



ITALIAN NAVAL ACADEMY



INTERNATIONAL NAVAL SEMESTER 2023



STUDIES CURRICULUM



1. INTRODUCTION

1.1. Pre-conditions

- Only military Officer Cadets/Midshipmen – with an appropriate military background – are eligible to participate in the entire International Naval Semester. Exceptions will be addressed on a case-to-case basis.
- Officer Cadets' pre-conditions for participation in the semester are:
 - English language requirements according to following point 1.2.;
 - Suitability for physical activity assured by the belonging Institution;
 - Basic managerial, communication and leadership skills;
 - Basic negotiation and problem solving skills;
 - Ability to plan, organize and accept responsibility;
 - Basic knowledge of using computers.
- There is no participation of civilian students in the semester.
- Military Officer Cadets/Midshipmen may attend one or more *one-week* classes/modules according to following point 2.1.

1.2. Language

- The entire International Naval Semester is held in English language.
- The Common European Framework of Reference for Languages (CEFR) Level B1 or NATO STANAG Level 2 is highly recommended (but not mandatory) for Cadets' participation.

1.3. Contents/Duration

- The International Semester is worth 26 ECTS (29 with Military Leadership C - physical training) and lasts 3 months. This fulfils the requirements for ERASMUS+ support.
- Moreover, all the Common Modules, which are an integral part of the Italian accreditation, are also part of the International Naval Semester.

1.4. Applications and Registration

- Please use the attached editable application form (typing in block letters) in Annex 1 (if you do not know your flight information at this stage you can send them later) and send it to POCs according to point 1.10 (marinaccad.international@marina.difesa.it and in copy carbon to marco.carrieri@marina.difesa.it and vitantonio.dipaola@marina.difesa.it).

- Last date for registration is **16 July 2023**.
- Dates:
 - The International Semester starts on **25 September 2023** and ends on **22-December 2023**.
 - Arrival day: **24-September 2023** (**not earlier, not later**) or the day before the module attended.
 - Departure day: to be arranged on a case-to-case basis after the last classes.
- A mixture of Countries/Institutions is instrumental in increasing the intercultural competences; consequently, a maximum of 30 foreign Cadets (2 per Country) is allowed (more Cadets in particular cases on a case-to-case basis).
- Participation will be assigned on the basis of the order in which reservations are received and on the basis of the following priorities:
 - EU Countries;
 - participation in the whole semester;
 - participation in single module.
- The procedure for the assignment of places is: **first replay – first booked**.

1.5. Accommodation & Meals

- According to EMILYO-LoD 5 (framework), accommodation, meals, and other expenses in relation to the education are provided free of charge for members of European Union Basic Officer Education Institutions (<http://www.emilyo.eu/node/982>).
- For Non-EU Members the rules follow bilateral regulations and contracts.
- No course fee is required.

1.6. Permission for Stay

- According to national Italian rules/law, the permission to stay shall be requested via the sending Institutions' Country national (military) diplomatic chain of command.
- A "Request for Visit (RfV)" is to be submitted via the sending country's authorities to the sending country's embassy in Italy.
- **Without this procedure, unfortunately, Officer Cadets/Midshipmen will not receive permission to stay by the Italian Defence Staff, thus preventing their participation in the International Semester or one-week module.**

1.7. Transportation

- Participants are requested to make their own travel arrangements to/from Pisa International Airport (PSA) or to/from Livorno train central station.
- The Italian Naval Academy will provide free transport from the PSA to the Academy and back. A representative from the Italian Naval Academy will meet the participants at the Arrival Terminal of PSA, according to the flight schedule.

1.8. Uniform/Dress Code

- In accordance with the dress code in force within the Italian Naval Academy, shorts and denim trousers are not allowed. For detailed information, see Annex 3 and NATO publication “The strategic Commanders’ guide to protocol”.
- The following clothes are authorized:
 - arrival/departure and short leave: Informal/Casual/Very casual
 - opening/closing ceremony: Ceremonial Dress and Service Uniform
 - courses: Working Dress uniform (no tie) or Field Dress
 - sports activities: Own Academy shorts, t-shirt and tracksuit¹

1.9. University of Pisa and ECTS recognition

- Those who participate in the entire semester, before arrival, shall submit an application as follows:
 - connect to the University web site – Incoming students:
<https://unipi.erasmusmanager.it/studenti/>.
 - click on “Practical information for mobility students” link and sign in at “ALICE Portal”.
 - on the same web page of incoming students, complete and submit the University of Pisa “Application form” in which they will be asked to upload the Learning Agreement before the mobility and receive the validation from the University Erasmus coordinator.
- For single/multiple modules application, midshipmen/cadets are considered by the University of Pisa as “visiting students” and accreditation on Alice Portal is not necessary.
- Italian Naval Academy will communicate the results of the exams and the ECTS to the PoC reported in the Application form forwarded.

