**Doctorate Degree Program in Ocean Engineering and Technology**

**1. Program objective:** The objective of the doctorate degree program is to integrate research and teaching resources related to ocean engineering and technology in order to cultivate the research talents required for naval architecture engineering, ocean green energy engineering, ocean geothermal energy engineering, electromechanical engineering, wind power engineering, coastal and hydraulic disaster prevention engineering, ocean material engineering, etc. Graduates of this program not only will have the ability to independently carry out research to solve practical problems, but also will develop innovative thinking to complete the development of new engineering knowledge.

**2. Research field:** The scope of the doctorate degree program is oriented in ocean-related research content, including integration of ocean-related systems engineering, development and protection of coastal space, design and development of ocean sensing equipment and instruments, study of underwater fluid power and noise, development of ocean anti-corrosion materials, disaster prevention, underwater noise detection, computational mechanics, and so on.

**3. Course list:** The core courses of the degree program are special topics on “Ocean Engineering”, “Offshore Floating Carrier”, “Mechatronic Engineering”, and “Ocean Energy Engineering”.

**4. Course related subjects:** The other elective courses of the degree program-related subjects are summarized as below.

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| --- | --- | --- | --- |
| Course Name | Credits | Class Level | Teacher |
| Offshore Engineering | 3 | 1st 2 years in graduate | To be announced |
| Disaster Prevention Engineering | 3 | 1st 2 years in graduate | To be announced |
| Mechanics of Offshore Structures | 3 | 1st 2 years in graduate | To be announced |
| Anti-Corrosion Technology | 3 | 1st 2 years in graduate | To be announced |
| Advanced Engineering Materials | 3 | 1st 2 years in graduate | To be announced |
| Sustainable Energy | 3 | 1st 2 years in graduate | To be announced |
| Advanced Heat Transfer | 3 | 1st 2 years in graduate | To be announced |
| Thermoelectricity | 3 | 1st 2 years in graduate | To be announced |
| Engineering Tribology | 3 | 1st 2 years in graduate | To be announced |
| Optical Sensors | 3 | 1st 2 years in graduate | To be announced |
| Finite Element Analysis | 3 | 1st 2 years in graduate | To be announced |
| Boundary Element Analysis | 3 | 1st 2 years in graduate | To be announced |
| Applied Numerical Analysis | 3 | 1st 2 years in graduate | To be announced |

**5. Doctoral degree requirements:** Students who receive Ph.D. degree in this program or in various fields such as Ocean Energy, Offshore Structures, Offshore Floating Carriers, Ocean Technology, Mechanical and Mechatronics, etc., are required to pass at least 30 credits (including 6 credits for the dissertation). In addition, graduate students need to pass both the Ph.D. degree examination and oral defense to obtain a Ph.D. degree.



