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Solve equations and systems of equations;
- Carry out polynomial division to find zeroes of functions or solve equations of higher degree;
- Apply vectors and matrices to economical questions – price vector, goods vector;
- Use determinants of matrices to solve systems of equations;
- Determine derivatives of rational, power, exponential, logarithmic functions and apply rules for differentiation (sum-, power-, product-, quotient-, chain- rule);
- Calculate rates of change, marginal cost / revenue / profit; analyze and interpret approximate vs. exact change;
- Analyse the relation of marginal cost and average cost;
- Determine indefinite integrals and calculate size of areas by applying definite integrals;
- Calculate combined, conditional probabilities and binomial coefficients;
- Apply tree diagrams and Baye's theorem to analyze example problems from quality control;
- Carry out expectation value computations and provide advice based on results;
- Carry out a linear regression analysis and analyse and interpret the results.

Communication and cooperation

- Communicate and cooperate with colleagues using mathematical and statistical approaches in order to solve a task responsibly.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals.

- Undertake professional activities with theoretical and methodical knowledge of mathematics and statistics.

Course content:

Part 1 - Basics
- Theory of sets, arithmetic, algebra
  Equations, inequalities, matrices and determinants;

Part 2 – Details
- Geometry, trigonometry;
- Vectors, analytical geometry;
- Functions of one variable;
- Differential calculus;
- Integral calculus;
- Theory of probabilities, statistics;

Part 3
- Applied statistics;
- Interpretation.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
2.4.1. Mathematics & Statistics	Mr. Rainer Heiligenstadt	4	Seminar, Lectures	Summative exam: ▪ KL ▪ Related to entire course content. ▪ Minimum passing grade: 4.0. Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
2.4.2. Module Related Exercises	Mr. Rainer Heiligenstadt	(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

2.5. Shipping Law & Environmental Liability

2.5. Shipping Law & Environmental Liability			
Module leader:	Professor "Maritime Law" Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC, 2nd Semester	**Contact hours (h):**	60h + 15h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This is also a compulsory module for ISMN students. This module may be offered within the "Blue Sciences Teaching Cooperation" and open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Remember, classify and delineate between national and international shipping regulations relating to safety and security of shipping and the protection and preservation of the marine environment;
- Describe and explain the spectrum of administrative and environmental protection requirements relating to vessel and cargo operations;
- Remember and understand the liabilities of the different stakeholders and actors in the maritime industry.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Analyse, constructively criticise and make qualitative judgments about the national and international legislative requirements and measures to ensure safety of life at sea, security of vessel/cargo operations and the protection and preservation of the marine environment;
- Ensure compliance with pollution prevention requirements;
- Demonstrate knowledge of emergency procedures.

Communication and cooperation

- Demonstrate knowledge and understanding of the different responsibilities on board and onshore relating to safety of life at sea and the prevention and preservation of the marine environment in order to ensure communication and cooperation among the different stakeholders.

Reflection of academic and professional identity

- Understand the objectives of shipping law and environmental liability of stakeholders;
- Reflect on and demonstrate knowledge of the obligations and the liabilities of the flag State and the Port State as well as the obligations of the ship master under national and international laws.
-

Course content:

International shipping legislation and regulations

- International Law of the Sea (UNCLOS);
- Safety of Life at Sea (SOLAS) Convention with application of International Safety Management (ISM) and International Ship and Port Facility Security (ISPS) Codes;
- International Convention for the Prevention of Pollution from Ships (MARPOL) and its annexes;
- International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW);

- Requirements for flagging and vessel registration
- Required ship documents and certificates;
- Flag state, Coastal State and Port State enforcement powers.

National shipping legislation and regulations (also taught in German for ISMN Students)

- Implementation of International Instruments in Germany;
- German legal system;
- German Flag Act;
- German Flag Ordinance;
- Ship Register Ordinance;
- Maritime Environmental Behaviour Regulation;
- Applicable Administrative and Criminal laws and sanctions.

Language of teaching:	English; Deutsch (for ISSM Students on German law of the sea)
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester
Further information:	

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
2.5.1. Shipping Law & Environmental Liability	Prof. Dr. Suzette V. Suarez, LLM.	4	Seminar, Lectures	Summative exam: ▪ KL or PF ▪ Related to the entire course content. ▪ Minimum passing grade: 4.0 Formative exam: ▪ mandatory exercises to be passed to participate in summative examination.
2.5.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

3. Semester

3.1. Economics of Ship Operation

3.1. Economics of Ship Operation			
Module leader:	Professor "Maritime Economics" Prof. Dr. Burkhard Lemper		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 3rd Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions Offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	The module may be offered within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- List the key variables in the portfolio of the ship-owner and provide advice to shipping companies in distress about the use of these variables;
- List the different cost items of the shipping business and classify these into categories according to literature and industry standards;
- Summarize the phenomenon of economies of scale and discuss related constraints in shipping;
- State how ship-owners will respond to different freight rate thresholds according to theory.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Carry out simplified profit/loss and cashflow computations for short time spans;
- Execute discounted cash-flow (DCF) and internal rate of return (IRR) computations and select the most profitable investment option;
- Carry out voyage earnings computations and reflect on the methodology;
- Carry out computations to identify the optimum voyage speed for bulk carriers.

Communication and cooperation

- Coordinate and distribute work to team members (as part of exercises).

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals;
- Undertake professional activities with theoretical and methodical knowledge of economics of ship operation.

Course content:

- Key variables in the portfolio of the ship-owner;
- Economies of scale;
- Detailed overview of cost categories of shipping;

- Simplified profit/loss and Cash-Flow accounts;
- Relevance and dangers of gearing;
- Optimization of voyage speed;
- Economic implications of different charter contracts and link between time charter contracts and freight contracts;
- Voyage earnings, concept, relevance and computation;
- Discounted cash flow analysis and internal rate of return;
- Discussion of spillover effects.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	▪ Maritime Economics; Stopford, M.; 3rd edition 2009; ▪ The Blackwell Companion to Maritime Economics; Talley, W.,T.; 2012; ▪ Slides and exercises surrounding the lecture units will be provided in pdf-format via the online class-room; ▪ Contemporary and easily accessible reading materials may be announced by lecturer.
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
3.1.1. Economics of Ship Operations	Mr. Michael Tasto	4	Seminar, Lectures	Summative exam: ▪ KL or HA, group work is encouraged; assessment will be based on individual contributions. ▪ Minimum passing grade: 4.0. Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
3.1.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

3.2. Maritime Transport Geography

3.2. Maritime Transport Geography			
Module leader:	Professor "Maritime Management" Prof. Dr. Thomas Pawlik		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 3rd Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	The module may be offered within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Explain and discuss the concepts of network theory;
- Differentiate port system development, functions and hinterlands;
- Describe port privatization and devolution in different economic environments.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Analyse evolution of international trade pattern;
- Reflect on port development pattern (institutionally and geographically);
- Outline location theory applied to ports.

