



# **Hellenic Naval Academy**

## **DECK CADETS SYLLABUS**



Academic Year: 2026 – 2027

| Fall Semester                                         | Hours | ECTS | Spring Semester                                                  | Hours | ECTS |
|-------------------------------------------------------|-------|------|------------------------------------------------------------------|-------|------|
| <b>1<sup>st</sup> YEAR</b>                            |       |      |                                                                  |       |      |
| SINGLE VARIABLE CALCULUS                              | 4     | 4    | VECTOR ANALYSIS                                                  | 4     | 5    |
| GENERAL & APPLIED PHYSICS A                           | 4     | 5    | ANALYTIC GEOMETRY                                                | 3     | 3    |
| GENERAL NAVIGATION - COASTAL NAVIGATION               | 4     | 5    | GENERAL & APPLIED PHYSICS B                                      | 3     | 3    |
| LINEAR ALGEBRA                                        | 3     | 3    | COLREG - SHIP HANDLING AND MANEUVERING                           | 2     | 2    |
| INTRODUCTION TO COMPUTER SCIENCE                      | 2     | 2    | APPLIED NAVIGATION                                               | 3     | 3    |
| ANCIENT AND MEDIEVAL NAVAL HISTORY                    | 3     | 3    | SOCIAL PSYCHOLOGY                                                | 3     | 3    |
| SEAMANSHIP                                            | 3     | 3    | EARLY MODERN NAVAL HISTORY                                       | 3     | 3    |
| FOREIGN LANGUAGES I                                   | 3     | 3    | FOREIGN LANGUAGES II & IMO                                       | 5     | 6    |
| PHILOSOPHY                                            | 2     | 2    | COMPUTER PROGRAMMING                                             | 2     | 2    |
| Subtotal                                              | 28    | 30   | Subtotal                                                         | 28    | 30   |
| <b>2<sup>nd</sup> YEAR</b>                            |       |      |                                                                  |       |      |
| CELESTIAL NAVIGATION - TIDES                          | 4     | 5    | SYSTEM ANALYSIS & INTRODUCTION TO CONTROL SYSTEMS                | 3     | 3    |
| BALLISTICS-EXPLOSIVES                                 | 2     | 2    | NUMERICAL ANALYSIS                                               | 2     | 2    |
| DIFFERENTIAL EQUATIONS                                | 3     | 3    | INTRODUCTION TO MARINE ENGINEERING                               | 5     | 6    |
| INTRODUCTION TO ELECTRIC CIRCUITS THEORY              | 3     | 4    | THEORETICAL MECHANICS II                                         | 2     | 2    |
| THEORETICAL MECHANICS I                               | 2     | 2    | THEORETICAL & APPLIED ELECTROMAGNETISM II                        | 2     | 2    |
| THEORY OF NAVIGATION AND APPLICATIONS                 | 4     | 5    | ELECTRIC CIRCUITS THEORY AND APPLICATIONS                        | 4     | 4    |
| THEORETICAL & APPLIED ELECTROMAGNETISM I              | 2     | 2    | MODERN NAVAL HISTORY                                             | 2     | 2    |
| FOREIGN LANGUAGES III                                 | 3     | 3    | MARINE METEOROLOGY                                               | 3     | 3    |
| PROBABILITIES                                         | 2     | 2    | FOREIGN LANGUAGES IV                                             | 2     | 2    |
| COMPUTER ARCHITECTURE                                 | 2     | 2    | STATISTICS                                                       | 2     | 2    |
|                                                       |       |      | DATA BASES                                                       | 2     | 2    |
| Subtotal                                              | 27    | 30   | Subtotal                                                         | 29    | 30   |
| <b>3<sup>rd</sup> YEAR</b>                            |       |      |                                                                  |       |      |
| ELECTRONIC CHARTS - GIS - ECDIS                       | 4     | 5    | ELECTRONIC NAVIGATION SYSTEMS                                    | 3     | 3    |
| INTRODUCTION TO ELECTRICAL POWER SYSTEMS              | 3     | 3    | ELECTRONICS II                                                   | 5     | 6    |
| INTRODUCTION TO APPLIED MECHANICS                     | 3     | 3    | NAVAL RADARS & ELECTROOPTICAL SYSTEMS                            | 4     | 4    |
| NAVAL MATERIALS SCIENCE AND TECHNOLOGY                | 2     | 2    | MATHEMATICAL MODELING AND APPLICATIONS                           | 2     | 2    |
| OPERATIONAL RESEARCH – LINEAR PROGRAMMING             | 2     | 2    | FOREIGN LANGUAGES VI                                             | 3     | 3    |
| ELECTRONICS I                                         | 5     | 6    | EXPERIMENTAL STRENGTH AND FAILURE OF MATERIALS                   | 3     | 3    |
| NAVAL OPERATIONS                                      | 3     | 3    | NAVAL GUNNERY                                                    | 3     | 3    |
| FOREIGN LANGUAGES V                                   | 2     | 2    | HYDROGRAPHY - OCEANOGRAPHY                                       | 4     | 4    |
| MODERN PHYSICS AND NAVAL APPLICATIONS                 | 4     | 4    | ARTIFICIAL INTELLIGENCE                                          | 2     | 2    |
| Subtotal                                              | 28    | 30   | Subtotal                                                         | 29    | 30   |
| <b>4<sup>th</sup> YEAR</b>                            |       |      |                                                                  |       |      |
| COMPUTER NETWORKS – NETWORK PROGRAMMING               | 3     | 3    | INFORMATION SECURITY - CRYPTOGRAPHY - COMPUTATIONAL INTELLIGENCE | 2     | 2    |
| SPECIAL TOPICS IN NAVIGATION AND SEA SCIENCE I        | 2     | 2    | LAW OF THE SEA                                                   | 3     | 3    |
| RISK ANALYSIS AND DECISION MAKING IN DEFENSE AND CSDP | 2     | 2    | SPECIAL TOPICS IN NAVIGATION AND SEA SCIENCE II                  | 2     | 2    |
| SEA ENVIRONMENT AND NAVAL OPERATIONS                  | 3     | 3    | ELECTRONIC WARFARE                                               | 2     | 2    |
| NAVAL/SATELLITE COMMUNICATIONS                        | 3     | 3    | PRINCIPLES OF LEADERSHIP AND MANAGEMENT                          | 2     | 2    |
| COMMUNICATION SYSTEMS I                               | 5     | 5    | NAVAL ARCHITECTURE                                               | 3     | 4    |
| COMBAT SYSTEMS ENGINEERING/GUIDED MISSILES/PWO        | 3     | 3    | COMMUNICATION SYSTEMS II                                         | 5     | 6    |
|                                                       |       |      | TACTICAL SYSTEMS/C4I NETWORKS                                    | 3     | 3    |
| HYDROACOUSTICS – SUBSURFACE WEAPONS                   | 3     | 3    | THESIS                                                           |       | 6    |
| THESIS                                                |       | 6    |                                                                  |       |      |
| Subtotal                                              | 24    | 30   | Subtotal                                                         | 22    | 30   |