



MARITIME COLLEGE

DEGREE CURRICULA

For Students Entering
Maritime College
During
2011 - 2012 Academic Year

As of 8/30/2011

LINKS TO THE MARITIME COLLEGE DEGREE CURRICULA

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[Electrical Engineering - Engine License](#)

[Electrical Engineering - Intern Option](#)

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[Mechanical Engineering - Engine License](#)

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[Naval Architecture - Deck License](#)

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[ITT](#)

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[ITT 2-year program for transfer students](#)

[Bachelor of Science in Marine Business and Commerce with Humanities Concentration - Deck License](#)

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[MES - Marine Biology Minor - Deck License](#)

[MES - Marine Biology Minor - Intern Option](#)

[MES - Meteorology & Oceanography Minor - Deck License](#)

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[Bachelor of Science in Marine Operations - Deck License](#)

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[Bachelor of Science in Marine Transportation \(MT\) - Deck License \(common first two years\)](#)

[MT](#)

[MT - Ship Management Minor](#)

[Bachelor of Science in Maritime Studies - Intern Option](#)

[Associate in Applied Science in Marine Technology: Small Vessel Operations - Assistant Engineer Limited License](#)

[Associate in Applied Science in Marine Technology: Small Vessel Operations - Deck Limited License](#)

Bachelor of Engineering Engine License / Intern Option Lower Division

This page shows the first two years for all Bachelor of Engineering students taking Engine License or Intern Option.

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----|--|
| ENGR 242 | Statics | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |

Engine License:

| | | | |
|----------|---------------------------|---|--|
| ENGR 503 | Manufacturing Processes I | 1 | |
| ENGR 541 | Ship Systems I | 2 | |

or

Intern Option:

| | | | |
|----------|--------------------------|---|--|
| HIST 102 | American Civilization II | 3 | |
|----------|--------------------------|---|--|

Engine License:

| | | | |
|----------|----------------------------|---|--|
| ENGR 504 | Manufacturing Processes II | 1 | |
| ENGR 542 | Ship Systems II | 2 | |

or

Intern Option:

| | | | |
|----------|-----------------|---|--|
| ENGR 244 | Dynamics | 3 | |
| ENGR 344 | Thermodynamics* | | |

* prospective Electrical Engineering majors are required to take ENGR 344

| | | | |
|--|-----------------------|-----------|--|
| | Total Credits: | 18 | |
|--|-----------------------|-----------|--|

| | | | |
|--|-----------------------|-----------|--|
| | Total Credits: | 18 | |
|--|-----------------------|-----------|--|

Engine License:

| | | | |
|----------|--------------------|---|--|
| ENGR 520 | Summer Sea Term II | 6 | |
| ENGR 521 | Cadet Observer | | |

or

Intern Option:

| | | | |
|----------|-------------------------|---|--|
| ENGR 525 | Industrial Internship I | 6 | |
|----------|-------------------------|---|--|

Total Lower Division Credits: 84

Bachelor of Engineering Deck License Lower Division

This page shows the first two years for all Bachelor of Engineering students taking Deck License.

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|------------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| NAUT 102 | IntroVesselOps & Seamanship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | | | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| ENGR 242 | Statics | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| METE 201 | Meteorology for Mariners | 3 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | | | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 244 | Dynamics* | 3 | |
| | <i>or</i> | | |
| ENGR 290 | Electrical Engineering I* | | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| NAVG 212 | Celestial Navigation | 4 | |
| | Total Credits: | 19 | |

* Naval Architecture Deck take ENGR 244

Electrical Engineering Deck take ENGR 290

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|--------|-----------------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits: 87

Bachelor of Engineering Electrical Engineering - Deck License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| NAUT 102 | IntroVesselOps & Smnship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | | | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|---------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| METE 201 | Meteorology for Mariners | 3 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| NAVG 212 | Celestial Navigation | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|--------|-----------------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits: 87

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

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Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

**Bachelor of Engineering
Electrical Engineering - Deck License
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 383 | Network Analysis | 3 | |
| ENGR 387 | Electronics I | 4 | |
| ENGR 394 | Electro Magnetic Fields | 3 | |
| NAUT 314 | Rules of the Road | 2 | |
| NAUT 315 | Collision Avoidance | 3 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|---------------------------------|------------|--|
| ENGR 384 | Power Electronics | 3 | |
| ENGR 388 | Electronics II | 4 | |
| ENGR 395 | Electric Machines | 3 | |
| MT 250 | Ship Construction and Stability | 2 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| NAVG 312 | Electr Nav & Voyage Planning | 4 | |
| | Total Credits: | 18 | |

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|--------|-----------------------|---|--|
| MT 530 | Summer Sea Term III | 5 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| ENGR 443 | Engineering Economics | 3 | |
| ENGR 481 | Communications Theory | 3 | |
| ENGR 484 | Electric Drives | 3 | |
| ENGR 488 | Electrical Design I | 4 | |
| HIST 102 | American Civilization II | 3 | |
| MT 321 | Intro to Cargo Ops & Stability | 3 | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| ENGR 428 | Computerized Control Systems | 3 | |
| ENGR 483 | Control Systems Theory | 3 | |
| ENGR 489 | Electrical Design II | 4 | |
| ENGR 495 | Marine Electrical Sysytem | 3 | |
| MT 322 | Marine Cargo Operations | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Total Credits: | 17 | |

| | 9th Semester | cr. | |
|----------|-------------------------------|------------|--|
| MT 426 | Maritime Communications | 3 | |
| NAUT 408 | License Seminar | 2 | |
| NAUT 416 | Bridge Watchstanding | 3 | |
| NAVG 402 | Advanced Navigation | 2 | |
| | Humanities or SocSci elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 16 | |

Total Credits for Degree: 181

Bachelor of Engineering Electrical Engineering - Engine License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| ENGR 503 | Manufacturing Processes I | 1 | |
| ENGR 541 | Ship Systems I | 2 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| ENGR 504 | Manufacturing Processes II | 1 | |
| ENGR 542 | Ship Systems II | 2 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| | Total Credits: | 18 | |

| | | | |
|----------|-----------------------------|---|--|
| ENGR 520 | Summer Sea Term II | 6 | |
| ENGR 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits: 84

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

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Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

**Bachelor of Engineering
Electrical Engineering - Engine License
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 371 | Applied Naval Architecture | 3 | |
| ENGR 383 | Network Analysis | 3 | |
| ENGR 387 | Electronics I | 4 | |
| ENGR 394 | Electromagnetic Fields | 3 | |
| ENGR 543 | Ship Systems III | 3 | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|-----------------------------|------------|--|
| ENGR 384 | Power Electronics | 3 | |
| ENGR 388 | Electronics II | 4 | |
| ENGR 395 | Electric Machines | 3 | |
| ENGR 544 | Ship Systems IV | 3 | |
| HIST 102 | American Civilization II | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| | Total Credits: | 18 | |

| | | | |
|----------|------------------------|---|--|
| ENGR 530 | Summer Sea Term III | 5 | |
| ENGR 516 | Engine License Seminar | 0 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGR 481 | Communications Theory | 3 | |
| ENGR 484 | Electric Drives | 3 | |
| ENGR 488 | Electrical Design I | 4 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Engr/Sci Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGR 428 | Computerized Control Systems | 3 | |
| ENGR 443 | Engineering Economics | 3 | |
| ENGR 483 | Control Systems Theory | 3 | |
| ENGR 489 | Electrical Design II | 4 | |
| ENGR 495 | Marine Electrical Systems | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 19 | |

Total Credits for Degree: 163

Engr/Sci Elective: any ENGR course numbered 300, 400 or 600 or any course in computer science, oceanography or mathematics approved by the Science Department.