Communication and cooperation

- Analyse and discuss impacts of horizontal and vertical integration and network implications;
- Discuss liner shipping network and port development in different economic contexts.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals;
- Undertake professional activities with theoretical and methodical knowledge of maritime transport geography.

Course content:

- Introduction to transport and economic geography;
- International trade and globalization;
- Network theory / Networks in the maritime industry – an analysis of the liner shipping market:
  - Connectivity and accessibility;
  - Centrality and peripherality – implications for a region in a global market;
  - The impacts of horizontal and vertical integration and network implications, the case of liner shipping;
- Location theory applied to ports;
- Port functions and hinterlands;
- Port development: privatization, devolution;
- Port development in different economic environments and the wider institutional contexts.

▪	
Language of teaching:	English
Prerequisites:	*None*
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester. ▪ Monios, J., Wilmsmeier, G. (Eds.) 2018. Maritime Mobilities. Routledge Studies in Transport Analysis, Routledge; ▪ Wilmsmeier, G., Monios, J. (Eds.) 2019. Maritime Geographies. Edward Elgar.
Further information:	---

Courses of the module				
Course title	**Teaching staff**	**Contact hours per week**	**Learning and teaching methods**	**Examination method(s), scope and duration**
3.2.1. Maritime Transport Geography	Prof. Dr. Gordon Wilmsmeier	4	Seminar, Lectures	Summative exam: ▪ KL, HA or R ▪ Minimum passing grade: 4.0. Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
3.2.2. Module Related Exercises		(1)	Module Exercises	

3.3. Elective Import Minor 2

3.3 Elective Import Minor 2			
Module leader:	ISSC Course Director Prof. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Elective Module ISSC, 3rd Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	ISSC students may choose among the minor modules offered within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Students are obliged to take the Minor Import Module to deepen own interests.
The learning outcomes are described in the module description of each specific minor.
This module description explains the general objectives of the minor import modules.

Example ISMN Minor Module 5.3 Dry Cargo Operations

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Describe the different ship types, their equipment for cargo operations and transport-related characteristics of most important cargo groups;
- Discuss the commercial aspects of cargo transportation and loading/discharging;
- Describe lifting appliances and rigging arrangements;
- Explain operational and design limitations of bulk carriers;
- Differentiate and explain requirements of different cargoes as container, heavy lift, Ro/Ro, bulk incl. grain, timber deck cargo, refrigerated cargo.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply relevant international regulations, codes and standards concerning cargo operations;
- Establish procedures for safe cargo handling;
- Plan and assess an exemplary stowage plan;
- Judge the utilization of the vessel's operational capacity;
- Assess stability and seaworthiness of a vessel within the scope of cargo operations and the loading conditions at sea;
- Plan and assess cargo securing arrangements;
- Set up work schedules for cargo operations;
- Choose correct ventilation of cargo holds on sea voyages;
- Assess reported defects and damage to cargo spaces, hatch covers and ballast tanks and take appropriate action, especially on bulk carriers.

Communication and cooperation

- Explain the basic principles for establishing effective communications and improving working relationship between ship and terminal personnel;
- Establish effective communications during loading and unloading.

Reflection of academic and professional identity

- Reflect on the responsibilities of a cargo officer and of a cargo planner to ensure safe dry cargo operations.

Course content:

The course content is as described in the module description of the chosen minor module.

Example ISMN Minor Module 5.3 Dry Cargo Operations

- Cargo transportation technologies (ship types, cargoes, holds and hatch covers, maintenance);
- Cargo operations (loading and discharging processes, legal and organisational framework of operations, claim handling);
- Cargo handling (lifting appliances, rigging, operational safety);
- Stowage planning (cargo information, space calculation, stowage rules, stowage plans, work schedules);
- Ship's stability and strength (stability in cargo operations, trimming, ballasting, limit assessments);
- Cargo securing (behaviour of cargo, principles of securing, securing devices and material properties, securing arrangement assessment, cargo securing manual);
- Ventilation of cargo holds;
- Specific cargo requirements (container, heavy lift, Ro/Ro, bulk incl. grain, timber deck cargo, refrigerated cargo).

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, further specific regulations and literature, most recent reading materials will be announced at the start of the semester.
Further information:	

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
3.3.1. Elective Import Minor 2	Lecturer of the chosen Elective Import Minor 2 **ISMN Dry Cargo Operations** Mr. Hendrik Jungen and Ms. Alexandra Pohl-Hempel	4	Seminar, Lectures	Summative exam: ▪ KL or PF ▪ Related to entire content of lecture. ▪ Minimum passing grade: 4.0. **ISMN Dry Cargo Operations** Summative exam (Modulprüfung): ▪ HA, PA, or PF ▪ Related to entire content of lecture. ▪ At least grade 4.0 Formative exam (Studienleistungen):

				▪ mandatory exercises to be passed to participate in summative examination
3.3.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

3.4. Ship & Maritime Technology

3.4. Ship & Maritime Technology			
Module leader:	ISMN Course Director Prof. Thomas Jung		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 3rd Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions Offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:			

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Explain and discuss the technical construction and function of the supply system
- Differentiate types of vessels
- Name and describe a vessel's technical equipment, systems and technical construction

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Reflect ship's theory in relation to buoyancy, stability, trim and strength, impact on stability
- outline engines and work equipment/machinery

Communication and cooperation

- analyse and discuss different types of stowage and cargo handling

Reflection of academic and professional identity

-

Course content:

- Basic knowledge of ship building/construction and ship associations, as well as the use of correct terms for the different parts of a vessel:
- Skills in reading drawings and plans.
- Types of vessels, Classification.
- Maintenance, overhauling/repairs, corrosion prevention
- Knowledge of a vessel's technical equipment, systems and technical construction.
- Engines and work equipment/machinery.
- Propulsion, propeller and rudder.
- Operating materials.
- Technical construction and function of the supply system.
- Planning and documentation of supplying provisions. Ship management.
- Ship's theory in relation to buoyancy, stability, trim and strength, impact on stability due to shifting cargo, flooding, wind forces, etc.

