

# MARINE ENGINEERING TECHNOLOGY - BS

## Program Requirements

### First Year

Fall		Semester Credit Hours
CHEM 107	General Chemistry for Engineering Students	3
CHEM 117	General Chemistry for Engineering Students Laboratory	1
ENGL 104	Composition and Rhetoric	3
MARE 100	Marine Engineering Fundamentals <sup>1</sup>	3
MARE 242	Manufacturing Methods I <sup>1</sup>	2
MATH 151	Engineering Mathematics I <sup>2</sup>	4
<b>Semester Credit Hours</b>		<b>16</b>

### Spring

MARE 111	Methods in Engineering Technology <sup>1</sup>	2
MATH 152	Engineering Mathematics II	4
PHYS 206 & PHYS 226	Newtonian Mechanics for Engineering and Science and Physics of Motion Laboratory for the Sciences	4
American history ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a> )		3
Creative arts ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts</a> )		3
<b>Semester Credit Hours</b>		<b>16</b>

### Second Year

Fall		Semester Credit Hours
MARE 112	Graphics for Engineering Technology <sup>1</sup>	2
MARE 202	Marine Thermodynamics <sup>1,2</sup>	3
MARE 205	Engineering Mechanics I <sup>1,2</sup>	3
MARE 243	Manufacturing Methods II	1
PHYS 207 & PHYS 227	Electricity and Magnetism for Engineering and Science and Electricity and Magnetism Laboratory for the Sciences	4
Communication ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication</a> )		3
<b>Semester Credit Hours</b>		<b>16</b>

### Spring

MARE 206	Engineering Mechanics II <sup>1,2</sup>	3
MARE 209	Mechanics of Materials <sup>1</sup>	3
MARE 211	Steam Propulsion Plants	3
MARE 261	Engineering Analysis <sup>1</sup>	3

American history ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a> )	3
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**Semester Credit Hours 15**

### Third Year

#### Fall

MARE 207	Electrical Power I <sup>1,2</sup>	3
MARE 305	Fluid Mechanics Theory <sup>1</sup>	4
MARE 313	Heat Transfer <sup>1</sup>	3
POLS 207	State and Local Government	3
Technical elective <sup>1,3</sup>		3

**Semester Credit Hours 16**

#### Spring

MARE 306	Electrical Power II <sup>1</sup>	3
MARE 309	Marine Construction Materials <sup>1</sup>	3
MARE 312	Diesel Propulsion Plants <sup>1</sup>	3
MARE 399	High Impact Experience in Marine Engineering Technology	0
MARE 441	Engineering Economics and Project Management <sup>1</sup>	3

Language, philosophy and culture ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture</a> )	3
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**Semester Credit Hours 15**

### Fourth Year

#### Fall

MARE 307	Marine Electronics <sup>1</sup>	3
MARE 405	Fundamentals of Naval Architecture <sup>1,4</sup>	3
MARE 451	Senior Design Project I <sup>1</sup>	2
MARE 481	Seminar	1
POLS 206	American National Government	3
MARE elective <sup>1,5</sup>		3

**Semester Credit Hours 15**

#### Spring

MARE 402	Shipboard Automation and Control <sup>1</sup>	3
MARE 452	Senior Design Project II <sup>1,4</sup>	2
Social and behavioral sciences ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences</a> )		3
MARE elective <sup>1,5</sup>		3
Technical elective <sup>1,3</sup>		3

**Semester Credit Hours 14**

**Total Semester Credit Hours 123**

All electives must be chosen in consultation with, and approved by, the student's academic advisor. Unless courses are specifically listed, see University Core Curriculum at <http://core.tamu.edu/> for a listing of course options for Communication; Mathematics; Life and Physical Sciences; Language, Philosophy and Culture; Creative Arts; American History; Government and Political Sciences; and Social and Behavioral Sciences. The 3-hour University Core Curriculum requirement for International and Cultural Diversity and the 3-hour University Core Curriculum requirement for Cultural Discourse may be met with courses used to satisfy other degree requirements.

Although they may count for university credit, grades from another institution below a C in engineering, mathematics and physics will not be accepted by the TAMUG engineering technology program toward the degree.

<sup>1</sup> Indicates required courses in Marine Engineering major. These courses will be used to compute the major GPA.

<sup>2</sup> MARR students are required to earn a grade of C or better in MATH 151, PHYS 206, PHYS 207, MARE 202, MARE 205, MARE 206 and MARE 207. Failure to meet this requirement will prevent the student from continuing any sequence in which the course is a prerequisite. Although they may count for credit, grades from another institution below a C in engineering, mathematics and physics will not be accepted by the TAMUG engineering programs toward the degree.

<sup>3</sup> Technical electives may be any course with the following prefixes: MARE (<http://catalog.tamu.edu/undergraduate/course-descriptions/mare/>), MARR (<http://catalog.tamu.edu/undergraduate/course-descriptions/marr/>), MARS (<http://catalog.tamu.edu/undergraduate/course-descriptions/mars/>), MART (<http://catalog.tamu.edu/undergraduate/course-descriptions/mart/>), MASE (<http://catalog.tamu.edu/undergraduate/course-descriptions/mase/>), OCEN (<http://catalog.tamu.edu/undergraduate/course-descriptions/ocen/>), CVEN (<http://catalog.tamu.edu/undergraduate/course-descriptions/cven/>), MATH (<http://catalog.tamu.edu/undergraduate/course-descriptions/math/>), PHYS (<http://catalog.tamu.edu/undergraduate/course-descriptions/phys/>), or OCNG (<http://catalog.tamu.edu/undergraduate/course-descriptions/ocng/>) in consultation with the student's advisor. At least one elective must be at the 300 or 400 level.

<sup>4</sup> Designated Writing intensive course.

<sup>5</sup> Students may take any of the 400-level courses (except MARE 402 and MARE 405 ) offered by the Marine Engineering Department in their senior year including standard courses such as MARE 401 which are offered to license option students.

The total hours may be increased if the student is required to take remedial math, remedial English, computer science, foreign language or if the creative arts; language, philosophy and culture or social science requirements do not fulfill the International and Cultural Diversity requirement.