¹ It is possible to bring technical sports clothing and equipment for practicing the sports listed in Annex 2.

1.10. Point of Contact

- **CDR (OF-4) Marco CARRIERI (ITN ESDC Representative & International Relation Officer)**
Italian Naval Academy
Tel: +39 0586 238 582 (office)
E-mail: marco.carrieri@marina.difesa.it
- **LTCDR (OF-3) Vitantonio DI PAOLA (ESDC IG Member & International Relation Officer)**
Italian Naval Academy
Tel: +39 0586 238 582 (office)
Mobile: +39 3407606992
E-mail: vitantonio.dipaola@marina.difesa.it
marinaccad.international@marina.difesa.it

2. Contents

2.1. Overview (according to the sequence of the modules/classes)

TYPE ²	Class	ECTS	WEEK	ADDITIONAL PARTICIPANTS
NCM	LEADERSHIP SEMINAR (Naval leadership)	2	25.09.2023 30.09.2023	YES
NCM	ENGLISH NAVAL TERMINOLOGY	2	02.10.2023 07.10.2023	YES
NCM	NAVAL COMPUTER NETWORK	2	09.10.2023 14.10.2023	YES
NCM	NAVAL ELECTRONICS	2	16.10.2023 21.10.2023	YES
CM	MARITIME SECURITY	2	23.10.2023 28.10.2023	YES
NCM	NAVAL COMMUNICATIONS	2	30.10.2023 04.11.2023	YES
NCM	NAVAL SENSORS	2	06.11.2023 11.11.2023	YES
NCM	NAVAL CYBER THREATS	4	13.11.2023 25.11.2023	YES
NCM	NAVAL ARCHITECTURE	4	27.11.2023 09.12.2023	YES
NCM	NAVAL POWER PLANTS	2	11.12.2023 16.12.2023	YES
NCM	OCEANOGRAPHY	2	18.12.2023 22.12.2023	YES
CM	MILITARY LEADERSHIP C	4	25.09.2023 22.12.2023	YES
CHRISTMAS BREAK				

In the event that a student does not pass an exam, a second exam session will be established during the semester and/or in the period 22nd – 23rd of December 2023.

² NCM = Non Common Module – CM = Common Module

2.2. In Detail

- The detailed module descriptions of all Common Modules (here marked in blue) can be found on the EMILYO homepage: <http://www.emilyo.eu/node/988>. Non Common Modules are marked in green.
- All modules are covered in the International Naval Semester and additional international cadets/midshipmen will participate with Italian Midshipmen of 7th Semester (4th year).

CLASS TITLE	NAVAL ARCHITECTURE
CREDITS	4 ECTS
TYPE OF CLASS	Integrated Class + Exercise
EXAM	To be taken at the end of the module
TEACHING CONTENTS	<ul style="list-style-type: none"> • Introductory concepts • Ship geometry • Buoyancy • Initial stability of the ship intact • Stability at high tilt angles of the ship intact • Buoyancy and stability of the damaged ship • Nomenclature and hull structure

CLASS TITLE	NAVAL COMMUNICATIONS
CREDITS	2 ECTS
TYPE OF CLASS	Integrated Class
EXAM	To be taken at the end of the module
TEACHING CONTENTS	<ul style="list-style-type: none"> • Spectral analysis and discretization of signals • Fundamentals of analogue and digital transmission • Electromagnetic waves and propagation • Antenna radiation • Wireless links

CLASS TITLE	NAVAL SENSORS
CREDITS	2 ECTS
TYPE OF CLASS	Integrated Class
EXAM	To be taken at the end of the module

TEACHING CONTENTS	<ul style="list-style-type: none"> • Pulsed radars • CW radars • Secondary radars • Fire control radars • Electronic warfare (EW) • Passive EW • Active EW • Electro-optical Systems • Sound propagation in water • Underwater sensors
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CLASS TITLE	NAVAL ELECTRONICS
CREDITS	2 ECTS
TYPE OF CLASS	Integrated Class + Exercise
EXAM	To be taken at the end of the module
TEACHING CONTENTS	<ul style="list-style-type: none"> • Electronic Signals and Components • Passive Filters • Power Supplies • Transistors and Amplifiers • Active Filters • Distortion, Noise, Feedback and Applications