- Bulk and heavy lift cargo, containers, Ro/Ro cargo, grain (grain code), minerals as bulk cargo (bulk cargo code) timber as deck cargo (timber code; guideline E1).
- stability and stress conditions under the application of appropriate procedures and methods (board computer, manual calculation);
- Preparation of the cargo holds, stowage regulations, stowage plan, cargo hold climate, documentation, work safety.
- CSS Code (Code of Safe Stowage and Securing of Cargo) and the application of the cargo securing manual for bulk and heavy lift cargo, Ro/Ro cargo and containers.
- Technical functions, operating criteria, testing, on-board documentation, control and maintenance of: cargo gear and cranes, gates, ramps, hold coverage, lifting platforms, conveying equipment, cooling plant.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
3.4.1. Ship & Maritime Technology	Prof. Dr. Iven Krämer	4	Seminar, Lectures	Summative exam: ▪ KL, HA or R ▪ Minimum passing grade: 4.0.
3.4.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

3.5. Maritime Human Resources

3.5 Maritime Human Resources			
Module leader:	Professor "Maritime Law" Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC, 3rd Semester	**Contact hours (h):**	60h + 15h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module is also a compulsory module of ISMN students. This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Remember and explain the international and national legislation and regulations of maritime labour;
- Describe an effective human resource management;
- Illustrate the major components of human resource management.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Demonstrate the application of maritime labour law in practice.

Communication and cooperation

- Present and demonstrate leadership, teamworking and managerial skills in the context of the maritime industry.

Reflection of academic and professional identity

- Consider the importance of an efficient human resource management;
- Reflect on the importance of complying with maritime labour laws.

Course content:

Maritime Labour Law

- International regulations as International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) and Maritime Labour Convention (MLC);
- Contracts and labour agreements;
- Social insurances;
- Work Time regulations;
- Occupational health regulations, ISO standards, training and education on board.

Nationaler Rechtsrahmen / Deutsches Seeschifffahrtsrecht

- Seearbeitsgesetz und Begleitvorschriften einschließlich Arbeitsschutzrecht;
- Betriebsverfassungsrecht;
- Sozialrecht;

- Seeleute-Befähigungsverordnung, Ausbildung von Seeleuten, Bescheinigungen für Seeleute;
- Schiffsbesetzungsverordnung.

HR Management

- Leadership and managing of people in shipping;
- Communication;
- Organizational behaviour and opportunity;
- Cultural behaviours;
- Employee appraisal and disciplinary actions.

Language of teaching:	English For ISMN students - national regulations are taught also in German
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be named at commence of lecture ▪ ILO: Maritime Labour Convention ▪ BG-Verkehr: Leitfaden zur Umsetzung Seearbeitsgesetze unter deutscher Flagge, 2018 ▪ ICS: Welfare aspects of the MLC ▪ Jeffery: Leadership Throughout, Nautical Institute
Further information:	

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
3.5.1 Maritime Human Resources	Mr. Röwe and Mr. Lingnau	4	Seminar, Lectures	Summative exam: KP: Combined examination ▪ KL for Labour Law (written test, 120 min) and ▪ HR Management: PR (oral presentation, 15 min) Related to entire content of course. Minimum passing grade 4.0 Formative exam: mandatory exercises to be passed as a requirement to participate in summative examination.
3.5.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

4. Semester

4.1. Controlling

4.1. Controlling			
Module leader:	Professor "Maritime Management" Prof. Dr. Thomas Pawlik		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 4th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module may be offered within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Describe the system of controlling and classify the type of data needed;
- Describe the main five depictions of business-plans;
- Analyze the corresponding controller-reports;
- Differentiate tabular and graphic data output of calculations and models.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply mathematical models of financial company structures;
- Carry out analyses of the profitability and feasibility of investment projects;
- Assess and simulate company decision-making processes;
- Assess and map e.g. markets or financing possibilities;
- Design and apply:
  - Models of (small) companies;
  - Simulations of their expected development;
  - Simulations of disturbing events and programs to restore their successful development
  - Corresponding controller reports

Communication and cooperation

- Identify the basic principles of different models;
- Design action strategies for certain company situations.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals;
- Undertake professional activities with theoretical and methodical knowledge of controlling.

Course content:

- Cost-volume-profit relationships;
- Determining how costs behave;

- Relevant information for decision making;
- Activity based costing;
- Pricing, target costing and customer profitability analysis;
- The five standard company-depictions;
- Their dynamisation for defined planning horizons;
- Concepts of controlling for the standard company-depictions;
- Capital investment decisions;
- Planning and budgetary control systems;
- Ship's theory in relation to buoyancy, stability, trim and strength, impact on stability due to shifting cargo, flooding, wind forces, etc.;
- Bulk and heavy lift cargo, containers, Ro/Ro cargo, grain (grain code), minerals as bulk cargo (bulk cargo code) timber as deck cargo (timber code; guideline E1);
- stability and stress conditions under the application of appropriate procedures and methods (board computer, manual calculation);
- Preparation of the cargo holds, stowage regulations, stowage plan, cargo hold climate, documentation, work safety;
- CSS Code (Code of Safe Stowage and Securing of Cargo) and the application of the cargo securing manual for bulk and heavy lift cargo, Ro/Ro cargo and containers;
- Technical functions, operating criteria, testing, on-board documentation, control and maintenance of: cargo gear and cranes, gates, ramps, hold coverage, lifting platforms, conveying equipment, cooling plant.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester; some indicative literature proposals are: ▪ Bhimani, A. et al; Management and Cost Accounting, 6th edition 2015; ▪ Willson, James D., and Janice M. Roehl-Anderson, Steven M. Bragg, Controllership – The Work of the Managerial Accountant, 6th ed. New York 1999
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
4.1.1. Controlling	Mr. Michael Tasto	4	Seminar, Lectures	Summative exam: ▪ KL or PA ▪ Minimum passing grade: 4.0 Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
4.1.2. Module Related Exercises	Mr. Michael Tasto	(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

4.2. Maritime Logistics

4.2. Maritime Logistics			
Module leader:	Professor "Maritime Economics" Prof. Dr. Burkhard Lemper		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC, 4th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions, offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module may be offered within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- List the different bulk commodities shipped by sea, as well as their demand drivers and typical trading routes and used vessel sizes;
- Summarize the link between globalization and seaborne trade for individual commodities;
- Restate the link between economic activity and seaborne trade for individual commodities;
- Discuss the key issues shaping the trade of major bulk commodities during the last years;
- Present the key issues of the discipline's logistics and supply chain management.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Carry out computations highlighting the impact of round-trip distance on economies of scale for bulk commodities;
- Provide an assessment about the suitability for a commodity to be transported in bulk (versus containerized transport);
- Judge the short- and long-term shipping demand for individual bulk commodities.