Bachelor of Engineering Electrical Engineering - Intern Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | Applied Engineering Elective | 3 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| | Applied Engineering Elective | 3 | |
| | Total Credits: | 18 | |

| | | | |
|----------|-------------------------|---|--|
| ENGR 525 | Industrial Internship I | 6 | |
|----------|-------------------------|---|--|

Total Lower Division Credits: 84

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

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Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

Bachelor of Engineering Electrical Engineering - Intern Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGR 345 | Engineering Statistical Anal. | 3 | |
| ENGR 383 | Network Analysis | 3 | |
| ENGR 387 | Electronics I | 4 | |
| ENGR 394 | Electromagnetic Fields | 3 | |
| | Applied Engineering Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGR 384 | Power Electronics | 3 | |
| ENGR 388 | Electronics II | 4 | |
| ENGR 395 | Electric Machines | 3 | |
| HIST 102 | American Civilization II | 3 | |
| | Applied Engineering Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 19 | |

| | | | |
|----------|--------------------------|---|--|
| ENGR 535 | Industrial Internship II | 6 | |
|----------|--------------------------|---|--|

Senior Year

| | Fall Semester | cr. | |
|----------|-----------------------|------------|--|
| ENGR 443 | Engineering Economics | 3 | |
| ENGR 481 | Communications Theory | 3 | |
| ENGR 484 | Electric Drives | 3 | |
| ENGR 488 | Electrical Design I | 4 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Engr/Sci Elective | 3 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| ENGR 428 | Computerized Control Systems | 3 | |
| ENGR 483 | Control Systems Theory | 3 | |
| ENGR 489 | Electrical Design II | 4 | |
| ENGR 495 | Marine Electrical Systems | 3 | |
| | Engr/Sci Elective | 3 | |
| | | | |
| | | 16 | |

Total Credits for Degree: 161

Applied Engineering Elective: Any ENGR course numbered 300 or above.

Engr/Sci Elective: any ENGR course numbered 300, 400 or 600 or any course in computer science, oceanography or mathematics approved by the Science Department.

Bachelor of Engineering Facilities Engineering - Engine License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| ENGR 503 | Manufacturing Processes I | 1 | |
| ENGR 541 | Ship Systems I | 2 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| ENGR 504 | Manufacturing Processes II | 1 | |
| ENGR 542 | Ship Systems II | 2 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| | Total Credits: | 18 | |

| | | | |
|----------|-----------------------------|---|--|
| ENGR 520 | Summer Sea Term II | 6 | |
| ENGR 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits: 84

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

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Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

**Bachelor of Engineering
Facilities Engineering - Engine License
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 244 | Dynamics | 3 | |
| ENGR 341 | Fluid Mechanics | 3 | |
| ENGR 344 | Thermodynamics | 3 | |
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 380 | Electrical Engineering II | 3 | |
| ENGR 543 | Ship Systems III | 3 | |
| | | | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-----------------------------|------------|--|
| ENGR 347 | Strength of Materials | 3 | |
| ENGR 351 | Heat Transfer | 3 | |
| ENGR 354 | Marine Engineering Design I | 3 | |
| ENGR 390 | Electrical Engineering III | 3 | |
| ENGR 544 | Ship Systems IV | 3 | |
| HIST 102 | American Civilization II | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| | | | |
| | Total Credits: | 20 | |

| | | | |
|----------|------------------------|---|--|
| ENGR 530 | Summer Sea Term III | 5 | |
| ENGR 516 | Engine License Seminar | 0 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGR 423 | HVAC System Design | 3 | |
| ENGR 425 | Facilities Engr Design I | 4 | |
| ENGR 443 | Engineering Economics | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Engr/Sci Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|--------------------------------|------------|--|
| ENGR 348 | Strength of Materials Lab | 1 | |
| ENGR 349 | Transport Processes Laboratory | 1 | |
| ENGR 350 | Analog Controls | 3 | |
| ENGR 371 | Applied Naval Architecture | 3 | |
| ENGR 426 | Facilities Engr Design II | 4 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 15 | |

Total Credits for Degree: 160

Engr/Sci Elective: any ENGR course numbered 300, 400 or 600 or any course in computer science, oceanography or mathematics approved by the Science Department.

Bachelor of Engineering Facilities Engineering - Intern Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| HIST 102 | American Civilization II | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | | | |
| | | | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 244 | Dynamics | 3 | |
| ENGR 344 | Thermodynamics | | |
| ENGR 290 | Electrical Engineering I | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| | Total Credits: | 18 | |

| | | | |
|----------|-------------------------|---|--|
| ENGR 525 | Industrial Internship I | 6 | |
|----------|-------------------------|---|--|

Total Lower Division Credits: 84

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

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Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

**Bachelor of Engineering
Facilities Engineering - Intern
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 341 | Fluid Mechanics | 3 | |
| ENGR 344 | Thermodynamics | 3 | |
| | <i>or</i> | | |
| ENGR 244 | Dynamics | | |
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 380 | Electrical Engineering II | 3 | |
| | Applied Engineering Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGR 347 | Strength of Materials | 3 | |
| ENGR 351 | Heat Transfer | 3 | |
| ENGR 354 | Marine Engineering Design I | 3 | |
| ENGR 390 | Electrical Engineering III | 3 | |
| | Applied Engineering Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | | | |
| | | | |
| | Total Credits: | 18 | |

| | | | |
|----------|--------------------------|---|--|
| ENGR 535 | Industrial Internship II | 6 | |
|----------|--------------------------|---|--|

Senior Year

| | Fall Semester | cr. | |
|----------|------------------------------|------------|--|
| ENGR 423 | HVAC System Design | 3 | |
| ENGR 425 | Facilities Engr Design I | 4 | |
| ENGR 443 | Engineering Economics | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Applied Engineering Elective | 3 | |
| | Engr/Sci Elective | 3 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|--------------------------------|------------|--|
| ENGR 348 | Strength of Materials Lab | 1 | |
| ENGR 349 | Transport Processes Laboratory | 1 | |
| ENGR 350 | Analog Controls | 3 | |
| ENGR 426 | Facilities Engr Design II | 4 | |
| | Applied Engineering Elective | 3 | |
| | Engr/Sci Elective | 3 | |
| | Total Credits: | 15 | |

Total Credits for Degree: 158

Applied Engineering Elective: Any ENGR course numbered 300 or above.

Engr/Sci Elective: any ENGR course numbered 300, 400 or 600 or any course in computer science, oceanography or mathematics approved by the Science Department.

