Course guide
280704 - 280704 - Management of Integrated Systems. Safety, Environment and Quality

Unit in charge: Barcelona School of Nautical Studies
Teaching unit: 742 - CEN - Department of Nautical Sciences and Engineering.
Degree:
MASTER’S DEGREE IN NAUTICAL SCIENCE AND MARITIME TRANSPORT MANAGEMENT (Syllabus 2016). (Compulsory subject).
MASTER’S DEGREE IN THE MANAGEMENT AND OPERATION OF MARINE ENERGY FACILITIES (Syllabus 2016). (Compulsory subject).

Academic year: 2022  ECTS Credits: 5.0  Languages: Catalan, Spanish, English

LECTURER

Coordinating lecturer: SANTIAGO ORDAS JIMENEZ

Others:
Primer quadrimestre: SANTIAGO ORDAS JIMENEZ - Grup: MGOIE, Grup: MNGTM

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE1-MNGTM. Coneixements adequats per iniciar l’activitat investigadora. Metodologia de la investigació aplicada a l’àmbit de l’especialitat
CE6-MNGTM. Coneixement i capacitat per a la realització d’auditories i estudis de Gestió de Qualitat.
CE7-MNGTM. Conocimiento y capacidad para la realización de auditorías y estudios de Seguridad Marina.
CE8-MNGTM. Coneixement i capacitat per a la realització d’auditories i estudis d’impacte ambiental.

Generical:
CG10-MNGTM. (ENG) Capacidad de analizar, valorar y corregir el impacto social y ambiental de las soluciones técnicas en el ámbito de la especialidad
CG11-MNGTM. Capacitat per a realitzar auditories energètiques i mediambientals

Transversal:
CT2. SUSTAINABILITY AND SOCIAL COMMITMENT: Being aware of and understanding the complexity of the economic and social phenomena typical of a welfare society, and being able to relate social welfare to globalisation and sustainability and to use technique, technology, economics and sustainability in a balanced and compatible manner.
CT3. TEAMWORK: Being able to work in an interdisciplinary team, whether as a member or as a leader, with the aim of contributing to projects pragmatically and responsibly and making commitments in view of the resources that are available.
CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Managing the acquisition, structuring, analysis and display of data and information in the chosen area of specialisation and critically assessing the results obtained.
CT5. FOREIGN LANGUAGE: Achieving a level of spoken and written proficiency in a foreign language, preferably English, that meets the needs of the profession and the labour market.
Basic:
CB6. Possess knowledge and understanding that provide a basis or opportunity be original in the development and / or application of ideas, often in a research context.
CB7. That the students can apply their knowledge and ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their study area.
CB9. That students can communicate their conclusions and the knowledge and Latest rationale underpinning to specialists and non-Specialty clearly and unambiguously.
CB10. Students must possess the learning skills that enable them continue studying in a way that will be largely self-directed or autonomous.

TEACHING METHODOLOGY
Master Classes
Autonomous work of theoretical content
Autonomous learning by solving exercises and problems

LEARNING OBJECTIVES OF THE SUBJECT
At the end of the course the student can demonstrate that:

- Knows Environmental Standards . ISO 14000/14001 , EMAS Regulation . Has extensive knowledge of them and Modes Application and Implementation
- Knows Quality Standards . ISO 9001. Has extensive knowledge of them and Modes Application and Implementation
- Knows safety regulations
- Knows The Standard OHSAS 18.001 on the management of Occupational Safety and Health.
- Knows aspects of Corporate Social Responsibility
- The student is capable of carrying an Audit Process

As a result of learning, the student has a training that covers all aspects related to maritime and safety risks, from the perspective of engineering and operations, as well as safety and health regulations and requirements.
The student knows the national and international regulations of management, quality and environment. The student is able to perform audits in these fields.

This course will evaluate the following STCW competences, according the Table A-II/2 & A-III/2

18. Develop emergency and damage control plans and handle emergency situation (A-II/2)

Ensure safe working practices (A-III/2)

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Hours large group</td>
<td>45,0</td>
<td>100.00</td>
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Total learning time: 45 h
CONTENTS

ISO 9001. Management Quality Systems

**Description:**
Requirements of a quality management system and the leadership and commitment of senior management.
Planning for the quality management system.
Resource Management-Support.
Requirements for Product Realization-operation.
Performance Evaluation and Improvement Processes.

