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**Міжнародна науково-практична конференція  
«Розбудова внутрішніх систем забезпечення якості у ЗВО України  
(до 10-ї річниці затвердження Програми заходів із забезпечення якості освіти у КНУТШ)»**

# **Внутрішня система забезпечення якості як основа належної професійної підготовки (досвід міжнародних акредитацій та інспектувань)**

**Вадим Захарченко**

**Національний університет “Одеська морська академія”  
Національний експерт з реформування вищої освіти Програми ЄС Еразмус+  
Компетентна особа Міжнародної морської організації**

**Київ, 22 листопада 2021 р.**



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# ***Професійна підготовка є важливою!***

***Висота 11'000 м, оголошення в авіалайнері***

**Dear ladies and gentlemen,  
This is captain speaking ...**

**Our crew is very good trained  
in team work,  
Not so good in landing ...**

**But do not worry please,  
We hope everything will be Ok, and  
Wish you nice and safe flight ...**



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# ***Специфіка "регульованих" професій : людський фактор***





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## ***Досвід міжнародних акредитацій та перевірок дотримання міжнародних стандартів***

- Акредитація Інститутом морської техніки,  
науки та технології (Велика Британія)  
Institute of Marine Engineering, Science and  
Technology – **IMarEST**



- Перевірка Європейським агентством з морської безпеки  
European Maritime Safety Agency – **EMSA**





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# Акредитація IMarEST (1)

## • Accreditation for Academic Courses leading to Professional Registration

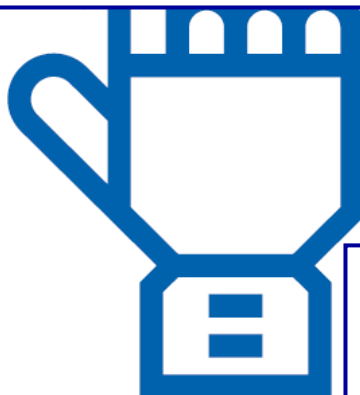


### The UK Standard for Professional Engineering Competence and Commitment (UK-SPEC)

Fourth edition

Published August 2020

The Engineering Council is the UK's regulatory body for the engineering profession. It operates under a Royal Charter and is governed by a Board that represents UK Licensees as well as individuals from industries and sectors with an interest in the regulation of the profession.



- **Engineering Technician (EngTech)**
- **Incorporated Engineer (IEng)**
- **Chartered Engineer (CEng)**







## ● Accreditation for Academic Courses leading to Professional Registration



### The UK Standard for Professional Engineering Competence and Commitment (UK-SPEC)

Fourth edition

Published August 2020

#### The Engineering Technician (EngTech) Standard

#### The Incorporated Engineer (IEng) Standard

#### The Chartered Engineer (CEng) Standard

Chartered Engineers develop solutions to complex engineering problems using new or existing technologies, and through innovation, creativity and technical analysis.

Chartered Engineers shall demonstrate:

- The theoretical knowledge to solve problems in new and established technologies and to develop new analytical techniques
- Successful application of the knowledge to deliver innovative products and services or taking technical responsibility for complex engineering systems
- Responsibility for the financial and planning aspects of projects, sub-projects or tasks
- Leadership and development of other professional staff through management, mentoring or coaching
- Effective interpersonal skills in communicating technical matters
- Understanding of the safety and sustainability implications of their work, seeking to improve aspects where feasible
- Commitment to professional engineering values

A Chartered Engineer will be able to demonstrate their competence in all of the areas listed, but the depth and extent of their experience and competence will vary with the nature and requirements of their role. They will demonstrate a level of competence and commitment in each area, (A1–E5), at a level which is consistent with their specific role. It is to be expected that

they will have a higher level of competence in some areas than others and their role may provide limited experience in certain areas. However, they need to demonstrate an understanding of, and familiarity with, the key aspects of competence in all areas as a minimum requirement while demonstrating higher levels of competence in those areas which are critical to their role. Overall, they will demonstrate an appropriate balance of competences to perform their role effectively at Chartered Engineer level.

The examples of evidence are intended as guidance to help identify activities that might demonstrate the required competence and commitment for Chartered Engineer registration. They are intended as examples only as the most appropriate evidence will vary with each individual role. The list is not exhaustive and other types of evidence might be valid. There is no requirement to provide multiple examples of evidence for each area of competence, but examples from two or three projects or tasks would be useful.