Bachelor of Engineering Marine Engineering - Engine License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| ENGR 503 | Manufacturing Processes I | 1 | |
| ENGR 541 | Ship Systems I | 2 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| ENGR 504 | Manufacturing Processes II | 1 | |
| ENGR 542 | Ship Systems II | 2 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| | Total Credits: | 18 | |

| | | | |
|----------|-----------------------------|---|--|
| ENGR 520 | Summer Sea Term II | 6 | |
| ENGR 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits: 84

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

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Engineering Department Lower Division Competency Requirement
(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

**Bachelor of Engineering
Marine Engineering - Engine License
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|-----------------------------|------------|--|
| ENGR 244 | Dynamics | 3 | |
| ENGR 341 | Fluid Mechanics | 3 | |
| ENGR 344 | Thermodynamics | 3 | |
| ENGR 347 | Strength of Materials | 3 | |
| ENGR 380 | Electrical Engineering II | 3 | |
| ENGR 543 | Ship Systems III | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| | Total Credits: | 20 | |

| | Spring Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 348 | Strength of Materials Lab | 1 | |
| ENGR 351 | Heat Transfer | 3 | |
| ENGR 354 | Marine Engineering Design I | 3 | |
| ENGR 390 | Electrical Engineering III | 3 | |
| ENGR 544 | Ship Systems IV | 3 | |
| HIST 102 | American Civilization II | 3 | |
| | Total Credits: | 19 | |

| | | | |
|----------|------------------------|---|--|
| ENGR 530 | Summer Sea Term III | 5 | |
| ENGR 516 | Engine License Seminar | 0 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGR 350 | Analog Controls | 3 | |
| ENGR 371 | Applied Naval Architecture | 3 | |
| ENGR 440 | Marine Engineering Design II | 3 | |
| ENGR 443 | Engineering Economics | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Engr/Sci Elective A | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|--------------------------------|------------|--|
| ENGR 349 | Transport Processes Laboratory | 1 | |
| ENGR 450 | Marine Engineering Design III | 3 | |
| ENGR 453 | Modern Concepts | 3 | |
| ENGR 495 | Marine Electrical Systems | 3 | |
| | Engr/Sci Elective B | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 16 | |

Total Credits for Degree: 164

Courses currently offered for Engr/Sci Electives A/B sequence in senior year

Engr/Sci Elective A

| | | |
|----------|------------------------------|---|
| ENGR 311 | Kinematics | 3 |
| ENGR 387 | Electronics I | 4 |
| ENGR 601 | Independent Study in Engr. I | 3 |

Engr/Sci Elective B

| | | |
|----------|-------------------------------|---|
| ENGR 312 | Machine Design | 3 |
| ENGR 481 | Communications Theory | 3 |
| ENGR 602 | Independent Study in Engr. II | 3 |

Bachelor of Engineering Mechanical Engineering - Engine License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| ENGR 503 | Manufacturing Processes I | 1 | |
| ENGR 541 | Ship Systems I | 2 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| ENGR 504 | Manufacturing Processes II | 1 | |
| ENGR 542 | Ship Systems II | 2 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| | Total Credits: | 18 | |

| | | | |
|----------|-----------------------------|---|--|
| ENGR 520 | Summer Sea Term II | 6 | |
| ENGR 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits: 84

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

(Continued on next page)

Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

**Bachelor of Engineering
Mechanical Engineering - Engine License
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|-----------------------------|------------|--|
| ENGR 244 | Dynamics | 3 | |
| ENGR 344 | Thermodynamics | 3 | |
| ENGR 347 | Strength of Materials | 3 | |
| ENGR 348 | Strength of Materials Lab | 1 | |
| ENGR 380 | Electrical Engineering II | 3 | |
| ENGR 543 | Ship Systems III | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 312 | Machine Design | 3 | |
| ENGR 341 | Fluid Mechanics | 3 | |
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 354 | Marine Engineering Design I | 3 | |
| ENGR 544 | Ship Systems IV | 3 | |
| HIST 102 | American Civilization II | 3 | |
| | | | |
| | Total Credits: | 18 | |

| | | | |
|----------|------------------------|---|--|
| ENGR 530 | Summer Sea Term III | 5 | |
| ENGR 516 | Engine License Seminar | 0 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| ENGR 371 | Applied Naval Architecture | 3 | |
| ENGR 390 | Electrical Engineering III | 3 | |
| ENGR 418 | Mechanical Engineering Design I | 4 | |
| ENGR 454 | Vibrations | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 349 | Transport Processes Laboratory | 1 | |
| ENGR 351 | Heat Transfer | 3 | |
| ENGR 419 | Mechanical Engineering Design II | 4 | |
| ENGR 443 | Engineering Economics | 3 | |
| | Engr/Sci Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 17 | |

Total Credits for Degree: 160

Engr/Sci Elective: any ENGR course numbered 300, 400 or 600 or any course in computer science, oceanography or mathematics approved by the Science Department.

Bachelor of Engineering Mechanical Engineering - Intern Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| HIST 102 | American Civilization II | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | | | |
| | | | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 244 | Dynamics | 3 | |
| ENGR 344 | Thermodynamics | | |
| ENGR 290 | Electrical Engineering I | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| | Total Credits: | 18 | |

| | | | |
|----------|-------------------------|---|--|
| ENGR 525 | Industrial Internship I | 6 | |
|----------|-------------------------|---|--|

Total Lower Division Credits: 84

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

(Continued on next page)

Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to “test out” of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

Bachelor of Engineering Mechanical Engineering - Intern Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGR 344 | Thermodynamics | 3 | |
| ENGR 244 | <i>or</i> Dynamics | | |
| ENGR 347 | Strength of Materials | 3 | |
| ENGR 348 | Strength of Materials Lab | 1 | |
| ENGR 380 | Electrical Engineering II | 3 | |
| | Applied Engineering Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 312 | Machine Design | 3 | |
| ENGR 341 | Fluid Mechanics | 3 | |
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 354 | Marine Engineering Design I | 3 | |
| | Applied Engineering Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | | | |
| | | | |
| | Total Credits: | 18 | |

| | | | |
|----------|--------------------------|---|--|
| ENGR 535 | Industrial Internship II | 6 | |
|----------|--------------------------|---|--|

Senior Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| ENGR 390 | Electrical Engineering III | 3 | |
| ENGR 418 | Mechanical Engineering Design I | 4 | |
| ENGR 454 | Vibrations | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Applied Engineering Elective | 3 | |
| | Engr/Sci Elective | 3 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 349 | Transport Processes Laboratory | 1 | |
| ENGR 351 | Heat Transfer | 3 | |
| ENGR 419 | Mechanical Engineering Design II | 4 | |
| ENGR 443 | Engineering Economics | 3 | |
| | Applied Engineering Elective | 3 | |
| | Engr/Sci Elective | 3 | |
| | Total Credits: | 17 | |

Total Credits for Degree: 158

Applied Engineering Elective: Any ENGR course numbered 300 or above.

Engr/Sci Elective: any ENGR course numbered 300, 400 or 600 or any course in computer science, oceanography or mathematics approved by the Science Department.

