



UFR_SDM

LICENCE 2

ENGLISH FOR MARINE SCIENCE

ACADEMIC YEAR : 2022-2023

Syllabus L 2 /UFR Science de la mer/Anglais

Teacher: Dr Kouadio Pascal KOFFI

0505157578/ koffi.pascal@usp.edu.ci / kpascal36@hotmail.fr

Status: Assistant (USP)

Title: English for Marine science

Duration: 12 hours

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I-COURSE DESCRIPTION

The present lecture is designed for L 2 students in Marine science. Based on the four linguistic skills, it provides students with technical terms related to marine science and activities in the domain of shipping operation and navigation. It also takes into account structural and functional language and writing materials.

a- GENERAL OBJECTIVES

This lecture aims at helping L 2 STUDENTS appropriate technical terms in Marine sciences and be able to use English language in their prospect professional career.

a- SPECIFIC OBJECTIVES

Specifically, L 2 STUDENTS should be able to:

- Acquire and use English for marine science
- Use technical language in maritime domain
- Use English to describe and talk about maritime tasks

II-COURSE CONTENT

N° SESSION	CONTENT	LECTURE	TUTORIAL
Session I	Unit I: SHIPPING AND SHIPS TYPES A- Section I: Shipping: I- Ships and transportation 2- Merchant ships B- Section 2: Ships types I- Categorising cargoes 2- Cargo ship and ships types	Lecture	

	3- Language spot: expressing reason and consequence Unit II: SHIP CONSTRUCTION AND MANNING A- Section I: Ship construction 1- Plan designing 2- Construction 3- Checking stage 4- From active to passive voice 5- Revising tenses B- Section 2: Manning 1- The Deck Department a- Responsibility b- Component 2- Language spot: Describing responsibility, duty and task		
Session 2	Unit III: SEAMANSHIP AND CARGO WORK A- Section I: Seamanship & Cargo work 1- Dealing with mooring 2- Cargo work 3- Bulk cargo and general cargo	Lecture	
Session 3	Unit IV: APPLIED TERMINOLOGY A- Section I: Terms relating to shapes and their measurement 1- Describing shapes with noun and adjectives 2- Talking about shapes measurement B- Section 2: Terms relating to a ship and hull surface	Lecture	

IV-METHODOLOGY:

This course is a full lecture guided by an interaction with students and among students. It is supported with materials such as texts, audio or videos to substantiate situations.

V-ASSESSMENT METHOD:

Assessment is by coursework (30%). A final exam takes place at the end of the semester. The latter is in writing focusing on the different lessons studied. A re-sit exam takes place at the end of the second semester if necessary according the teaching team.

VI-BIBLIOGRAPHY

- [1] BLACKKEY, T. N, *English for Maritime Studies* [1983]. Cambridge: Cambridge University Press, 1987
- [2] BRIEGER, Nick and Alison Pohl, *Technical English: Vocabulary and Grammar*. UK: Summertown Publishing,
- [3] LOGIE, Catherine et al. *English for Seafarers (Study Pack 2)*. Edinburgh: Marlin, 1998
- [4]SCHATZ, S. Mary, *Grammar Rules! For Students, Parent, & Teachers: A straighten approach to Basic English Grammar and Writing Skills*.
- [5] *Maritime English, Vol. II*, (published in 2016)¹
- [6] *Essential English for Marine engineers*²

¹ Nom d’auteur écrit en Russe

² Idem

LECTURE-L 2-MARINE SCIENCE-2022-2023

UNIT 1: SHIPPING AND SHIPS TYPES

A- Section I: Shipping

Introduction

Shipping derives from ship. While ship is the physical and mechanical material for sailing, shipping deals with operations relating to sailing. Words family to ship are: craft, vessel, boat...

Words family to shipping are: freight, shipment, embarking, charging, discharging...

From the above precision, dealing with shipping leads us to what ships are designed for.

1- Ships and transportation

The main use of ship is transportation. As such, shipping deals with transport from one port to another or from harbour to harbours. In this line, we talk about merchant ships.

2- Merchant ships

Merchant ships are divided into two categories: cargo ship and passenger ship. We can also talk about ships for cargoes and ships for passengers.

Focus: merchant ships are designed to carry cargo. Some are also designed to carry passengers.

Cargo: freight, luggage/baggage, load, goods, materials on import-export trading.