CLASS TITLE	NAVAL COMPUTER NETWORK
CREDITS	2 ECTS
TYPE OF CLASS	Integrated Class + Exercise
EXAM	To be taken at the end of the module
TEACHING CONTENTS	<ul style="list-style-type: none"> • Principles of communication networks • Networking and main net topologies • OSI/ISO stack and TCP/IP • Commutation and multiplation • Transport net and access net: transmission support and means • Switching and forwarding: main devices • LAN, WAN, routing and gateways • Internetworking: IP addressing, main protocols, VPN • Command & Control systems: main architecture and principles of operation

CLASS TITLE	NAVAL CYBER THREATS
CREDITS	4 ECTS
TYPE OF CLASS	Integrated Class + Exercise

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EXAM	To be taken at the end of the class
TEACHING CONTENTS	<ul style="list-style-type: none"> • Cyber security - characteristics and risk management in the Maritime Domain • The threats identification process • Identification of vulnerabilities and risk management • Dimensions of IT/OT convergence in cyber protection of the Maritime domain • Simulations and trainings

CLASS TITLE	NAVAL POWER PLANTS
CREDITS	2 ECTS
TYPE OF CLASS	Integrated Class
EXAM	To be taken at the end of the module
TEACHING CONTENTS	<ul style="list-style-type: none"> • Ship propulsion systems • Thermodynamics of combustion engines • Combined Propulsion Plants • Safety and Environmental

CLASS TITLE	OCEANOGRAPHY
CREDITS	2 ECTS
TYPE OF CLASS	Integrated Class
EXAM	To be taken at the end of the module
TEACHING CONTENTS	<ul style="list-style-type: none"> • Introduction to military Oceanography • Dynamics of marine waters • Underwater Acoustics/Sonar • NATO METOC Structure and Support • Using METOC data in route planning

CLASS TITLE	MARITIME SECURITY
CREDITS	2 ECTS
TYPE OF CLASS	Integrated Class + Exercise
EXAM	To be taken at the end of the module
TEACHING CONTENTS	<ul style="list-style-type: none"> • Maritime Security Concept • State, regional and international aspects on Maritime Security • EU Maritime Security Strategy • Maritime Security Operations, Maritime Policy • Maritime Transport Infrastructure Security • Technology Usage on Maritime Security

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CLASS TITLE	ENGLISH NAVAL TERMINOLOGY
CREDITS	2 ECTS
TYPE OF CLASS	Integrated Class
EXAM	To be taken at the end of the module
TEACHING CONTENTS	<ul style="list-style-type: none"> • Ship Structure interior and exterior • Nautical directions, mooring equipment • Ship organization Command structure and Department, uniform rank and rate • Radio communications and visual communication • Ship's platform systems • Warfare systems and maritime operation • Weather and weather forecast • First Aid • Shipboard Duties and Condition of readiness • Manoeuvrability, handling and mooring

CLASS TITLE	NAVAL LEADERSHIP
CREDITS	2 ECTS
TYPE OF CLASS	Integrated Class
EXAM	To be taken at the end of the module
TEACHING CONTENTS	<ul style="list-style-type: none"> • Ethics and Leadership in the Navy environment • How communicate and interact in an international environment • How optimize the human resources • Mediation and negotiation techniques

CLASS TITLE	MILITARY LEADERSHIP C (PHYSICAL EDUCATION)
CREDITS	4 ECTS (2 ECTS Theoretical part + 2 ECTS practical during the entire semester)
TYPE OF CLASS	Integrated Class + Exercise
EXAM	<p>Trainees are to be observed and are to be evaluated concerning their leadership profiles, during training sessions</p> <p>Theoretical background is to be tested and graded after the theoretical part</p>
TEACHING CONTENTS	<ul style="list-style-type: none"> • First Aid • General and Specific (theoretical) Sports Education • Practical Sports Education

Please do not forget to register your stay via your national (military) diplomatic chain of command!