Bachelor of Engineering Naval Architecture - Deck License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| NAUT 102 | IntroVesselOps & Smnship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | | | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|---------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| METE 201 | Meteorology for Mariners | 3 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 244 | Dynamics | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| NAVG 212 | Celestial Navigation | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|--------|----------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | or Cadet Observer | | |

Total Lower Division Credits: 87

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

(Continued on next page)

Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

**Bachelor of Engineering
Naval Architecture - Deck License
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|------------------------|------------|--|
| ENGR 341 | Fluid Mechanics | 3 | |
| ENGR 344 | Thermodynamics | 3 | |
| ENGR 347 | Strength of Materials | 3 | |
| ENGR 363 | Ship Statics | 3 | |
| ENGR 365 | Ship Form and Graphics | 3 | |
| NAUT 314 | Rules of the Road | 2 | |
| NAUT 315 | Collision Avoidance | 3 | |
| | Total Credits: | 20 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| ENGR 366 | Ship Structure | 3 | |
| ENGR 368 | Ship Design I | 3 | |
| ENGR 443 | Engineering Economics | 3 | |
| HIST 102 | American Civilization II | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| NAVG 312 | Electr Nav & Voyage Planning | 4 | |
| | | | |
| | Total Credits: | 18 | |

| | | | |
|--------|-----------------------|---|--|
| MT 530 | Summer Sea Term III | 5 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 290 | Electrical Engineering I | 3 | |
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 348 | Strength of Materials Lab | 1 | |
| ENGR 461 | Ship Design II | 4 | |
| ENGR 462 | Ship Resistance and Propulsion | 3 | |
| MT 321 | Intro to Cargo Ops & Stability | 3 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------|------------|--|
| ENGR 354 | Marine Engineering Design I | 3 | |
| ENGR 471 | Ship Design III | 4 | |
| ENGR 473 | Ship Dynamics | 3 | |
| MT 322 | Marine Cargo Operations | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Engr/Sci Elective | 3 | |
| | Total Credits: | 17 | |

| | 9th Semester | cr. | |
|----------|-------------------------------|------------|--|
| MT 426 | Maritime Communications | 3 | |
| NAUT 408 | License Seminar | 2 | |
| NAUT 416 | Bridge Watchstanding | 3 | |
| NAVG 402 | Advanced Navigation | 2 | |
| | Humanities or SocSci elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 16 | |

Total Credits for Degree: 181

Engr/Sci Elective: any ENGR course numbered 300, 400 or 600 or any course in computer science, oceanography or mathematics approved by the Science Department.

Bachelor of Engineering Naval Architecture - Engine License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| ENGR 503 | Manufacturing Processes I | 1 | |
| ENGR 541 | Ship Systems I | 2 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| ENGR 504 | Manufacturing Processes II | 1 | |
| ENGR 542 | Ship Systems II | 2 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| | Total Credits: | 18 | |

| | | | |
|----------|-----------------------------|---|--|
| ENGR 520 | Summer Sea Term II | 6 | |
| ENGR 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits: 84

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

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Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

**Bachelor of Engineering
Naval Architecture - Engine License
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|---------------------------|------------|--|
| ENGR 244 | Dynamics | 3 | |
| ENGR 344 | Thermodynamics | 3 | |
| ENGR 347 | Strength of Materials | 3 | |
| ENGR 363 | Ship Statics | 3 | |
| ENGR 365 | Ship Form and Graphics | 3 | |
| ENGR 380 | Electrical Engineering II | 3 | |
| ENGR 543 | Ship Systems III | 3 | |
| | Total Credits: | 21 | |

| | Spring Semester | cr. | |
|----------|-----------------------------|------------|--|
| ENGR 341 | Fluid Mechanics | 3 | |
| ENGR 366 | Ship Structure | 3 | |
| ENGR 368 | Ship Design I | 3 | |
| ENGR 443 | Engineering Economics | 3 | |
| ENGR 544 | Ship Systems IV | 3 | |
| HIST 102 | American Civilization II | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| | Total Credits: | 20 | |

| | | | |
|----------|------------------------|---|--|
| ENGR 530 | Summer Sea Term III | 5 | |
| ENGR 516 | Engine License Seminar | 0 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 348 | Strength of Materials Lab | 1 | |
| ENGR 461 | Ship Design II | 4 | |
| ENGR 462 | Ship Resistance and Propulsion | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Engr/Sci Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGR 354 | Marine Engineering Design I | 3 | |
| ENGR 390 | Electrical Engineering III | 3 | |
| ENGR 471 | Ship Design III | 4 | |
| ENGR 473 | Ship Dynamics | 3 | |
| | Humanities or SocSci elective | 3 | |
| | | | |
| | | | |
| | Total Credits: | 16 | |

Total Credits for Degree: 165

Engr/Sci Elective: any ENGR course numbered 300, 400 or 600 or any course in computer science, oceanography or mathematics approved by the Science Department.

Bachelor of Engineering Naval Architecture - Intern Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 101 | Calculus I | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-----------------------------------|-----------|--|
| ENGL 103 | Freshman English II for Engineers | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 102 | Calculus II | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 102 | Engineering Physics I | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 211 | Calculus III | 4 | |
| PHYS 201 | Engineering Physics II | 4 | |
| PHYS 202 | Engineering Physics Lab | 1 | |
| ENGR 503 | Manufacturing Processes I | 1 | |
| ENGR 541 | Ship Systems I | 2 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 200 | Intro to Engineering Analysis | 2 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 212 | Differential Equations | 4 | |
| ENGR 504 | Manufacturing Processes II | 1 | |
| ENGR 542 | Ship Systems II | 2 | |
| | Total Credits: | 18 | |

| | | | |
|----------|-------------------------|---|--|
| ENGR 525 | Industrial Internship I | 6 | |
|----------|-------------------------|---|--|

Total Lower Division Credits: 84

Engineering Department Lower Division Competency Requirement

B.E. Engineering students must satisfy a lower division competency requirement. Students must achieve a minimum mastery level in defined subject areas prior to achieving the status of matriculated upper division student. The required standard is a 2.0 GPA in each of the following lower division subsets.

Humanities: ENGL101, ENGL102; HUMN201, HUMN202
Mathematics: MATH101, MATH102, MATH211, MATH212
Science: PHYS102, PHYS201, PHYS202, CHEM121, CHEM122, CHEM212
Engineering: ENGR242, ENGR244*, ENGR290*

*Specific courses may be excluded from subset GPA calculation if the student's engineering program does not require the courses for junior level work.

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Engineering Department Lower Division Competency Requirement

(Continued)

Students who do not achieve the minimum subset GPA should expect to be required to remediate in subset area(s) prior to becoming eligible for removal from remediation status. Students in remediation status must have a corrective program developed in conjunction with their faculty advisor and approved by the respective area Chair and the Engineering Department Chair. Students who at any time have a subset average between 1.7 and 2.0 may be given a subset warning and; should expect to be required to repeat one or more subset courses as part of the remediation process. Students with subset averages below 1.7 will be required to repeat one or more subset courses as part of the remediation process. At the discretion of the Engineering Department chair students may be allowed to "test out" of remediation status. Students in remediation status will not be allowed to register for upper division courses in their major. Additional registration restrictions will be imposed on students on academic probation or restricted registration status.

Naval Architecture - Intern Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|---------------------------|------------|--|
| ENGR 344 | Thermodynamics | 3 | |
| ENGR 347 | Strength of Materials | 3 | |
| ENGR 363 | Ship Statics | 3 | |
| ENGR 365 | Ship Form and Graphics | 3 | |
| ENGR 380 | Electrical Engineering II | 3 | |
| ENGR 543 | Ship Systems III | 3 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|--------------------------|------------|--|
| ENGR 244 | Dynamics | 3 | |
| ENGR 341 | Fluid Mechanics | 3 | |
| ENGR 366 | Ship Structure | 3 | |
| ENGR 368 | Ship Design I | 3 | |
| ENGR 443 | Engineering Economics | 3 | |
| HIST 102 | American Civilization II | 3 | |
| | Total Credits: | 18 | |

| | | | |
|----------|--------------------------|---|--|
| ENGR 535 | Industrial Internship II | 6 | |
|----------|--------------------------|---|--|

Senior Year

| | Fall Semester | cr. | |
|----------|----------------------------------|------------|--|
| ENGR 345 | Engineering Statistical Analysis | 3 | |
| ENGR 348 | Strength of Materials Lab | 1 | |
| ENGR 461 | Ship Design II | 4 | |
| ENGR 462 | Ship Resistance and Propulsion | 3 | |
| ENGR 472 | Sail Boat Principles & Design | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|--------------------------------|------------|--|
| ENGR 354 | Marine Engineering Design I | 3 | |
| ENGR 471 | Ship Design III | 4 | |
| ENGR 473 | Ship Dynamics | 3 | |
| ENGR 476 | Power Boat Principles & Design | 3 | |
| | Applied Engineering Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 19 | |

Total Credits for Degree: 163

Applied Engineering Elective: Any ENGR course numbered 300 or above.