## ● Accreditation for Academic Courses leading to Professional Registration

Competence		Examples of evidence
A. Knowledge and understanding	The applicant shall demonstrate that they:	<ul style="list-style-type: none"><li>• Formal training related to your role</li><li>• Learning and developing new engineering</li></ul>
Chartered Engineers shall use		

Competence		Examples of evidence
B. Design, development and solving engineering problems	The applicant shall demonstrate that they: 1. Take an active role in the identification and definition of project requirements, problems	<ul style="list-style-type: none"><li>• Identifying projects or technical improvements to products, processes or systems</li><li>• Preparing specifications, taking account of functional and other requirements</li><li>• Establishing user requirements</li><li>• Reviewing specifications and tenders to identify</li></ul>
Chartered Engineers shall apply appropriate theoretical and practical methods to the analysis and solution of engineering problems		

- A. Knowledge and understanding
- B. Design, development and solving engineering problems
- C. Responsibility, management and leadership
- D. Communication and interpersonal skills
- E. Personal and professional commitment

- Preparing, presenting and agreeing design recommendations, with appropriate analysis of risk, and taking account of cost, quality, safety, reliability, accessibility, appearance, fitness for purpose, security (including cyber security), intellectual property constraints and opportunities, and environmental impact



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Published Augu



## • EMSA inspection

inspection of the maritime education, training and certification system of Ukraine



**Compliance with the requirements of the  
STCW Convention**

**Ukraine, 10 - 20 April 2018**

### **Regulation I/6**

*Training and assessment*

Each Party shall

.1

.2

### **Regulation I/8**

*Quality standards*

1 Each Party shall ensure that:

- .1 in accordance with the provisions of section A-I/8 of the STCW Code, all training, assessment of competence, certification, including medical certification, endorsement and revalidation activities carried out by non-governmental agencies or entities under its authority are continuously monitored through a quality standards system to ensure achievement of defined objectives, including those concerning the qualifications and experience of instructors and assessors; and
- .2 where governmental agencies or entities perform such activities, there shall be a quality standards system.

2 Each Party shall also ensure that an evaluation is periodically undertaken, in accordance with the provisions of section A-I/8 of the STCW Code, by qualified persons who are not





## IMarEST

1. Подання (самоаналіз) за встановленою структурою
2. Вивчення документів
3. Візит експертної групи
4. Висновки експертів
5. Прийняття рішення

## EMSA

1. Надання документів та інформації за встановленою структурою
2. Вивчення документів
3. Інспекційний візит
4. Проект звіту за результатами перевірки
5. Коментарі, додаткові докази
6. Звіт за результатами перевірки
7. План заходів держави щодо усунення недоліків



## **SECTION A**

### **GENERIC INFORMATION**

A1	GENERAL INFORMATION
A2	QUALITY ASSURANCE
A3	STAFF
A4	RESOURCES
A5	PLANNED CHANGES

## **SECTION B**

### **COURSE INFORMATION**

B1	PROGRAMMES
B2	PROJECTS
B3	INDUSTRIAL INPUT AND INFLUENCE
B4	OVERSEAS STUDY
B5	ADMISSIONS, PROGRESSION, AWARD & DESTINATION
B6	PROFESSIONAL MEMBERSHIP
B7	SPECIAL / COMMENDABLE FEATURES

## **SECTION C**

### **OUTPUT STANDARDS MATRIX**

C1	PROGRAMME CONTENT
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## Опитувальник IMarEST (фрагмент)

### A2 QUALITY ASSURANCE

Please provide details of the Departmental QA management structure and procedures including;

#### A2.1 QAA Institutional Audit Review

On CD: Please provide a copy of the summary and recommendations from the most recent QAA Audit Review Report. Where one has not been carried out please state when this is scheduled for or expected.

#### A2.2 Internal Programme Review Reports

On CD: Please provide the three most recent reviews (including annual and periodic), covering teaching and learning aspects and the Department's response.