Passengers: travellers, tourists....

a- Changes and trend in merchant shipping

Today/nowadays, **most merchant ships are built or designed** to carry cargo, but a few still carry passengers.

They can operate as **liners**. These are employed on regular routes on a fixed timetable.

When merchant ships operate as liners **a list of their arrival and departure dates is published in advance and they sail whether full or not.**

Focus: arrival date/ departure date/ published in advance

b- Types of liners:

There are two main types of liners: **deep-sea liners** and **short-sea liners**.

The former (**deep-sea liners**) carry mainly containerized cargo across the oceans of the world; the latter (**short-sea liners**) carry containerized or conventional cargo on shorter routes.

Ferries/shuttles are also classed as liners. They are set to offer a **daily or weekly service** for passengers and vehicles across **channels and narrow sea**.

c- Rarefaction of passenger liners

A few ships are still employed as **passenger liners**. They not only carry passengers but also some cargo on route from Europe to North America and to the Far East (cargoes + passengers).

The **decrease/fall** in passenger trade on ships has reduced the traffic of passenger liners. But some still operate as **cruise ships (tourism, pleasure, research...)** for part of the year.

3- Other categories of merchant ships

Merchant ships also operate as **tramps**. Tramps are a category of vessels without a fixed timetable. So, they do not **sail on regular routes**, they are not **kept to a fixed timetable**, but are **employed where there is a cargo for them to carry**. It means they **sail to everywhere/any harbours**.

a- Types of tramps

There are deep-sea tramps and short-sea tramps. Some are classed as coastal plying on **coastal routes** and up rivers to **island ports**. The traditional tramp cargoes are **dry bulk cargoes**, but some are designed to carry general cargoes.

Focus: dry bulk cargoes/ liquid bulk carrier

b- Merchant ships and specialised vessels

Shipping also has to do with specialisation in transportation of merchandises or cargoes. In this respect, we have a number of merchant ships operating as specialised vessels. These vessels are designed to carry a particular type of cargo.

Hence, come several types of specialised vessel with the most common known as **oil tankers**. They are owned by the major **oil companies** or by **independent operators**. Besides, two other types of liquid bulk carrier of growing importance are **chemical carriers** and **Liquefied Natural Gas (LNG) Carriers**.

B-Section 2: Ships types

Definition

Type classification of merchant ships can be drawn from what they carry. Therefore, we have most designed to carry cargo and only a few still carry passengers as seen in the previous section. It means ships types, even with those carrying cargoes, are determined by the type of cargo they load and transport.

1- Categorising cargoes

Dry and liquid are the adjectives use to designate or describe cargo. While dry referred to hard objects/goods, liquid referred to goods in form of water. From the above distinction, we have **dry cargo** and **liquid cargo**. These two categories of cargo make up two ships types.

2- Cargo ships and ships types

According to cargo categories, cargo ships are divided into two basic types: dry cargo ships and liquid cargo ships.

a- Dry cargo ships

This type of ships carries liquid-free or moisture-free goods such as **the multi-deck vessel** and **the container ship**.

b- Liquid cargo ships

Contrary to dry cargo ships which do not carry liquid goods, liquid cargo ships transport goods in liquid form. Liquid cargo ships include oil tankers, the liquefied natural gas carrier (NLG), and the chemical carrier.

3- Language spot:

a- Add reason to statement: Multi-deck vessels have 'tween decks, **because these** make stowage of individual package easier.

b- Add two reasons to statement: Oil tankers are often very large, **because** huge quantities of oil need to be transported and one large vessel is more economical to operate than two smaller ones.

- c- Add consequence to statement: Containers are of standard dimensions, **consequently** stowage is easier.

Many ferries carry vehicles, **therefore these** have doors at the stern or bows.

- 4- Performance: Why have passenger liners been greatly reduced in number? Why are passenger ships being decreased in the nautical traffic? (floor to the attendants/students)

= Passenger ships have been greatly reduced in number, because of competition from air transport.

Unit 2: SHIPS CONSTRUCTION AND MANNING

A- Section I: Ships construction

Introduction

Ship building follows a well-ordered sequence of events. The constructor follows different steps from the plan to the materialisation of the ship. So dealing with ships construction is tantamount to talk about the different steps out of which a ship is built.