Bachelor of Science International Transportation and Trade - Intern Lower Division

This page shows the first two years for all students majoring in International Transportation and Trade.

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 90 | Intro to College Mathematics | 4 | |
| | <i>or</i> | | |
| MATH 111 | Applied Calculus I | | |
| PS 111 | Professional Studies | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGL 102 | Freshman English II | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 251 | Statistics | 3 | |
| PE 100 | Swimming | 1 | |
| | Free Elective | 3 | |
| | GenEd: Natural Science w/Lab | 3 | |
| | | | |
| | | | |
| | | | |
| | Total Credits: | 16 | |

Sophomore Year

| | Fall Semester | cr. | |
|----------|---------------------------------|-----------|--|
| ENGL 452 | Technical Writing | 3 | |
| GBAC 311 | Financial Accounting | 3 | |
| GBEC 121 | Macroeconomics | 3 | |
| HIST 102 | American Civilization II | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| GBAC 315 | Managerial Accounting | 3 | |
| GBEC 122 | Microeconomics | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Humanities or SocSci elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 16 | |

Total Lower Division Credits: 64

Lower Division Competency Requirement

ITT students must satisfy a lower division competency requirement in order to register for upper division major courses. Competency is defined as having achieved a GPA of 2.5 in each of two groups of courses:

**ENGL 101, MATH 90 or 111, MATH 251;
GBUS 100, GBEC 121, GBEC 122, GBAC 311, GBAC 315.**

Bachelor of Science International Transportation and Trade - Intern Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 90 | Intro to College Mathematics | 4 | |
| | <i>or</i> | | |
| MATH 111 | Applied Calculus I | | |
| PS 111 | Professional Studies | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|------------------------------|-----------|--|
| ENGL 102 | Freshman English II | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 251 | Statistics | 3 | |
| PE 100 | Swimming | 1 | |
| | Free Elective | 3 | |
| | GenEd: Natural Science w/Lab | 3 | |
| | | | |
| | | | |
| | | | |
| | Total Credits: | 16 | |

Sophomore Year

| | Fall Semester | cr. | |
|----------|---------------------------------|-----------|--|
| ENGL 452 | Technical Writing | 3 | |
| GBAC 311 | Financial Accounting | 3 | |
| GBEC 121 | Macroeconomics | 3 | |
| HIST 102 | American Civilization II | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| GBAC 315 | Managerial Accounting | 3 | |
| GBEC 122 | Microeconomics | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Humanities or SocSci elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 16 | |

Total Lower Division Credits: 64

Lower Division Competency Requirement

ITT students must satisfy a lower division competency requirement in order to register for upper division major courses. Competency is defined as having achieved a GPA of 2.5 in each of two groups of courses:

**ENGL 101, MATH 90 or 111, MATH 251;
GBUS 100, GBEC 121, GBEC 122, GBAC 311, GBAC 315.**

Bachelor of Science International Transportation and Trade - Intern Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| GBEC 424 | Intl. Economics and Finance | 3 | |
| GBLW 431 | Business Law | 3 | |
| GBMG 341 | Organizational Management | 3 | |
| GBTT 251 | Transportation Systems | 3 | |
| | International Studies Elective | 3 | |
| | | | |
| | Total Credits: | 15 | |

| | Spring Semester | cr. | |
|----------|---------------------------|-----------|--|
| GBEC 427 | Financial Management | 3 | |
| GBEC 428 | Economic Geography | 3 | |
| GBMG 345 | Fundamentals of Marketing | 3 | |
| GBTT 252 | Business of Shipping | 3 | |
| GBTT 451 | Marine Insurance | 3 | |
| | GBAT Elective | 3 | |
| | Total Credits: | 18 | |

| | | | |
|----------|----------------------------------|---|--|
| GBUS 525 | ITT Internship / Work Exp. or | 6 | |
| GBUS 526 | ITT Study Abroad | | |

Senior Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| GBLW 433 | Admiralty Law | 3 | |
| GBLW 435 | Environmental Law & Policy | 3 | |
| GBTT 453 | Import/Export & Traffic Mgt. | 3 | |
| GBTT 457 | Port and Terminal Operations | 3 | |
| | International Studies Elective | 3 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

| | Spring Semester | cr. | |
|----------|-------------------------------------|-----------|--|
| GBEC 429 | Seminar: Transport. Economics or | 3 | |
| GBMG 440 | Seminar: Strategy and Policy | | |
| GBMG 446 | Operations Research | 3 | |
| GBTT 351 | International Logistics | 3 | |
| GBUS 300 | International Business | 3 | |
| | GBAT Elective | 3 | |
| | Total Credits: | 15 | |

Total Upper Division Credits: 69
Total Credits for Degree: 133

GBAT Electives: Any GBAT course or any course in the Minor in Intermodal and Maritime Security

International Studies Electives

ENGL 413 Novels of Latin America
 ENGL 415 Literature of Colonialism
 ENGL 416 Literature of the Sea
 ENGL 418 Contemporary Literature
 ENGL 470 Major British Authors
 GBLW 437 International Law
 GBMG 347 Entrepreneurship in ITT
 GBMG 442 International Marketing Mgt.
 GBMG 443 Cross-Cultural Management
 GBTB 460 Principles of Global Supply Chain Security
 GBUS 526 ITT Study Abroad

HIST 401-02 Topics in European Civilization I-II
 HIST 418 Hist. of American Foreign Policy
 HIST 421 Vietnam and America
 HIST 425 History of Technology
 MT 408 International Safety Management
 MT 435 Maritime Security
 NVSC 102 Sea Power and Maritime Affairs
 NVSC 311 Evolution of Warfare
 Foreign language courses.
 Courses in study abroad programs will be evaluated by the department chair.