## C. Legislation

### National University «Odessa Maritime Academy»

(Please **list and submit** all laws, regulations and procedures applicable to your MET Institution in the following areas:)

Number (if applicable)	Date of adoption/ publication (dd/mm/yyyy)	Name (title)	Subject / remark	Reference for the docs submitted
<b>I. Legal basis for the establishment as MET institution (law, statute, other)</b>				
1556-VII	01.07.2014	Law of Ukraine «On Higher Education»	Law establishes the basic legal, organizational and financial principles of functioning of higher education system (file C1.pdf)	C.1
623-p	15.06.2015	Order of the Cabinet of the Ministers of Ukraine "About the reorganization of Odessa National Maritime Academy"	About reorganization of Odessa National Maritime Academy to National University "Odessa Maritime Academy" (file C2.pdf)	C.2
			The Statute defines the concept of educational activity, authority of legal status, structure, rights and responsibilities of the National University (file C3.pdf)	C.3
<b>II. Provision(s) requiring</b>				
1556-VII	01.07.2014		System for quality assurance in higher	C.4
1411	09.12.2011	subordinated to the Ministry of Education and Science, Youth and Sports of Ukraine and that carry out training of staff for crews of marine vessels"		C.5
<b>III. Provision(s) related to "Course design, review and approval"</b>				
1556-VII	01.07.2014	Law of Ukraine «On Higher Education»	Section III Article 10 Item 3, 4; Section VI Article 32; Section VII Article 36. General Provisions on the development and approval of educational programmes (file C1.pdf)	C.6
	26.01.2016	Provisions about study programmes and curricula	Provisions regulate the procedure of the elaboration, approval, monitoring and revision of educational programmes in National University" (file C7.pdf)	C.7
<b>IV. Provision(s) related to "Man</b>				
	07.09.2016	Provis	ulators)"	C.8
491	07.10.2014	Order	of planning, purchasing, equipment related to economical education (file C8.pdf)	C.9
<b>V. Provision(s) related to "Examination and assessment of competence"</b>				
	23.02.2017	Provisions about organization of the educational process in National University "Odessa Maritime Academy"	Provisions determine the guidelines of the educational activity of the university, the forms of organization of the educational process, types of training sessions and requirements for participants of the educational process (file C10.pdf)	C.10
	29.12.2016	Provisions on the examination board of National University "Odessa Maritime Academy"	Provisions determine the procedure of the work of the examination board (file C11.pdf)	C.11



- I. Законодавчі основи функціонування закладу (закон, статут, інше)
- II. Положення, що зобов'язують заклад впровадити Систему забезпечення якості (Систему стандартів якості)
- III. Положення, що стосуються розроблення, затвердження та перегляду програм
- IV. Положення, що стосуються управління навчальними ресурсами (лабораторне обладнання, комп'ютери, тренажери тощо)
- V. Положення, що стосуються оцінювання компетентності
- VI. Положення, що стосуються кваліфікації та досвіду викладачів, інструкторів, екзаменаторів.
- VII. Положення, що стосуються прийому і реєстрації студентів та видачі дипломів й сертифікатів
- VIII. Інші закони, регуляторні акти та процедури, що стосуються закладу





## Inspection Programme Maritime Education, Training and Certification System in Ukraine, 10-20 April 2018

### National University "Odessa Maritime Academy" (NUOMA)

Place: Odessa		Date: 17.04.2018	
Time	STCW references	Inspected Activity	Unit/Staff involved
09:00 09:15		<ul style="list-style-type: none"> <li>Presentation of the EMSA team</li> <li>Introduction to the methodology used</li> <li>Validation of the inspection programme</li> <li>Presentation of the NUOMA team</li> </ul>	Head (or his/her representative), Deans, Heads of Department, Quality representative
09:15 11:00	Article I Regulations I/6, I/8 and I/12	<ul style="list-style-type: none"> <li>Quality standards system: policy, objectives, organization, authority and responsibilities, resource management, measurement and analysis, continual improvement, follow-up of non-conformities, management review, control of documents, control of records, external evaluation</li> <li>Governmental accreditation, monitoring, applicable national regulations on education and training</li> <li>Academic staff qualification</li> </ul>	Head (or his/her representative), Deans, Heads of Department, Quality representative and staff involved
11:00 12:30 and 13:30 17:00	Article I Regulations I/6, I/8, I/12 and I/15 Chapters II to VII	<ul style="list-style-type: none"> <li>Course design, review and approval</li> <li>Training monitoring and supervision</li> <li>Assessment of competence, examination</li> </ul>	Heads of Department, Quality representative and staff involved