I-Plan designing

a- Design

This project level follows the order sequence. It means a client ask the constructor to build him a vessel. Requirements from the order are taken into account in the drawing office where plans are completed. There are basic design and detail design. The first has to do with demands settling between the owner and craftsmen (constructor). As for the detail design, it is about drawing the different parts of ship. The design leads us to the lofting.

b- Lofting

Lofting consists in materialising the drawing on a surface to sort out the actual model of the ship to be built for the numerical control to start.

2-Construction

a- Numerical control

This stage is related to cutting the different forms. It means craftsmen cut parts through a mechanised tool/machine to bend in the next step.

b- Bending

Bending is the stage where cut forms are moulded according to the different curves for assemblage.

c- Assembly

It seems inefficient to build a ship at a time. Thus, the construction is done in blocks called block construction method. It means according to size, forms are put together (assemble) in the shipyard.

d- Block installation and Assembly

It is to join the different blocks previously assembled. That makes up the final form of the ship.

e- Painting

The painting begins when the Assembly is over. It improves the appearance of the ship. It also prevents the ship from corrosion.

f- Launching

It's about floating the ship on the sea for the first time. This is done easily because the building berth is inclined to the direction of the sea like a slide. When Assembly and painting are over, the ship is let slide on and float on the sea.

g- Outfitting

This stage comes after the first launching. It consists in equipping completely the hull with pipes, engine, interiors or electric wires. This job is done for 30% since by the launching the construction is approximately completed at 70%.

3-Checking stage

a- Trial

Outfitting is over, start some tests on the ship performance such as vessel speed, the turning....

These tests aim at confirming satisfaction with the contracted specifications between the owner and the shipyard for delivery.

b- Delivery

This is the last stage where the ship is handed over to its owner. The public is invited to take part.

c- Language spot: From active to passive voice

1- Naval architect designs ships.

✓ Ships are designed by naval architects.

2- Men built the tanker in six months.

✓ The tanker was built in six months.

3- First, I measured the piece of metal.

✓ First, the piece of metal was measured.

4- First, I should measure the piece of metal.

✓ First, the metal should be measured.

❖ Uses of passive voice:

- It allows an object of a sentence to be moved to the subject position (example 1)
- It allows the writer to avoid a subject (like men in example 2) focussing **how long it took to build the ship**, but not **who built it**.
- The passive allows us to write/speak in an impersonal style. This is useful in more scientific English, particularly in reports and experiments. In this case, passive voice is synonymous to objectivity and draws the reader's attention on the action/fact rather than the person doing the action (example 3).

- Revising tenses

- Present tenses

- ✚ Present simple: The captain checks the crew.

- ✚ Present continuous: The captain is checking the crew.

- ✚ Present perfect: The captain has checked the crew.

- ✚ Present perfect continuous: The captain has been checking the crew.

- Past tenses

- ✚ Past simple: The captain checked the crew.

- ✚ Past continuous: The captain was checking the crew.

- ✚ Past perfect: The captain had checked the crew.

- ✚ Past perfect continuous: the captain had been checking the crew.

- Future tenses

- ✚ Future simple: The captain will check the crew.

- ✚ Future continuous: the captain will be checking the crew.

- ✚ Future perfect: the captain will have checked the crew.

- ✚ Future perfect continuous: The captain will have been checking the crew.

- Conditional tenses

- ✚ Conditional simple: The captain would check the crew.

- ✚ Conditional continuous: The captain would be checking the crew.

✚ Conditional perfect: The captain would have checked the crew.

✚ Conditional perfect continuous: The captain would have been checking the crew.

B-Section 2: Manning

Introduction

In terms of manning, four (4) departments are to be mentioned: deck department, engine department, catering department, and radio department. From this classification, one can understand manning has to do with crew on a ship. The focus of this section will be on the deck department.

I- The deck department

a- Responsibility

The Deck Department is responsible for navigating the ship safely and economically from port to port. It means navigation is the responsibility of the Deck Department. We can put it this way: the Deck Department is in charge of navigating the ship safely and economically from port to port. It's also the job of the Deck Department to see that the cargo is stowed properly in the holds and kept in good condition during the voyage.

b- Component

The team in the Deck Department is composed of Officers, Petty-Officers, and Ratings under the Master called Captain in charge of the whole Crew. Each level in the Deck Department has a responsibility to achieve.

- The Master/captain is the first Officer and an experienced navigator who usually works out the best course.
 - Officer
- The Chief Officer is responsible of the stowage of cargo.

- The Second Officer and the Third Officer help the Chief Officer in his duties. It means they **keep the ship on course** and look after all the equipment used for navigation.