**Bachelor of Science
International Transportation and Trade - Intern
Minor in Business Communications
Lower Division**

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 90 | Intro to College Mathematics | 4 | |
| | <i>or</i> | | |
| MATH 111 | Applied Calculus I | | |
| PS 111 | Professional Studies | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| ENGL 102 | Freshman English II | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 251 | Statistics | 3 | |
| PE 100 | Swimming | 1 | |
| | Free Elective | 3 | |
| | GenEd: Natural Science w/Lab | 3 | |
| | | | |
| | | | |
| | | | |
| | Total Credits: | 16 | |

Sophomore Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| ENGL 452 | Technical Writing | 3 | |
| GBAC 311 | Financial Accounting | 3 | |
| GBEC 121 | Macroeconomics | 3 | |
| HIST 102 | American Civilization II | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBAC 315 | Managerial Accounting | 3 | |
| GBEC 122 | Microeconomics | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Humanities or SocSci elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 16 | |

Total Lower Division Credits: 64

Lower Division Competency Requirement

ITT students must satisfy a lower division competency requirement in order to register for upper division major courses. Competency is defined as having achieved a GPA of 2.5 in each of two groups of courses:

**ENGL 101, MATH 90 or 111, MATH 251;
GBUS 100, GBEC 121, GBEC 122, GBAC 311, GBAC 315.**

**Bachelor of Science
International Transportation and Trade - Intern
Minor in Business Communications
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|-----------------------------|------------|--|
| GBEC 424 | Intl. Economics and Finance | 3 | |
| GBLW 431 | Business Law | 3 | |
| GBMG 341 | Organizational Management | 3 | |
| GBMG 348 | Business Ethics | 3 | |
| GBTT 251 | Transportation Systems | 3 | |
| | | | |
| | Total Credits: | 15 | |

| | Spring Semester | cr. | |
|----------|---------------------------|------------|--|
| ENGL 450 | Speech | 3 | |
| GBEC 427 | Financial Management | 3 | |
| GBEC 428 | Economic Geography | 3 | |
| GBMG 345 | Fundamentals of Marketing | 3 | |
| GBTT 252 | Business of Shipping | 3 | |
| GBTT 451 | Marine Insurance | 3 | |
| | Total Credits: | 18 | |

| | | | |
|----------|----------------------------------|---|--|
| GBUS 525 | ITT Internship / Work Exp. or | 6 | |
| GBUS 526 | ITT Study Abroad | | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGL 456 | Advanced Technical Writing | 3 | |
| GBLW 433 | Admiralty Law* | 3 | |
| GBLW 435 | Environmental Law & Policy* | 3 | |
| GBTT 453 | Import/Export & Traffic Mgt.* | 3 | |
| GBTT 457 | Port and Terminal Operations* | 3 | |
| | | | |
| | Total Credits: | 15 | |

| | Spring Semester | cr. | |
|----------|-------------------------------------|------------|--|
| GBEC 429 | Seminar: Transport. Economics or | 3 | |
| GBMG 440 | Seminar: Strategy and Policy | | |
| GBMG 446 | Operations Research | 3 | |
| GBTT 351 | International Logistics* | 3 | |
| GBUS 300 | International Business* | 3 | |
| | Business Commun. Elective | 3 | |
| | Total Credits: | 15 | |

* Students will meet with advisor to replace one of these courses by

| | | | |
|--|---------------------------|---|--|
| | Business Commun. Elective | 3 | |
|--|---------------------------|---|--|

Total Upper Division Credits: 69
Total Credits for Degree: 133

Business Communications Electives (choose two)

| | | |
|----------|----------------------------------|---|
| ENGL 454 | Journalism | 3 |
| GBLW 437 | International Law | 3 |
| GBMG 347 | Entr. in Intern. Transp. & Trade | 3 |
| HIST 425 | History of Technology | 3 |
| HIST 440 | History of Amer. Enterprise I | 3 |
| HIST 441 | History of Amer. Enterprise II | 3 |
| HUMN 402 | Images of Men, Women, Mach. | 3 |

**Bachelor of Science
International Transportation and Trade - Intern
Minor in Intermodal and Maritime Security
Lower Division**

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 90 | Intro to College Mathematics | 4 | |
| | <i>or</i> | | |
| MATH 111 | Applied Calculus I | | |
| PS 111 | Professional Studies | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| ENGL 102 | Freshman English II | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 251 | Statistics | 3 | |
| PE 100 | Swimming | 1 | |
| | Free Elective | 3 | |
| | GenEd: Natural Science w/Lab | 3 | |
| | | | |
| | | | |
| | | | |
| | Total Credits: | 16 | |

Sophomore Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| ENGL 452 | Technical Writing | 3 | |
| GBAC 311 | Financial Accounting | 3 | |
| GBEC 121 | Macroeconomics | 3 | |
| HIST 102 | American Civilization II | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBAC 315 | Managerial Accounting | 3 | |
| GBEC 122 | Microeconomics | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Humanities or SocSci elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 16 | |

Total Lower Division Credits: 64

Lower Division Competency Requirement

ITT students must satisfy a lower division competency requirement in order to register for upper division major courses. Competency is defined as having achieved a GPA of 2.5 in each of two groups of courses:

**ENGL 101, MATH 90 or 111, MATH 251;
GBUS 100, GBEC 121, GBEC 122, GBAC 311, GBAC 315.**

**Bachelor of Science
International Transportation and Trade - Intern
Minor in Intermodal and Maritime Security
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|-----------------------------|------------|--|
| GBEC 424 | Intl. Economics and Finance | 3 | |
| GBLW 431 | Business Law | 3 | |
| GBMG 341 | Organizational Management | 3 | |
| GBTT 251 | Transportation Systems | 3 | |
| MT 435 | <i>Maritime Security</i> | 3 | |
| | | | |
| | Total Credits: | 15 | |

| | Spring Semester | cr. | |
|----------|-------------------------------------|------------|--|
| GBEC 427 | Financial Management | 3 | |
| GBEC 428 | Economic Geography | 3 | |
| GBMG 345 | Fundamentals of Marketing | 3 | |
| GBTT 252 | Business of Shipping | 3 | |
| GBTT 451 | Marine Insurance | 3 | |
| GBTT 460 | <i>Global Supply Chain Security</i> | 3 | |
| | | | |
| | Total Credits: | 18 | |

| | | | |
|----------|----------------------------------|---|--|
| GBUS 525 | ITT Internship / Work Exp. or | 6 | |
| GBUS 526 | ITT Study Abroad | | |

Senior Year

| | Fall Semester | cr. | |
|----------|--|------------|--|
| GBLW 433 | Admiralty Law* | 3 | |
| GBLW 435 | Environmental Law & Policy* | 3 | |
| GBTT 453 | Import/Export & Traffic Mgt.* | 3 | |
| GBTT 457 | Port and Terminal Operations* | 3 | |
| GBTT 462 | <i>Sci & Tech Issues of Security</i> | 3 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

| | Spring Semester | cr. | |
|----------|-------------------------------------|------------|--|
| GBEC 429 | Seminar: Transport. Economics or | 3 | |
| GBMG 440 | Seminar: Strategy and Policy | | |
| GBMG 446 | Operations Research | 3 | |
| GBTT 351 | International Logistics* | 3 | |
| GBUS 300 | International Business* | 3 | |
| MT 430 | <i>Emergency Mgt. Systems</i> | 3 | |
| | | | |
| | Total Credits: | 15 | |

* Students will meet with advisor to replace one of these courses by

| | | | |
|----------|-------------------------------------|---|--|
| GBTT 465 | <i>Contemporary Security Issues</i> | 3 | |
|----------|-------------------------------------|---|--|

Total Upper Division Credits: 69
Total Credits for Degree: 133

Requirements for the Minor:

- (i) For acceptance in the Minor, generally students must be of senior standing and have a GPA of 3.0 or greater.
- (ii) The student's cumulative GPA for the five Minor courses must be 3.0 for the Minor to be transcribed on the record. The courses constituting the Minor are listed above in *italics*.

Bachelor of Science International Transportation and Trade - Intern 2-Year Program Lower Division Transfer Requirements

Maritime College's B.S. in International Transportation and Trade (ITT) welcomes well-qualified transfer students. In order to complete the upper division work in two years of full-time study, a student must take the appropriate courses during his/her first two years. While students who do not fulfill all the lower division transfer requirements will still be considered for admission into the ITT program, it may not be possible to complete the work in the two-year time frame. An overall GPA of 2.5 is required to transfer into the ITT program.