Remarks: 1. Please fill in the yellow & blue fields only. 2. Fill in 1 form for 1 person. 3. Click into the squares to mark, click again to unmark. 4. When concluded, send this form by 16 July 2023 to: marco.carrieri@marina.difesa.it , vitantonio.dipaola@marina.difesa.it and marinaccad.international@marina.difesa.it Please send the application form with a copy of passport or ID card. See also: http://www.emilyo.eu/node/878	<input type="checkbox"/>	Leadership Seminar (Naval Leadership) 25 Sep – 30 Sep 2023	<input type="checkbox"/>	Naval sensors 06 Nov – 11 Nov 2023
	<input type="checkbox"/>	English Naval terminology 02 Oct – 07 Oct 2023	<input type="checkbox"/>	Naval cyber threats 13 Nov – 25 Nov 2023
	<input type="checkbox"/>	Naval computer network 09 Oct – 14 Oct 2023	<input type="checkbox"/>	Naval Architecture 27 Nov – 9 Dec 2023
	<input type="checkbox"/>	Naval electronics 16 Oct – 21 Nov 2023	<input type="checkbox"/>	Naval power plants 11 Dec – 16 Dec 2023
	<input type="checkbox"/>	Maritime Security 23 Oct – 28 Oct 2023	<input type="checkbox"/>	Oceanography 18 Dec – 22 Dec
	<input type="checkbox"/>	Naval Communications 30 Oct – 04 Nov 2023	<input type="checkbox"/>	Entire International Semester 25 Sep – 22 Dec 2023

Male <input type="checkbox"/>	Female <input type="checkbox"/>	Rank	FAMILY NAME	First name (s)
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Date of birth Click for date	Nationality	Passport or ID number	Passport or ID expiry date Click for date
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Branch of Service (if available)	Sending institution's name	I want to participate as:		
		Student <input type="checkbox"/>	Instructor <input type="checkbox"/>	Observer <input type="checkbox"/>

Phone number (if available)	Mobile number (if available)	E-mail address (es)
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Arrival by plane <input type="checkbox"/>	Arrival by train <input type="checkbox"/>	Arrival by own car <input type="checkbox"/>	Location of arrival	Arrival date Click for date	Arrival time
Departure by plane <input type="checkbox"/>	Departure by train <input type="checkbox"/>	Departure by own car <input type="checkbox"/>	Location of departure	Departure date Click for date	Departure time

Special dietary or food requirements due to medical or religious reasons		If yes, please specify food you cannot eat
No <input type="checkbox"/>	Yes <input type="checkbox"/>	

Additional remarks (need for special equipment, special travel arrangements, etc.)
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Point of contact (POC) of sending institute				
Male <input type="checkbox"/>	Female <input type="checkbox"/>	Rank	FAMILY NAME	First name
POC's phone number			POC's e-mail address	