- Petty-Officers

- Also called boatswains or bosuns, Petty-Officers, generally, control constant cleaning, painting work....

- Ratings

- They maintain the ship clean and do painting.
- The carpenter sounds the tank and bilges in order to check the depths of liquid in them....

2- Language spot: Describing responsibility, task and duty

For example:

- a- The Deck Department is responsible for keeping watches.
- b- The Master is in charge of working out the best course.
- c- The stowage of cargo is the responsibility of the Chief Officer.
- d- The Second Officer is responsible to the Master...
- e- The Second Officer reports to the Master...

Unit 3: SEAMANSHIP AND CARGO WORK

A- Section I&2: Seamanship and cargo work

Introduction

Relating to shipping, navigation and cargo handling, seamanship and cargo work is a unit about skills in sailing and abilities to handle ships and cargo. In short, the section deals with abilities for handling ships on navigation.

I- Dealing with mooring

Mooring, synonymous to anchorage, means holds a ship in place. To this end, seamen use **mooring lines** to make a ship fast to the quayside. (Make fast: a ship is made fast to

the quayside by mooring). The standard mooring lines are: a headline, a breastline and a backspring forward, a stern line, a breastline and a backspring aft.

2- Cargo work

Cargoes carried by ships can be divided into two basic types: bulk cargo and general cargo.

a- Bulk cargo: it consists of a single cargo, usually carried loose. Bulk cargo is carried in specially designed vessels. Therefore, stowage presents few problems.

b- General cargo: it's a variety of goods packed separately. With general cargo, Stowage presents many problems, because each item different in shape and size has its own type of packaging and characteristics.

3- Bulk cargo / general cargo

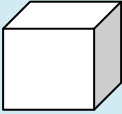
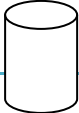
✓ Bulk cargo can be divided into: liquid bulk cargo / dry bulk cargo

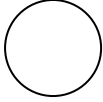
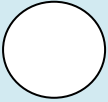
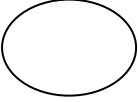
✓ General cargo can be divided into: containerized, non-containerized and refrigerated cargo.

Unit 4: APPLIED TERMINOLOGIES

A- Section I: terms relating to shapes and their measurement

I- Describing shapes with noun or adjective

Two-dimensional figures	Noun	Adjective	Three-dimensional figures	Noun	Adjective
	Square	Square		Cube	Cubic
	Rectangle	Rectangular		cylinder	cylindrical

	Triangle	triangular		Pyramid	Pyramidal
	Circle	Circular		Sphere	Spherical
	Semicircle	Semicircular		Hemisphere	Hemispherical
	Ellipse /oval	Ellipstical/oval		Cone	Conical

For example: It is shaped like a rectangle.

= It is a rectangular shape.

It is a cylindrical shape

= It's shaped like a cylinder

a- Writing: description of buoys

- Theory

Can

Pillar

Spar

Colour: red

Shape: can, spar or pillar

Top mark: (if any) red can

Light: red, any rhythm

In the system of buoyage adapted by the International Association of Light-house Authorities (IALA), Lateral marks consist of porthand buoys and starboard hand buoys.

Porthand buoys are red in colour. They are either can-shaped, pillar-shaped or spar-shaped. If they carry a top mark it is also red and shaped like a can. Lights, when fitted, are red and flash in any rhythm.

- Application

Drawing from the above example, use the note below to write a description of a starboard hand buoys.

2- Shapes measurement

We can describe the length of an object using four different patterns:

- 1- The beam is three metres in length.
- 2- The beam has a length of three metres.
- 3- The length of the beam is three metres.
- 4- The beam is three metres long.

- Width, breadth, height, depth and thickness are described using the same patterns.
- Radius, diameter, circumference are described using patterns 1, 2, 3

Noun	Adjectives
Width	Wide
Breadth	Broad
Height	high
Depth	Deep
Thickness	Thick
length	Long

B- Section 2: TERMS RELATING TO SHIP'S HULL AND HULL SURFACE

(this section will be substantiated by excerpts from book I

- The main body of a ship is called hull
- The hull is divided into three parts: Fore end, Midships, After end

- The foremost part is called the bow and the rearmost part is called the Stern (see p. 24 for pictures)

The hull surface can be referred to using the following terms:

Bow, Amidships, Quarter, Water line. (See p. 24 for pictures)

..... the end