Students should take courses that correspond as closely as possible to the following list.

Note: The SUNY General Education category is listed in parentheses, where applicable.

| | cr. |
|--|------------|
| CS 100/101, Introduction to Business Computing & Computer Laboratory | 3 |
| ENGL 101, Freshman English I - Composition | 3 |
| ENGL 102, Freshman English II - Literature | 3 |
| ENGL 452, Technical Writing | 3 |
| GBAC 311, Financial Accounting | 3 |
| GBAC 315, Managerial Accounting | 3 |
| GBEC 121, Macroeconomics | 3 |
| GBEC 122, Microeconomics | 3 |
| GBUS 100, Introduction to Business & Economics | 3 |
| HIST 101/102, American Civilization I&II (Gen Ed: American History) | 6 |
| HUMN 201/202, World Lit & Culture I & II (Gen Ed: Western and Other Civilizations) | 6 |
| MATH 251, Statistics | 3 |
| MATH 90, Intro to College Math or MATH 111, Applied Calculus | 4 |
| PE Elective | 1 |
| Free Electives | 6 |
| Humanities or SocSci electives | 6 |
| General Education: Natural Science w/Lab | 3 |
| Total Lower Division Transfer Credits: | 62 |

Total Upper Division Program (found on previous pages) Credits: 69

Total Credits for Degree: 131

Lower Division Competency Requirement

ITT students must satisfy a lower division competency requirement in order to register for upper division major courses. Competency is defined as having achieved a GPA of 2.5 in each of two groups of courses:

**ENGL 101, MATH 90 or 111, MATH 251;
GBUS 100, GBEC 121, GBEC 122, GBAC 311, GBAC 315.**

**Bachelor of Science
Marine Business and Commerce - Deck License
Humanities Study Area Concentration
Lower Division**

The first two years of this curriculum are identical to those of the Marine Transportation curriculum.

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calculus I | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGL 102 | Freshman English II | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| MATH 112 | Applied Calculus II | 3 | |
| NAUT 102 | Intro Vessel Ops & Seamanship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|-------------------------------|-------------|--|
| GBEC 121 | Macroeconomics | 3 | |
| GBTT 251 | Transportation Systems | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| MT 250 | Ship Construction & Stability | 2 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | Total Credits: | 17.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBAC 311 | Financial Accounting | 3 | |
| GBEC 122 | Microeconomics | 3 | |
| GBTT 252 | Business of Shipping | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 251 | Statistics | 3 | |
| NAVG 212 | Celestial Navigation | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|--------|----------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | or Cadet Observer | | |

Total Lower Division Credits: 79.5

**Bachelor of Science
Marine Business and Commerce - Deck License
Humanities Study Area Concentration
Upper Division**

Each semester below includes a group of Humanities Study Area Concentration (SAC) Electives.
These courses are to be chosen in consultation with student's advisor.

Junior Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| ENGL 452 | Technical Writing | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MT 321 | Intro to Cargo Ops & Stability | 3 | |
| NAUT 314 | Rules of the Road | 2 | |
| NAUT 315 | Collision Avoidance | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Humanities SAC Elective | 3 | |
| | Humanities SAC Elective | 3 | |
| | Total Credits: | 21 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| HIST 102 | American Civilization II | 3 | |
| MT 322 | Marine Cargo Operations | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| NAVG 312 | Electr Nav & Voyage Planning | 4 | |
| | Humanities SAC Elective | 3 | |
| | Humanities SAC Elective | 3 | |
| | | | |
| | | | |
| | Total Credits: | 18 | |

| | | | |
|--------|-----------------------|---|--|
| MT 530 | Summer Sea Term III | 5 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBLW 431 | Business Law | 3 | |
| NAUT 408 | License Seminar | 2 | |
| NAVG 402 | Advanced Marine Navigation | 2 | |
| | Humanities SAC Elective | 3 | |
| | Humanities SAC Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBEC 427 | Financial Management | 3 | |
| MT 426 | Maritime Communications | 3 | |
| NAUT 416 | Bridge Watchstanding | 3 | |
| | Humanities SAC Elective | 3 | |
| | Humanities SAC Elective | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 18 | |

Total Credits for Degree: 158.5

**Bachelor of Science
Marine Environmental Science - Deck License
Marine Biology Minor
Lower Division**

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calc I (or MATH 101) | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|---------------------------------|------------|--|
| CHEM 123 | General Chemistry II | 3 | |
| CHEM 124 | General Chemistry II Laboratory | 1 | |
| ENGL 102 | Freshman English II | 3 | |
| MATH 112 | Applied Calc II (or MATH 102) | 3 | |
| NAUT 102 | IntroVesselOps & Seamanship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| OCEA 101 | General Oceanography | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| | | | |
| | Total Credits: | 20 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|-------------------------------|-------------|--|
| BIO 201 | General Biology | 4 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 251 | Statistics | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| MT 250 | Ship Construction & Stability | 2 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | | | |
| | Total Credits: | 18.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-------------|--|
| BIO 210 | Ecology | 3 | |
| CHEM 221 | Organic Chemistry | 3 | |
| CHEM 222 | Organic Chemistry Laboratory | 1 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| NAVG 212 | Celestial Navigation | 4 | |
| PE 2xx | Lifetime Sports | 1 | |
| PHYS 214 | General Physics II | 4 | |
| PHYS 216 | General Physics II Lab | 0.5 | |
| | | | |
| | Total Credits: | 19.5 | |

| | | | |
|--------|-----------------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits 88

Bachelor of Science
Marine Environmental Science - Deck License
Marine Biology Minor
Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| BIO 315 | Marine Biology | 3 | |
| CHEM 220 | Environmental Chemistry | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MT 321 | Intro to Cargo Ops & Stability | 3 | |
| NAUT 314 | Rules of the Road | 2 | |
| NAUT 315 | Collision Avoidance | 3 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| BIO 320 | Invertebrate Zoology | 4 | |
| ES 305 | Remote Sensing | 3 | |
| HIST 102 | American Civilization II | 3 | |
| MT 322 | Marine Cargo Operations | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| NAVG 312 | Electr Nav & Voyage Planning | 4 | |
| | Total Credits: | 19 | |

| | | | |
|--------|-----------------------|---|--|
| MT 530 | Summer Sea Term III | 5 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| BIO 415 | Ichthyology | 3 | |
| ES 420 | Environmental Pollution | 3 | |
| GEOL 301 | General Geology | 3 | |
| MT 426 | Maritime Communications | 3 | |
| NAUT 408 | License Seminar | 2 | |
| NAVG 402 | Advanced Marine Navigation | 2 | |
| | Humanities or SocSci Elective | 3 | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| BIO 416 | Fisheries Science | 3 | |
| GBLW 435 | Environmental Law & Policy | 3 | |
| NAUT 416 | Bridge Watchstanding | 3 | |
| OCEA 402 | Estuaries & Coastal Processes | 3 | |
| | Humanities or SocSci Elective | 3 | |
| | MES Elective | 3 | |
| | Total Credits: | 18 | |

Total Credits for Degree: 167

MES Electives

Marine Biology Minor cr.

| | | |
|--------|--|---|
| ES 410 | Marine Microbiology | 3 |
| ES 430 | Environmntl. Impact Assessment | 3 |
| | Alternatively, any course with the prefix BIO, ES, METE or OCEA | 3 |