### National University "Odessa Maritime Academy" (NUOMA)

Place: Odessa		Date: 18.04.2018	
Time	STCW references	Inspected Activity	Unit/Staff involved
09:00 10:30	Article I Regulations I/2, I/8 and I/15 Chapters II to VII	<ul style="list-style-type: none"> <li>Admission of students</li> <li>Issue of degrees, diplomas, training certificates, CoPs and /or documentary evidence, as applicable</li> </ul>	Quality representative and staff of the units involved
10:30 12:30 and 13:30 15:00	Article I Regulations I/6, I/8 and I/12	<ul style="list-style-type: none"> <li>Visit to training facilities: laboratories, simulators, library, workshops and emergency, safety and survival training site(s) (if applicable)</li> <li>Pedagogical documentation</li> <li>Maintenance records</li> <li>Use of equipment and simulators</li> <li>Competency assessment using simulators (if applicable)</li> </ul>	Heads of Department, Lecturers, Instructors
15:00 16:00	Article I Regulation I/8	Prepare for the closing meeting	EMSA Inspectors
16:00 17:00		Debriefing: synthesis of the inspection	People met

- Training monitoring and supervision
- Assessment of competence, examination



- Законодавство (закони, урядові та галузеві нормативно-правові акти)
  - Інституційні (внутрішні) положення
  - Встановлені повноваження, відповідальні особи
  - Документальні підтвердження
  - Перевірка фактичного стану
- Дотримання стандартів на основі системи забезпечення якості
  - Фокус на обов'язковості та дієвості процесів



Аналіз комплексу документів, що визначають зміст освіти

### ***Охоплені***

- освітні програми
- навчальні плани
- робочі програми навчальних дисциплін
- зміст практичних / лабораторних занять
- зміст та організація оцінювання