Communication and cooperation

- Develop and apply logistics and supply chain management fundamentals in practice.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals.

Course content:

- Bulk shipping theory:
  - Impact of round-trip distance on bulk shipping economics and logistics;
  - Economic principles of bulk shipping and properties of bulk commodities;
  - Bulk shipping market conditions in academic theory and reality;
  - Market participants and their strategies;
  - Trade theory;
  - Exercise: analysis of a bulk shipping market;

- Bulk shipping markets then and today:
  - Crude oil, oil products, chemicals;
  - Dry bulks;
  - Stopford's specialized shipping market model;
- Introduction to Logistics and Supply Chain Management beyond the maritime industry.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester; some indicative literature proposals are: ▪ Maritime Economics; Stopford, M.; 3rd edition 2009, ▪ The Blackwell Companion to Maritime Economics; Talley, W.,T.; 2012, ▪ The Handbook of Maritime Economics and Business; Grammenos, C. T.; 2nd edition, 2010
Further information:	Interested students may consult the "Dry Cargo Chartering" study book as well as the "Logistics and Multimodal Transport" study book from the Institute of Chartered Ship Brokers (each in the latest available edition) a valuable resource for further self-studies.

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
4.2.1. Maritime Logistics	Mr. Hendrik Jungen	4	Seminar, Lectures	Summative exam: ▪ R or KL ▪ Minimum passing grade: 4.0. Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
4.2.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

4.3 Elective Import Minor 3

4.3. Elective Import Minor 3			
Module leader:	ISSC Course Director Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Elective, ISSC, 4th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	15 classes in summer term	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	Offered as Minor Import Module within the "Blue Sciences" Cooperation		

Learning outcomes:

Students are obliged to take the Minor Import Module to deepen own interests.
The learning outcomes are described in the module description of each specific minor.
This module description explains the general objectives of the minor modules.

Example ISMN Minor Module 4.3 Dangerous Cargo

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Outline basics of chemistry with focus on chemical hazards (CL 1);
- Explain the importance of national and international regulations for the transport of dangerous cargoes at sea (CL 2);
- Describe precautionary measures during loading, discharging and care during the voyage (CL 2).

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply international rules, standards and codes on shipping dangerous goods CL 3);
- Demonstrate stowage planning under the observance of handling, stowage and segregation regulations (CL 3);
- Determine / plan emergency procedures, preparation for emergency situations and actions in the case of an incident (CL 3);
- Categorize / classify the classification regulations, packing regulations and carriage documents to recognize any irregularities in the transport (CL 4);
- Check consignments of dangerous goods and related transport documents to identify any irregulations (CL 4 and 5).

Communication and cooperation

- Participate in organized ship/ship, ship/shore, shore/shore communication in operations with dangerous cargo (CL 3);

Reflection of academic and professional identity

- Reflect on the importance of regulations for the safe carriage of dangerous cargo (CL 3).

Course content:

The course content is as described in the module description of the module offered as minor module.

Example ISMN Minor Module 4.3 Dangerous Cargo

- Basics of chemical hazards;
- IMDG-Code (International Maritime Dangerous Goods Code);
- IMSBC-Code (International Maritime Solid Bulk Cargoes Code);
- National laws, regulations and guidelines on classification, packing, documentation;
- Procedures and communication in operations with dangerous cargo.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester by the lecturer of the chosen Module. **ISMN Dangerous Cargo** ▪ IMO Model Courses 1.01 Basic Training For Oil And Chemical Tanker Cargo Operations ▪ IMO Model Course 1.04 Basic Training for Liquified Gas Tanker Cargo Operations
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
4.3.1. Elective Import Minor 3	Lecturer of the chosen Elective Import Minor 3 **ISMN Dangerous Cargo** Mr. Uwe Kraft	4	Seminar, Lectures	Summative exam: ▪ KL, HA, or PF; related to the entire course content; Minimum passing grade: 4.0. **ISMN Dangerous Cargo** Summative exam: ▪ KL or PF ▪ Related to entire content of lecture. ▪ Minimum passing grade:4.0 Formative exam: ▪ mandatory exercises to be passed to participate in summative examination
4.3.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

4.4. Marine Insurance & Large Casualty Handling

4.4. Marine Insurance & Large Casualty Handling			
Module leader:	Professor "Maritime Law" Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module, ISSC 4th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions or in block offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module may be offered within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Describe and explain types of international marine insurances and marine insurance markets;
- Discuss the basics of common marine insurances.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply P&I rules, H&M and LoH conditions;
- Judge on arrest, recoveries, guarantees and enforcement of claims;
- Choose adequate ways of settlement of disputes, arbitration and conciliation between the parties involved in a large casualty;
- Judge on salvage awards.

Communication and cooperation

- Explain the relationship of the parties involved in a large casualty and the accordant interaction;
- Develop and apply ways to handle and coordinate large casualties in case studies;
- Explain large claims handling strategies.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals.

Course content:

- Introduction on types of international marine insurances (direct insurance, re-insurance mutual insurance and captives);
- The basics and mechanisms of common marine insurances like P&I, H&M, Cargo, FD&D, LoH, War, K&R;
- Parties involved in large casualties, their roles and interaction with these parties;
- Enforcement of claims, recoveries, guarantees and arrest;
- Repairer´s / builder´s liability and knock for knock regime;
- Settlement of disputes, litigation / court actions, arbitration and mediation;
- Casualty analysis, management and coordination;
- Collecting evidence and information;

- Dealing with media;
- Global limitation;
- General Average;
- Commercial tug contracts / salvage.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester; some indicative literature proposals are: ▪ London Salvage Convention ▪ Allgemeine Deutsche Seeversicherungsbedingungen ▪ DTV-Kaskoklauseln 1978, aktuelle Fassung ▪ Nordic Plan 2013, Version 2016 ▪ Convention on Limitation of Liability for Marine Claims 1976 ▪ York Antwerp Rules 1994 ▪ Supplytime 2005 ▪ Lloyd´s Open Form 2011
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
4.4.1. Marine Insurance & Large Casualty Handling	Ms. Dorothee Schaar and Ms. Anna-Lena Simon, LL.M.	4	Seminar, Lectures	Summative exam: ▪ KL, HA or PF ▪ Minimum passing grade: 4.0. Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
4.4.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

4.5 Transport Law & Claim Handling

4.5 Transport Law & Claim Handling			
Module leader:	Professor "Maritime Law" Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module, ISSC 4th Semester	**Contact hours (h):**	60h + 15h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This is also a compulsory module for ISMN students. This module may be offered within the "Blue Sciences Teaching Cooperation" and open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Remember, organize and delineate the different transport and charter contracts;
- Understand and reflect on the applicability of selected cases of cargo claims;
- Describe and differentiate international multimodal legal relationships.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply the provisions under the German Commercial Code concerning carriage of goods by sea;
- Evaluate and verify the applicability of relevant provisions under the German Commercial Code and relevant international conventions in order to understand and consider solutions in cases of cargo claims and disputes.

Communication and cooperation

- Outline the obligations and liabilities of contractual and non-contractual relations in maritime trade law;
- Communicate with the relevant stakeholders/colleagues involved (shipping company, underwriters/brokers).

Reflection of academic and professional identity

- Reflect on the importance of acquiring good knowledge and understanding of transport law and cargo claims as a professional in the maritime industry;
- Demonstrate understanding of the legal challenges in involved in the carriage of goods by sea, on land or multi-modal;
- Be able to rely on and apply the acquired knowledge of transport law in day to day business and organization of a shipping or transport company.

Course content:

- Carriage contracts and transport documents under the German Commercial Code and conventions (Hague-, Visby-, Hamburg-Rules) and charter contracts (voyage, time, bareboat charter);
- Rules relating to the payment of freight, demurrage/detention and other costs under the German Commercial Code;

- Rules on liability arising out of damages, loss and/or delays in the carriage of goods on land or by sea or multi-modal;
- Multi-modal transport law regime, contracts for storage, cargo handling and special transports;
- Master's obligations regarding seaworthiness and preparedness for loading, carriers' liability, conservation of evidence, sea protest;
- Legal situation of the Master and his/her status as representative of the ship owner according to the German Commercial Code.

Language of teaching:	English
Prerequisites:	*None*
Preparation/literature:	*Lecture slides in pdf format will be uploaded on the online classroom; specific literature and other reading materials will be assigned at the start of the semester.*
Further information:	

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
4.5.1. Transport Law & Claim Handling	Prof. Dr. Suzette V. Suarez, LL.M.	4	Seminar, Lectures	Summative exam: ▪ KL or PF ▪ Related to entire course content. ▪ Minimum passing grade: 4.0 Formative exam: ▪ mandatory exercises to be passed to participate in summative examination
4.5.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

5. Semester

5.1. Practical Semester

5.1. Practical Semester			
Module leader:	ISSC Course Director Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	24 ECTS	**Workload (h):**	720 h
Type of module and position in the course of study:	Compulsory Module ISSC, 5th Semester	**Contact hours (h):**	Not applicable
Scope und frequency of teaching:	At least 18 weeks offered once per academic year in the Winter Semester	**Self-study (h):**	Not applicable
Type of module and position in other study programs or continuing education offers:			

Learning outcomes:

The students complete an internship of at least eighteen weeks in a company in the professional field of shipping and chartering. While serving as an intern at a company, special emphasis is placed on the areas of "Chartering / Operating" or "Controlling/ Accounting" or "Claims Department / Ship Management".

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Deepen and reinforce theoretical application, i.e. the students learn to apply their knowledge and abilities acquired from their university studies to their company tasks;
- Give the university, study program, professors and fellow students feedback and insights regarding their practical experience;
- Understand global professional life and work (function, organization, work processes, management, etc.).

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Practice and apply competences and skills in organization, planning and administration;
- Practice social competences in an international working and social environment.

Communication and cooperation

- Network with companies, colleagues and potential employers at home and abroad;
- Improve their language proficiency, in particular English.

Reflection of academic and professional identity

- Reflect on their own professional qualifications;
- Develop a professional self-image based on goals and standards of maritime professionals.

Course content:

- The specific content of the internship is established by the shipping company or other maritime company offering a position or, respectively, the student's pre-arrangement report.

Language of teaching:	English
Prerequisites:	90 ECTS credits from modules 1.1. to 4.5.
Preparation/literature:	Materials will be assigned by the company offering the internship position.
Further information:	---

Courses of the module				
Course title	**Teaching staff**	**Contact hours per week**	**Learning and teaching methods**	**Examination method(s), scope and duration**
5.1. Practical Semester	Prof. Dr. Suzette V. Suarez, LL.M., Practical Semester Coordinator		Seminar, Lectures, Practical Semester	Summative exam: ▪ PF ▪ Requirement for successfully passing the module: Students must be graded as „bestanden" (passed) to pass the examination.

5.2. Practical Semester – Preparation & Evaluation

5.2. Practical Semester Preparation & Evaluation			
Module leader:	ISSC Course Director Prof. Dr. Suzette V. Suarez, LL.M		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 5th Semester	**Contact hours (h):**	60h
Scope und frequency of teaching:	Offered once per academic year	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:			

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Be well-prepared to serve as an intern and be accurately informed about the process, objectives and content of an internship as well as its possible intercultural challenges;
- Understand company operations and the tasks to be performed during service as an intern at a company.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Know how to prepare and hand in the various requirements of the internship;
- Apply for an internship position with a shipping company or a company in the maritime industry.

Communication and cooperation

- Communicate with the shipping company during the application process in a professional manner;
- Provide feedback and insights of the practical experience with the university, professors, and colleagues by way of an internship report.

Reflection of academic and professional identity

- Reflect on their own professional qualifications;
- Develop a professional self-image based on goals and standards of maritime professionals.

Course content:

- During the preparation for an internship, all relevant administrative and topic-related aspects of internships are discussed in detail with the students;
- The module deals with the following: placement, i.e., assisting students during their search for an internship position (if possible, within a shipping company or another maritime institution), clarifying organizational issues (such as visas for work and residency abroad), conveying the content, form and design of the various elements of the internship report, as well as the appropriate conduct for an intern, and the objectives of the internship.

Language of teaching:	English
Prerequisites:	90 ECTS credits from modules 1.1. to 4.5.

Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.
Further information:	---

Courses of the module				
Course title	**Teaching staff**	**Contact hours per week**	**Learning and teaching methods**	**Examination method(s), scope and duration**
5.2.1. Practical Semester Preparation & Evaluation	Prof. Dr. Suzette V. Suarez, LL.M, Practical Semester Coordinator	4	Seminar, Lectures	Summative exam: ▪ PF ▪ Requirement for successfully passing the module: Students must be graded as „bestanden" (passed) to pass the examination.
5.2.2. Module Related Exercises		(1)	Module Exercises	

6. Semester

6.1. Ship Finance & Shipbuilding Contracts

6.1. Ship Finance & Shipbuilding Contracts			
Module leader:	Professor "Maritime Law" Prof. Dr. Suzette V. Suarez, LLM.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 6th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions or in block offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Describe and explain the German KG (limited partnership) model and its shift in role in light of the financial crisis;
- Discuss tasks and duties of classification societies;
- Differentiate and explain the most important commodity types in shipping.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply measures safeguarding liquidity for ship finance;
- Plan and assess phases, structure and investors of ship financing in an international context;
- Evaluate contracts for sale and purchase;
- Assess the general fiscal and economic conditions of shipbuilding;
- Assess the economic and legal structure of closed-end ship funds;

Communication and cooperation

- Explain sources and types of capital financing;
- Develop and apply key mathematical financial figures and their critical interpretation in practice.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals.