ANNEX 2

SPORT ACTIVITIES

TRACK AND FIELD

TENNIS

RUGBY

BASKETBALL

VOLLEYBALL

FOOTBALL

HORSE RIDING

SHOOTING

SELF DEFENCE

SWIMMING

ROWING

SAILING



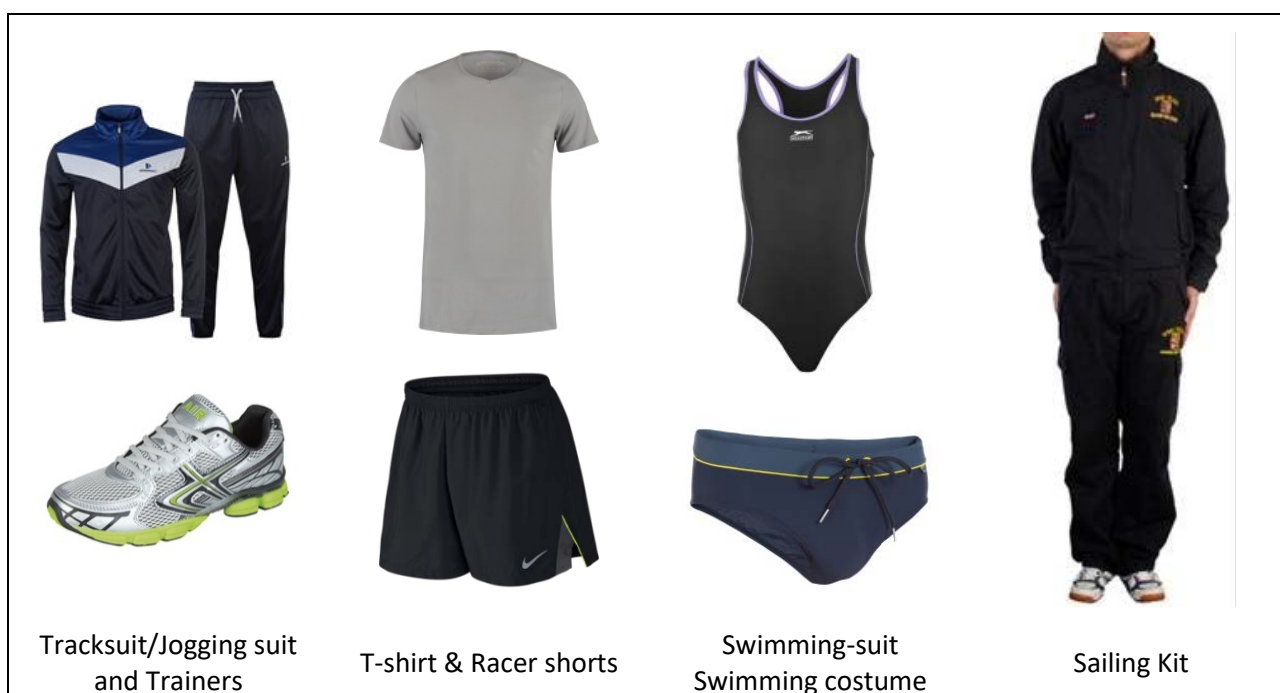
ANNEX 3

DRESS CODE

UNIFORMS



SPORTSWEAR



INFORMAL/CASUAL

MALE		FEMALE	
			
Business Suit	Different colour slacks and jacket	Business Suit	Different colour Trousers or Skirt

VERY CASUAL

MALE		FEMALE	
			
			
Open neck	Sweater or Cardigan	Open neck	Sweater or Cardigan

OUTDOOR



ACCESSORIES



EXCERPT FROM NATO PUBLICATION



“THE STRATEGIC COMMANDERS’ GUIDE TO PROTOCOL”

(NON-SENSITIVE INFORMATION RELEASABLE TO THE PUBLIC)

Chapter 3 – Etiquette

3.1 NATO Dress Code.

Winter Uniform	Summer Uniform	Civilian Attire	Appropriate Occasion for Wear
Mess Dress/Dinner Dress – (The most formal uniform) - Black Tie - Short Jacket as defined by National requirements - Tails as appropriate - Miniature Medals	Mess Dress/Dinner Dress – (The most formal uniform) - Black Tie - Short Jacket as defined by National requirements - Tails as appropriate - Miniature Medals	Black Tie - Dinner Jacket (smoking) - Bow Tie	- Military Dinners/Balls and National Receptions - State Function
Ceremonial Dress - Service Dress with Medals - Swords and Gloves as required	Ceremonial Dress - Service Dress (lightweight equivalent) with Medals - Long Sleeves - Closed neck or tie	Formal - Dark Lounge/ Business Suit	- Formal Dinners/Luncheons
Service Dress (Class A) - Day Uniform with jacket and tie - Ribbons	Service Dress (Class A) - See Winter, lightweight equivalent, white with jacket for Navy	Informal - Lounge/ Business Suit - One Colour	- Informal Dinners/Luncheons - Cocktail Parties - Private Receptions/ Functions
Working Dress (Class B) - Service Dress without jacket - Pullover/Sweater may be worn	Working Dress (Class B) - Short Sleeved Shirt - Open Neck	Casual - Tie - Different colour slacks and jacket	- Informal Dinners/Luncheons Informal House Party
Field Dress - Combat Uniform	Field Dress - Combat Uniform, sleeves rolled up	Very Casual - Open neck	- Off-sites and Barbecues
Ladies: Protocol Offices do not dictate to civilian ladies correct form of dress. Ladies take their cue from the Men’s Dress Code		Relaxed - Anything goes	

Guest Account Request Form

All fields are mandatory unless otherwise stated.

Guest Information Section

(to be completed by the Requestor)

Title	
First Name(s)	
Surname(s)	
Email*	
Birth Date	
Nationality	
Fiscal Code (optional)	
Passport Number or EU National Identity Card Number	
Mobile Number	
Start date	
End date	

* private email address (not unipi.it)

I accept all the rules governing the use of the assigned Account (see the *Regolamento per l'accesso ai servizi di rete di Ateneo* for reference, <https://www.unipi.it/index.php/phoca-prova/category/2-regolamenti-di-ateneo>). I will maintain the confidentiality of my password. I understand that any abuse of access to the University's systems and their data, any illegal copying of software, and any misuse of the University's equipment may result in disciplinary action and will be reported to the competent authority.

Date (DD/MM/YYYY)

Requestor Signature

Identification Section

(to be completed by the Person in charge of the user registration)

I hereby state that I have identified the Requestor by the mean of his Passport/EU National Identity Card.

Date (DD/MM/YYYY)

First Name and Surname

Signature

Authorization Section

(to be completed by the Head of Department/Structure)

As Head of Department/Structure of _____ I authorize the present request.

Date (DD/MM/YYYY)

First Name and Surname

Signature



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