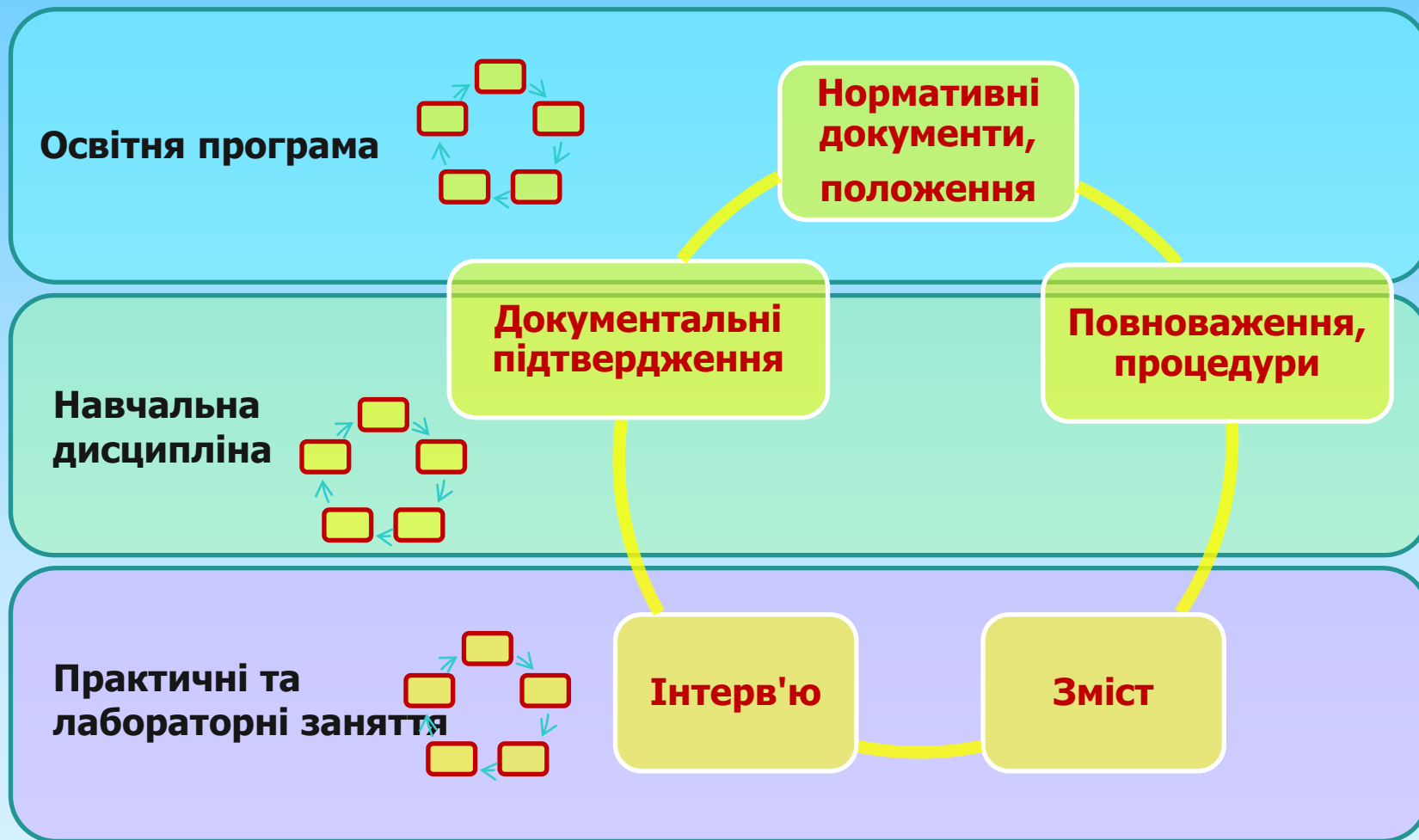
### ***Основні аспекти перевірки***

- хто розробляє, хто затверджує?
- яким документом встановлені повноваження?
- процедура розроблення та затвердження
- документальні підтвердження дотримання процедури
- аналіз змісту
- перевірка реалізації в лабораторіях



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# Перевірка програм (1)





## Specification of minimum standard of competence for masters and chief mates on ships of 500 gross tonnage or more

Column 1	Column 2	Column 3
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence
Manoeuvre and handle a ship in all conditions	Manoeuvring and handling a ship in all conditions, including:  .1 manoeuvres when approaching pilot stations and embarking or disembarking pilots, with due regard to weather, tide, headreach and stopping distances	Examination and assessment of evidence obtained from one or more of the following:  .1 approved in-service experience  .2 approved simulator training, where appropriate

Компетентність

Результат навчання

Освітня програма

Навчальний план

Навчальна дисципліна

Практичні заняття

Обладнання

Оцінювання





## Specification of minimum standard of competence for masters and chief mates on ships of 500 gross tonnage or more

Column 1	Column 2	Column 3
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**Компетентність**

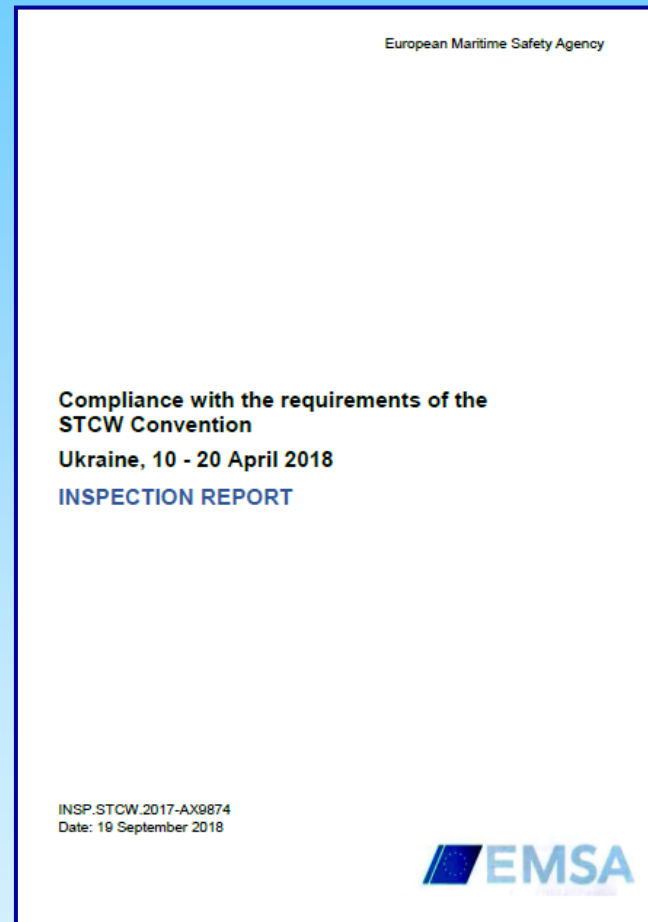
**Результат навчання**





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# Підсумкові документи





## 1. Особливий акцент на

- внутрішніх правилах, процедурах, повноваженнях
- змісті та організації професійної підготовки та забезпеченні досягнення здобувачами освіти професійної компетентності
- методах і засобах демонстрації компетентності та оцінювання
- моніторингу прогресу студентів

## 2. Значний час на попереднє вивчення інформації та документів експертами

## 4. Заклад самостійно визначає хто має відповідати на запитання щодо певних процесів і процедур та систему документальних доказів

## 5. Сприйняття різних підходів, методів та засобів досягнення цілей

- *(принцип – “як це у Вас?”)*



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***Дякую за увагу!***

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