Course content:

- Contracts for sale and purchase (S & P), especially the Memorandum of Agreement (MoA);
- Advance payment guarantees / refund guarantees;
- Ship building – standardized contracts for new buildings;
- Measures of safeguarding liquidity for ship finance;
- Source and types of capital procurement;

- Phases, structure and investors of ship financing in an international context;
- German KG (limited partnership) model and its shift in role in light of the financial crisis;
- Alternative forms of financing with equity (ownership capital) and debt (loan capital) as well as their effects on the balance sheet;
- Key mathematical financial figures and their critical interpretation in practice;
- Rating assessments and credit rates regarding ship financing in view of bank regulations on capital ownership;
- Tasks and duties of classification societies;
- Content and collateral of ship mortgages;
- Economic and legal structure of closed-end ship funds and their development in the course of time;
- General fiscal and economic conditions of shipbuilding – tonnage tax, currency hedging, charter rates;
- Analysis of offering prospectuses with regard to legal issues and content as well as the status of issuing houses;
- Basics in derivatives and in forward markets;
- Restructuring of capital and secondary markets for closed-end funds.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be named at commence of lecture; some indicative literature proposals are: ▪ Winter / Hennig: Grundlagen der Schiffsfinanzierung (Frankfurt School); ▪ Martin Stopford: Maritime Economics (Routeldge); ▪ Günter Wöhe: Einführung in die ABWL (Vahlen); ▪ Bieg/Kußmaul: Finanzierung (Vahlen)
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
6.1.1. Ship Finance & Shipbuilding Contracts	Mr Tilmann Degen and Ms Daja Böhlhoff	4	Seminar, Lectures	<u>Summative exam:</u> ▪ KL, R, HA or PF ▪ Minimum passing grade: 4.0. Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
6.1.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

6.2. Maritime Arbitration

6.2. Maritime Arbitration			
Module leader:	Professor "Maritime Law" Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC, 6th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions or in block offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Describe and explain the fundamentals of maritime arbitration;
- Discuss routing / lawful and unlawful deviation / piracy issues;
- Differentiate and explain seaworthiness / cargoworthiness / bill of lading disputes;

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Prepare argumentations on agency disputes;
- Assess damages calculation under charter parties;
- Judge on bunker quality or payment disputes / claims;
- Analyze laytime and demurrage disputes;
- Assess apportionment of cargo claims.

Communication and cooperation

- Prepare argumentations and material in agency disputes;
- Develop and apply strategies to deal with all kinds of claims and disputes related to shipping contracts.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals.

Course content:

Selected case law and practical discussions via seminar papers on a series of common charter party disputes, including, but not limited to:

- Basics of maritime arbitration;
- Charter party fixtures;
- Charter parties compared to other maritime contracts (such as salvage, towage, offshore);
- Seaworthiness / cargoworthiness / bill of lading disputes;
- Vetting disputes;
- Payment of freight or hire;

- Bunker quality or payment disputes / claims;
- Apportionment of cargo claims (NYPE ICA);
- Non-performance claims;
- Agency disputes;
- Lien on cargo, bunker or vessel;
- Arrest disputes;
- Notice of readiness disputes;
- Laytime and demurrage disputes;
- Speed & consumption claims;
- Off hire;
- Routing / lawful and unlawful deviation / piracy issues;
- Frustration of contract;
- Delivery and redelivery of ship;
- Damages calculation under charter parties;
- Ship-building disputes / sale and purchase disputes;
- Legal consequences of environmental disasters.

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
6.2.1. Maritime Arbitration	Dr. Volker Lücke and Dr. Andrei Kharchenko	4	Seminar, Lectures	Summative exam: ▪ KL, HA or PF ▪ Minimum passing grade: 4.0. Formative exam: ▪ At the start of the semester, the lecturer determines the type of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
6.2.2. Module Related Exercises		(1)	MODULE EXERCISES	Module related exercises are offered on a regular basis to support and guide the self-study process.

6.3. Elective I

6.3. Elective I			
Module leader:	ISMN Course Director Prof. Dr. Ilknur Colmorn		
ECTS points:	6 ECTS (2x3 ECTS)	**Workload (h):**	180h (90h + 90h)
Type of module and position in the course of study:	Elective, Compulsory Module, 6th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions or in block offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This elective is- available for students of ISMN, ISSC and Blue Science study programmes. This is also open to Erasmus exchange students.		

Learning outcomes:

Students are obliged to take a class to deepen own interests.
The learning outcomes are described in the module description of each specific elective.
This module description explains the general objectives of the elective modules.

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Wxplain and describe specific contemporary issues of shipping markets and requirements or development of maritime technologies.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply specific tools;
- Analyze fundamental materials and structure topic related questions;
- Evaluate specific tasks and challenges for decision making or qualified discussion.

Communication and cooperation

- Participate in topic related discussions;
- Agree in co-operation with others to work on maritime challenges.

Reflection of academic and professional identity

- Take responsibility for a subject of personal interest;
- Find value for the personal development.

Course content:

The focus of Elective 1 are specific aspects of shipping markets and technologies. The objectives of the offered modules are contemporary issues of maritime markets and technological developments. The content of the modules is documented in the specific module descriptions.
The specific electives are offered in the study year on student's demand. General topics are:

Module 6.3.1 Passenger Ships

(1) Operations of Passenger Ships
(2) Environmental Issues

Module 6.3.2 Project Cargo / Heavy Lift
(1) Project Cargo Shipping
(2) Stowage & Securing

Module 6.3.3 Offshore Shipping
(1) Market Requirements (wind, oil, gas)
(2) Technical Challenges

Language of teaching:	English
Prerequisites:	as per specific module description
Preparation/literature:	as per specific module description
Further information:	as per specific module description

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
6.3.1 Elective 1 (part 1)	Different lecturers	2	Seminar, Lectures	Summative exam: ▪ KL, HA or PF ▪ Related to entire content of lecture. ▪ Minimum passing grade: 4.0 / passed or failed Formative exam: ▪ mandatory exercises to be passed to participate in summative examination
6.3.2 Elective 2 (part 2)	Different lecturers	2	Seminar, Lectures	Summative exam: ▪ KL, HA or PF ▪ Related to entire content of lecture. ▪ Minimum passing grade: 4.0 / passed or failed Formative exam: ▪ mandatory exercises to be passed to participate in summative examination
6.3.3. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

6.4. Maritime Research

6.4. Maritime Research			
Module leader:	Professor "Maritime Economics" Prof. Dr. Burkhard Lemper		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 6th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions or in block offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Research, describe and illustrate developments and trends in maritime markets and industries;
- Apply the concept of Stopford's shipping market model (or any other model relevant for the research subject) to the conducted research and recognize similarities and differences between the research subject and academic theory.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Evaluate development scenarios for the researched subject based on a given set of assumptions.