**Full-or-part-time:** 2h
**Theory classes:** 2h

ISO 14001 & EMAS Regulation: Environmental Management Systems

**Description:**
Environmental Management and ISO 14001.
Special features of the Environmental Management System according EMAS Regulation.
Analysis and Environmental Statement.

**Full-or-part-time:** 2h
**Theory classes:** 2h

Advanced Tools for Sustainable Environmental Management

**Description:**
Fundamentals of Ecodesign and Life Cycle of Products.
What are the eco-labels.
Sustainable Management and Certification.
Ambientales.Análisis indicators and Environmental Risk Assessment.

**Full-or-part-time:** 2h
**Theory classes:** 2h

corporate social responsibility

**Description:**
Requirements and Implementation ISO 26000 and ISO CAP Evolution.
Sustainability Reports. The Global Reporting Initiative (GRI).
Requirements of AA1000.
SA8000 requirements.
Trends and Integration of Social Responsibility.
Audits and Certification of Social Responsibility.

**Full-or-part-time:** 2h
**Theory classes:** 2h
Health & Safety at work

Description:
Fundamentals of Occupational Safety.
Application of Industrial Safety at Companies.
Importance of Industrial Hygiene at Companies.
Ergonomics.
Psicosociological characteristics associated with Labour.

Full-or-part-time: 2h
Theory classes: 2h

OHSAS 18001: Safety and Health Management System

Description:
Challenge of Safety and Health at Work.
Documental Structure of Safety & Health Management Systems.
General and Policy Requirements OHSMS.
Planning Management System OHSAS.
Implementation and operation of OHSMS.
Testing and Management System Review OHSMS by management.

Full-or-part-time: 2h
Theory classes: 2h

Safety Management System (ISM Code)

Description:
Background and the vision of the ISM Code
Introduction to the 16 elements of the ISM Code
Functional requirements for a SMS
System of internal and external verification
Interpretations and requirements of major flag States

Specific objectives:
This knowledge is necessary in accordance with STCW Code A-II/2 and A-III/2 and it's developed according to MASTER AND CHIEF MATE (Model course 7.01) (2014 Edition) and CHIEF ENGINEER OFFICER AND SECOND ENGINEER OFFICER (Model course 7.02) (2014 Edition)

18.1 Preparation of contingency plans for response to emergencies
18.2 Ship construction, including damage control
18.3 Methods and aids for fire prevention, detection and extinction
18.4 Functions and use of life-saving appliances

Ensure safe working practices

Full-or-part-time: 2h
Theory classes: 2h
Integration of Management Systems Audit and Certification

Description:
International Standardization and Industrial Safety.
Main aspects of IMS Audits.
Auditor IMS profile.
Audit Process.
Audit Report Preparation of a IMS.
Integration of Management Systems.

Full-or-part-time: 2h
Theory classes: 2h

GRADING SYSTEM

The final score is the sum of the following partial grades:
\[ N_{\text{final}} = 0.5 \, N_{\text{pf}} + 0.3 \, N_{\text{act}} + 0.2 \, N_{\text{aca}} \]

- \( N_{\text{final}} \): final grade.
- \( N_{\text{pf}} \): final test score.
- \( N_{\text{act}} \): continuous assessment work.
- \( N_{\text{aca}} \): continuous assessment activities rating.

The final test consists of a part with issues related to the learning objectives of the course in terms of knowledge or understanding concepts, and a set of application exercises. Continuous assessment consists of different activities, both individual and group, summative and formative, made ??during the course (in the classroom and outside of it). The reassessment of the course wi ll consist of a final exam that will include all the contents of the subject.

EXAMINATION RULES.

If not any of the ongoing evaluation activities performed, shall be deemed not scored.
Be deemed not submitted the student / a not present at the final test or have not submitted at least 50% of the work and activities.

BIBLIOGRAPHY

Basic: