

# COASTAL AND PORT ENGINEERING

|      |   |  |  |
|------|---|--|--|
| 1    | Course Title:   | COASTAL AND PORT ENGINEERING   |  |
| 2    | Course Code:  | INS4062  |  |
| 3    | Type of Course:   | Optional   |  |
| 4    | Level of Course:  | First Cycle  |  |
| 5    | Year of Study:  | 4  |  |
| 6    | Semester:   | 8  |  |
| 7    | ECTS Credits Allocated:                                     | 3.00   |  |
| 8    | Theoretical (hour/week):                                    | 2.00   |  |
| 9    | Practice (hour/week):                                       | 1.00   |  |
| 10   | Laboratory (hour/week):                                     | 0  |  |
| 11   | Prerequisites:  | None   |  |
| 12   | Language:   | Turkish  |  |
| 13   | Mode of Delivery:   | Face to face   |  |
| 14   | Course Coordinator:   | Prof. Dr. MURAT KANKAL   |  |
| 15   | Course Lecturers:   |  |  |
| 16   | Contact information of the Course Coordinator:              | ademakpinar@uludag.edu.tr<br>0 224 2942625   |  |
| 17   | Website:  | <a href="http://insaat.uludag.edu.tr/">http://insaat.uludag.edu.tr/</a>                                |  |
| 18   | Objective of the Course:                                    | To give information about coastal and harbour structures   |  |
| 19   | Contribution of the Course to Professional Development:     | The course forms the basis of all engineering design processes related to port and coastal structures. |  |
| 20   | Learning Outcomes:  |  |  |
|      |   | 1  | Will be able to understand the basic elements of structures related to civil engineering to be built in coastal and harbors            |
|      |   | 2  | To be able to gain knowledge on planning and design of basic coastal structures and ports  |
|      |   | 3  | Understand and describe the properties of waves, which are the most important environmental factor in the design of coastal structures |
|      |   | 4  |  |
|      |   | 5  |  |
|      |   | 6  |  |
|      |   | 7  |  |
|      |   | 8  |  |
|      |   | 9  |  |
|      |   | 10   |  |
| 21   | Course Content:   |  |  |
|      |   | <b>Course Content:</b>   |  |
| Week | Theoretical   | Practice   |  |
| 1    | Introduction  |  |  |
| 2    | Onshore and Offshore Civil Engineering                      |  |  |
| 3    | Theories of Waves , Energy of Waves                         | Problem solving  |  |
| 4    | The Classification of Waves, Basic Equations of Wave Motion |  |  |

|    |   |                 |
|----|---|-----------------|
| 5  | Determination of design wave characteristics    | Problem solving |
| 6  | Structures of OnshoreandOffshore                |                 |
| 7  | Breakwaters, Jetties, ShoreProtectionStructures | Problem solving |
| 8  | Importance and classification of ports          |                 |
| 9  | Principles of coastal sediment transport        |                 |
| 10 | Coastal sediment properties                     |                 |
| 11 | Longshore Sediment Transport                    | Problem solving |
| 12 | Breakwater design                               |                 |
| 13 | Breakwater design                               | Problem solving |
| 14 | Application                                     | Problem solving |

|    |   |  |
|----|---|--|
| 22 | Textbooks, References and/or Other Materials: | Yüksel, Y., Çevik, E., Kıyı Mühendisliği, Beta Yayınları<br>Yüksel, Y., Çevik, E., Liman Mühendisliği, Arıkan Yayınları<br>Ergin, A., Coastal Engineering, METU Yayınları<br>Yüksel, Y., Dalgakıran tasarımı, Beta yayınları |
|----|---|--|

|    |           |  |
|----|-----------|--|
| 23 | Assesment |  |
|----|-----------|--|

| TERM LEARNING ACTIVITIES | NUMBE R | WEIGHT |
|--------------------------|---------|--------|
| Midterm Exam             | 1       | 40.00  |
| Quiz                     | 0       | 0.00   |
| Home work-project        | 0       | 0.00   |
| Final Exam               | 1       | 60.00  |

| Activites                        | Number | Duration (hour) | Total Work Load (hour) |
|----------------------------------|--------|-----------------|------------------------|
| Success Grade Theoretical        | 14     | 2.00            | 28.00                  |
| Practicals/Labs                  | 14     | 1.00            | 14.00                  |
| Total Study and preperation      | 104.00 | 2.00            | 28.00                  |
| Homeworks                        | 1      | 20.00           | 20.00                  |
| Course Projects                  | 0      | 0.00            | 0.00                   |
| <b>24. ECTS /WORK LOAD TABLE</b> |        |                 |                        |
| Field Studies                    | 0      | 0.00            | 0.00                   |
| Midterm exams                    | 1      | 0.00            | 0.00                   |
| Others                           | 0      | 0.00            | 0.00                   |
| Final Exams                      | 1      | 2.00            | 2.00                   |
| Total Work Load                  |        |                 | 92.00                  |
| Total work load/ 30 hr           |        |                 | 3.07                   |
| ECTS Credit of the Course        |        |                 | 3.00                   |

| 25  | CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |
|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
|     | PQ1   | PQ2 | PQ3 | PQ4 | PQ5 | PQ6 | PQ7 | PQ8 | PQ9 | PQ10 | PQ11 | PQ12 | PQ13 | PQ14 | PQ15 | PQ16 |
| ÖK1 | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| ÖK2 | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| ÖK3 | 5   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

**LO: Learning Objectives PQ: Program Qualifications**

|                            |                   |              |                 |               |                    |
|----------------------------|-------------------|--------------|-----------------|---------------|--------------------|
| <b>Contribution Level:</b> | <b>1 very low</b> | <b>2 low</b> | <b>3 Medium</b> | <b>4 High</b> | <b>5 Very High</b> |
|----------------------------|-------------------|--------------|-----------------|---------------|--------------------|