Communication and cooperation

- Develop professional working relationships with research supervisor and colleagues;
- Communicate results of research using a variety of communication methods.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals.

Course content:

- Conducting Research for maritime markets and industries:
  - Basic research principles;
  - Working with statistics and large amounts of data;
  - Suitable visualization of different types of data;
  - Relationship between audience and research report design;
- Scenario development and forecasting methodologies;
- Introduction to Logistics and Supply Chain Management beyond the maritime industry.

Language of teaching:	English
Prerequisites:	None

Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester; some indicative literature proposals are: ▪ Maritime Economics; Stopford, M.; 3rd edition 2009, ▪ The Blackwell Companion to Maritime Economics; Talley, W., T.; 2012, ▪ The Handbook of Maritime Economics and Business; Grammenos, C. T.; 2nd edition, 2010
Further information:	---

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
6.4.1. Maritime Research	N.n.	4	Seminar, Lectures	Summative exam: ▪ B or PF ▪ Minimum passing grade: 4.0 Formative exam ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
6.4.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

6.5 Fleet Management

6.5 Fleet Management			
Module leader:	Professor "Maritime Management" Prof. Dr. Thomas Pawlik		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC, 6th Semester	**Contact hours (h):**	60h + 15h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions or in block offered once per academic year in the Summer Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This is also a compulsory module for ISMN students. This module may be offered within the "Blue Sciences Teaching Cooperation" and open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Describe and understand the different maintenance systems for ships;
- Differentiate the tasks of nautical and technical ship management;
- Classify the tasks for docking and outline a docking project.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Analyze and evaluate the different maintenance systems for ships;
- Analyze and evaluate performance data of ships and fleets;
- Analyze spare part logistics (spare part structures, processes, purchasing, warehousing).

Communication and cooperation

- Participate in an effective collaboration between shore organization and ship's command.

Reflection of academic and professional identity

- Reflect on the importance of fleet management tasks as a holistic and systematic management approach.

Course content:

Technical Ship Management

- Maintenance strategies and planned maintenance systems;
- Purchasing and logistic chain, spare part logistics and warehousing;
- Docking requirements and preparation for ship yard;
- Inspections, Audits.

Fleet and Ship Performance

- Ship and fleet performance control systems;
- Data capture and data bases;
- Key Performance Indicators;
- Data analyzing and applied statistics;

▪ EEDI/EEOI, SEEMP ,	
Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be named at commence of lecture
Further information:	

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
6.5.1. Fleet Management	Mr. Nadja Köppen	4	Seminar, Lectures	Summative exam: ▪ KL, HA or PF ▪ Related to entire content of lecture. ▪ Minimum passing grade: 4.0 Formative exam: ▪ mandatory exercises to be passed to participate in summative examination
6.5.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

7. Semester

7.1. Management Systems

7.1. Management Systems			
Module leader:	Professor „Maritime Management “ Prof. Dr. Thomas Pawlik		
ECTS points:	6 ECTS	**Workload (h):**	180h
Type of module and position in the course of study:	Compulsory Module ISSC 7th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This module may be offered within the “Blue Sciences Teaching Cooperation”. This module is open to Erasmus exchange students.		

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Describe and explain the different general and shipping related management systems;
- Discuss integrative contents of these management systems;
- Differentiate and explain the relevance of managements systems in maritime business.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Assess methods for quality control and quality management;
- Evaluate environmental regulations and strategies;
- Analyse examples of maritime companies regarding their different management systems.

Communication and cooperation

- Prepare simple tools for quality planning, assurance and improvement;
- Formulate and apply basic principles and fundamental concepts of management models.

Reflection of academic and professional identity

- Develop a professional self-image based on goals and standards of maritime professionals.

Course content:

- Integrated management systems to manage and optimize maritime companies;
- ISO 9001/4, ISO 14001, ISO 18001, ISO 13000, EFQM: principles, content, structure;
- Maritime-specific models as ISM, TMSA, Green Ship;
- Relevance of management systems to achieve performance excellence and customer satisfaction;
- Modules of a management system (e.g. responsibility of management, resource management, process optimization, continuous improvement);
- Methods and tools for quality planning, assurance and improvement;
- Implementation of management systems (analysis, planning, realization, check).

Language of teaching:	English
Prerequisites:	None
Preparation/literature:	Lecture notes, specific literature, most recent reading materials will be assigned at the start of the semester.
Further information:	---

Courses of the module				
Course title	**Teaching staff**	**Contact hours per week**	**Learning and teaching methods**	**Examination method(s), scope and duration**
7.1.1. Management Systems	Prof. Dr. Ilknur Colmorn	4	Seminar, Lectures	Summative Exam: ▪ KL or HA ▪ Minimum passing grade: 4.0. Formative exam: ▪ At the start of the semester, the lecturer determines a series of mandatory exercises to be completed on a pass/fail basis. ▪ Passing the formative exams is a prerequisite for taking the summative exam.
7.1.2. Module Related Exercises		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

7.2. Elective II

7.2. Elective II			
Module leader:	ISSC Course Director Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS (2x 3 ECTS)	**Workload (h):**	180 h (90h + 90h)
Type of module and position in the course of study:	Elective, Compulsory Module 7th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions or block seminar offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This elective module is open to students within the "Blue Sciences Teaching Cooperation". This module is open to Erasmus exchange students.		

Learning outcomes:

Students are obliged to take a class to deepen own interests.
The learning outcomes are described in the module description of each specific elective.
This module description explains the general objectives of the elective modules.

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Explain and describe specific contemporary issues of shipping markets and management related challenges and requirements.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply specific tools;
- Analyse fundamental materials and structure topic related questions;
- Evaluate specific tasks and challenges for decision making or qualified discussion.

