

# CURRICULUM STANDARD

*Effective Term*  
*Spring 2007*  
*[2007\*01]*

Curriculum Program Title

**Marine Technology**

Code

**A15320**

Concentration

**(not applicable)**

## *Curriculum Description*

The Marine Technology curriculum is designed to provide the practical and academic skills essential for success in marine scientific support. Students will receive training in observational and measurement techniques aboard a variety of vessels including an ocean-going research vessel.

Course work includes a unique blend of traditional and contemporary vocational, technical, and scientific marine education. Students are trained in the use of physical, chemical, meteorological, biological, and geological oceanographic instrumentation and sampling equipment.

Graduates should qualify for entry-level field or laboratory positions with industries, state and federal agencies, and educational facilities associated with marine science and research. Career opportunities include oceanography, environmental science, marine biology, geophysical exploration, and fisheries-related employment.

## *Curriculum Requirements\**

*[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]*

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

|  | <b>AAS</b>   | <b>Diploma</b> | <b>Certificate</b> |
|--|--------------|----------------|--------------------|
| Minimum General Education Hours          | 15           | 6              | 0                  |
| Minimum Major Hours                      | 49           | 30             | 12                 |
| Other Required Hours                     | 0-7          | 0-4            | 0-1                |
| <b>Total Semester Hours Credit (SHC)</b> | <b>64-76</b> | <b>36-48</b>   | <b>12-18</b>       |

*\*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

## *Major Hours*

[ref. 23 NCAC 02E.0204 (3)]

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** (*if applicable*). A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

### Marine Technology A15320

|   | AAS           | Diploma       | Certificate   |
|---|---------------|---------------|---------------|
| <b>Minimum Major Hours Required</b>   | <b>49 SHC</b> | <b>30 SHC</b> | <b>12 SHC</b> |
| <b>A. CORE</b><br><i>Courses required for the diploma are designated with *</i>   | <b>52 SHC</b> | <b>32 SHC</b> |               |
| <b>Required Courses:</b><br>CIS 111 Basic PC Literacy 2 SHC<br>ELN 114 Marine Electronics 2 SHC<br>* MSC 110 Training Cruise I 1 SHC<br>* MSC 112 Training Cruise II 1 SHC<br>* MSC 114 Training Cruise III 1 SHC<br>* MSC 122 Boat Handling/Seamanship 3 SHC<br>* MSC 124 Industrial Skills 3 SHC<br>* MSC 126 Marine Engines 2 SHC<br>* MSC 132 Fishing Gear Technology I 3 SHC<br>* MSC 134 Fishing Gear Technology II 2 SHC<br>* MSC 150 Marine Navigation 3 SHC<br>* MSC 152 Marine Instrumentation 2 SHC<br>* MSC 160 Oceanography 4 SHC<br>* MSC 172 Marine Biology 3 SHC<br>* MSC 174 Marine Invertebrate Zoology 4 SHC<br>MSC 180 Water Analysis 3 SHC<br>MSC 216 Training Cruise IV 1 SHC<br>MSC 218 Training Cruise V 1 SHC<br>MSC 220 Marine GIS 3 SHC<br>MSC 254 Marine Data Processing 2 SHC<br>MSC 256 Cartography/Hydrographic Surveying 2 SHC<br>MSC 276 Marine Vertebrate Zoology 4 SHC<br><b>Required Subject Areas:</b><br>None |               |               |               |
| <b>B. CONCENTRATION</b> ( <i>Not applicable</i> )   |               |               |               |

**Marine Technology A15320 (Continued)**

|   |  |  |  |
|---|--|--|--|
| <p><b>C. OTHER MAJOR HOURS</b><br/><i>To be selected from the following prefixes:</i><br/>BIO, CHM, CIS, COE, CSC, DFT, ELN, HEA, MAT, MSC, PHO,<br/>PHY, and WLD</p> <p><i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.</i></p> |  |  |  |
|---|--|--|--|