Communication and cooperation

- Participate in topic related discussions;
- Agree in co-operation with others to work on maritime challenges.

Reflection of academic and professional identity

- Take responsibility for a subject of personal interest;
- Find value for the personal development as maritime professionals.

Course content:

Elective 2 topics will be based on current developments in the maritime industry including digitalization and new offshore industries such as offshore windparks and their impacts on the maritime industry. Specific legal courses will also be offered such as International Law of the Sea.

Topics

- Digitalisation of Maritime Affairs
- Offshore Industries and the Maritime Industry
- International Law of the Sea

Language of teaching:	English
Prerequisites:	as per specific module description
Preparation/literature:	as per specific module description
Further information:	as per specific module description

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
7.2.1 Elective Topic 1	Different lecturers	2	Seminar, Lectures	Summative exam: ▪ PF, KL or MP ▪ Related to entire content of lecture. ▪ At least grade 4.0 / passed or failed. Formative exam: ▪ mandatory exercises to be passed to participate in summative examination
7.2.1 Elective Topic 2	Different lecturers	2	Seminar, Lectures	Summative exam: ▪ PF, KL or MP ▪ Related to entire content of lecture. ▪ At least grade 4.0 / passed or failed. Formative exam: ▪ mandatory exercises to be passed to participate in summative examination
7.2.3. Module Related Exercises	Different lecturers	(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

7.3. Elective III

7.3. Elective III			
Module leader:	ISSC Course Director Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	6 ECTS (2 x 3 ECTS)	**Workload (h):**	180 h (90h + 90h)
Type of module and position in the course of study:	Elective, Compulsory Module 7th Semester	**Contact hours (h):**	60 + 15 h (lecture + module related exercises)
Scope und frequency of teaching:	14 sessions or block seminar Offered once per academic year in the Winter Semester	**Self-study (h):**	120h
Type of module and position in other study programs or continuing education offers:	This elective module is open to students within the "Blue Sciences Teaching Cooperation" and Erasmus exchange students.		

Learning outcomes:

Students are obliged to take a class to deepen own interests.
The learning outcomes are described in the module description of each specific elective.
This module description explains the general objectives of the elective modules.

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Explain and describe specific contemporary issues of shipping markets and management related challenges and requirements.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply specific tools;
- Analyze fundamental materials and structure topic related questions;
- Evaluate specific tasks and challenges for decision making or qualified discussion.

Communication and cooperation

- Participate in topic related discussions;
- Agree in co-operation with others to work on maritime challenges.

Reflection of academic and professional identity

- Take responsibility for a subject of personal interest;
- Find value for the personal development as maritime professionals.

Course content:

The focus of Elective 2 are specific aspects of shipping markets and managerial challenges. The objectives of the offered modules are contemporary issues of maritime markets and management related challenges and requirements. The content of the modules is documented in the specific module descriptions.
The specific electives are offered in the study year on student's demand. General topics may include:

Port Management
(1) Port Design and Equipment
(2) Port Operations

Shipping Management & Organization
(1) Management Systems in Shipping (Quality and Safety Management)
(2) Management Systems in Shipping (Environmental and Energy Management Systems)

Specific Topics in Shipping
(1) Actual topics in shipping
(2) Actual topics in shipping

Language of teaching:	English
Prerequisites:	as per specific module description
Preparation/literature:	as per specific module description
Further information:	as per specific module description

Courses of the module

Course title	Teaching staff	Contact hours per week	Learning and teaching methods	Examination method(s), scope and duration
7.3.1 Elective III Topic 1	Different lecturers	2	Seminar, Lectures	Summative exam: ▪ PF, KL or MP ▪ Related to entire content of lecture. ▪ At least grade 4.0 / passed or failed. Formative exam: ▪ mandatory exercises to be passed to participate in summative examination
7.3.2 Elective III Topic 2	Different lecturers	2	Seminar, Lectures	Summative exam: ▪ PF, KL or MP ▪ Related to entire content of lecture. ▪ At least grade 4.0 / passed or failed. Formative exam: ▪ mandatory exercises to be passed to participate in summative examination
7.3.3. Module Related Exercise		(1)	Module Exercises	Module related exercises are offered on a regular basis to support and guide the self-study process.

7.4. Bachelor Thesis

7.4. Bachelor Thesis			
Module leader:	ISSC Course Director Prof. Dr. Suzette V. Suarez, LL.M.		
ECTS points:	12 ECTS	**Workload (h):**	360h
Type of module and position in the course of study:	Compulsory Module ISSC 7th Semester	**Contact hours (h):**	
Scope und frequency of teaching:	Every semester	**Self-study (h):**	360h
Type of module and position in other study programs or continuing education offers:			

Learning outcomes:

Knowledge and understanding (extension, consolidation and understanding of knowledge)

- Identify and discuss a research question in the business field of maritime shipping in a wider sense.

Using, applying and generating knowledge (applying and transferring knowledge, Scientific innovation)

- Apply the learned competencies in a discrete scientific task;
- Plan, analyse and evaluate a scientific question of the maritime industry;
- Appraise the outcomes of the thesis.

Communication and cooperation

- Participate in scientific discussions;
- Organize himself/herself and collaborate with other stakeholders of the topic.

Reflection of academic and professional identity

- Accept a challenging task, to solve problems and to find answers on his/her own;
- Being convinced to develop further scientific tasks (e.g. in a master program).

Course content:

- Determine the research task or question;
- Review and analyse literature;
- Plan and determine the frame of content and time (exposé and draft of Table of Content);
- Determine methods of research;
- Work on scientific development of answers;
- Analyse and discuss data;
- Structure, develop and write the thesis;
- Defend the thesis.

Language of teaching:	English
Prerequisites:	*Application and approval of thesis topic required according to BPO-AT.* *Anmeldung und Genehmigung erforderlich gemäß BPO-AT.*

Preparation/literature:	▪ *Rossig, Prätsch: Wissenschaftliches Arbeiten, 2010.* ▪ *specific publications according the subject.*
Further information:	---

Courses of the module				
Course title	**Teaching staff**	**Contact hours per week**	**Learning and teaching methods**	**Examination method(s), scope and duration**
7.4.1 Bachelor Thesis (Seminar)	Thesis supervisor and second reader are subject to the approval of the Examination Board (Prüfungsausschuss).	8	BT	Summative exam: ▪ BT and MP ▪ Duration 9 weeks ▪ Minimum passing grade 4.0 Formative exam: ▪ In academic writing form
7.4.2. Module Related Exercises		(2)	Module Exercises	