**Bachelor of Science
Marine Environmental Science - Intern
Marine Biology Minor
Lower Division**

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calc I (or MATH 101) | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|---------------------------------|------------|--|
| CHEM 123 | General Chemistry II | 3 | |
| CHEM 124 | General Chemistry II Laboratory | 1 | |
| ENGL 102 | Freshman English II | 3 | |
| MATH 112 | Applied Calc II (or MATH 102) | 3 | |
| OCEA 101 | General Oceanography | 4 | |
| PE 100 | Swimming | 1 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-------------|--|
| BIO 201 | General Biology | 4 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 251 | Statistics | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | | | |
| | Total Credits: | 16.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-------------|--|
| BIO 210 | Ecology | 3 | |
| CHEM 221 | Organic Chemistry | 3 | |
| CHEM 222 | Organic Chemistry Laboratory | 1 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| PHYS 214 | General Physics II | 4 | |
| PHYS 216 | General Physics II Lab | 0.5 | |
| | Total Credits: | 15.5 | |

Total Lower Division Credits 63

**Bachelor of Science
Marine Environmental Science - Intern
Marine Biology Minor
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|-------------------------|------------|--|
| BIO 315 | Marine Biology | 3 | |
| CHEM 220 | Environmental Chemistry | 3 | |
| HIST 101 | American Civilization I | 3 | |
| | MES Elective | 3 | |
| | | | |
| | Total Credits: | 12 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| BIO 320 | Invertebrate Zoology | 4 | |
| ES 305 | Remote Sensing | 3 | |
| HIST 102 | American Civilization II | 3 | |
| | Free Elective | 3 | |
| | Science/Mathematics Elective | 3 | |
| | Total Credits: | 16 | |

| | | | |
|--------|----------------------------------|---|--|
| ES 505 | Environmental Sci. Internship I | 3 | |
| ES 515 | Environmental Sci. Internship II | 3 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| BIO 415 | Ichthyology | 3 | |
| ES 420 | Environmental Pollution | 3 | |
| GEOL 301 | General Geology | 3 | |
| | Free Elective | 3 | |
| | Humanities or SocSci Elective | 3 | |
| | Total Credits: | 15 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| BIO 416 | Fisheries Science | 3 | |
| GBLW 435 | Environmental Law & Policy | 3 | |
| OCEA 402 | Estuaries & Coastal Processes | 3 | |
| | Humanities or SocSci Elective | 3 | |
| | MES Elective | 3 | |
| | Total Credits: | 15 | |

Total Credits for Degree: 127

MES Electives

Marine Biology Minor cr.

| | | |
|--------|--|---|
| ES 410 | Marine Microbiology | 3 |
| ES 430 | Environmntl. Impact Assessment | 3 |
| | Alternatively, any course with the prefix BIO, ES, METE or OCEA | 3 |

**Bachelor of Science
Marine Environmental Science - Deck License
Meteorology and Oceanography Minor
Lower Division**

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calc I (or MATH 101) | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|---------------------------------|------------|--|
| CHEM 123 | General Chemistry II | 3 | |
| CHEM 124 | General Chemistry II Laboratory | 1 | |
| ENGL 102 | Freshman English II | 3 | |
| MATH 112 | Applied Calc II (or MATH 102) | 3 | |
| NAUT 102 | IntroVesselOps & Seamanship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| OCEA 101 | General Oceanography | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| | | | |
| | Total Credits: | 20 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|-------------------------------|-------------|--|
| BIO 201 | General Biology | 4 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 251 | Statistics | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| MT 250 | Ship Construction & Stability | 2 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | | | |
| | Total Credits: | 18.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-------------|--|
| BIO 210 | Ecology | 3 | |
| CHEM 221 | Organic Chemistry | 3 | |
| CHEM 222 | Organic Chemistry Laboratory | 1 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| NAVG 212 | Celestial Navigation | 4 | |
| PE 2xx | Lifetime Sports | 1 | |
| PHYS 214 | General Physics II | 4 | |
| PHYS 216 | General Physics II Lab | 0.5 | |
| | | | |
| | Total Credits: | 19.5 | |

| | | | |
|--------|-----------------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits 88

Bachelor of Science
Marine Environmental Science - Deck License
Meteorology and Oceanography Minor
Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| BIO 315 | Marine Biology | 3 | |
| CHEM 220 | Environmental Chemistry | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MT 321 | Intro to Cargo Ops & Stability | 3 | |
| NAUT 314 | Rules of the Road | 2 | |
| NAUT 315 | Collision Avoidance | 3 | |
| | | | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| ES 305 | Remote Sensing | 3 | |
| HIST 102 | American Civilization II | 3 | |
| MT 322 | Marine Cargo Operations | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| NAVG 312 | Electr Nav & Voyage Planning | 4 | |
| OCEA 415 | Marine Biogeochemistry | 3 | |
| OCEA 416 | Marine Biogeochemistry Lab | 1 | |
| | Total Credits: | 19 | |

| | | | |
|--------|-----------------------|---|--|
| MT 530 | Summer Sea Term III | 5 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| ES 420 | Environmental Pollution | 3 | |
| GEOL 301 | General Geology | 3 | |
| METE 350 | Synoptic Meteorology | 4 | |
| MT 426 | Maritime Communications | 3 | |
| NAUT 408 | License Seminar | 2 | |
| NAVG 402 | Advanced Marine Navigation | 2 | |
| | Humanities or SocSci Elective | 3 | |
| | Total Credits: | 20 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBLW 435 | Environmental Law & Policy | 3 | |
| METE 408 | Dynamic Meteorology | 3 | |
| NAUT 416 | Bridge Watchstanding | 3 | |
| OCEA 402 | Estuaries & Coastal Processes | 3 | |
| | Humanities or SocSci Elective | 3 | |
| | MES Elective | 3 | |
| | | | |
| | Total Credits: | 18 | |

Total Credits for Degree: 168

MES Electives

Mete. & Ocea. Minor cr.

| | | |
|----------|--|---|
| METE 402 | Tropical Cyclones | 3 |
| METE 411 | Marine Climatology | 3 |
| METE 422 | Weather Forecasting | 3 |
| OCEA 308 | Dynamic Oceanography | 3 |
| OCEA 414 | Marine Geology | 3 |
| | Alternatively, any course with the prefix BIO, ES, METE or OCEA | 3 |

**Bachelor of Science
Marine Environmental Science - Intern
Meteorology and Oceanography Minor
Lower Division**

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calc I (or MATH 101) | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|---------------------------------|------------|--|
| CHEM 123 | General Chemistry II | 3 | |
| CHEM 124 | General Chemistry II Laboratory | 1 | |
| ENGL 102 | Freshman English II | 3 | |
| MATH 112 | Applied Calc II (or MATH 102) | 3 | |
| OCEA 101 | General Oceanography | 4 | |
| PE 100 | Swimming | 1 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-------------|--|
| BIO 201 | General Biology | 4 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| MATH 251 | Statistics | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | | | |
| | Total Credits: | 16.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-------------|--|
| BIO 210 | Ecology | 3 | |
| CHEM 221 | Organic Chemistry | 3 | |
| CHEM 222 | Organic Chemistry Laboratory | 1 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| PHYS 214 | General Physics II | 4 | |
| PHYS 216 | General Physics II Lab | 0.5 | |
| | Total Credits: | 15.5 | |

Total Lower Division Credits 63

**Bachelor of Science
Marine Environmental Science - Intern
Meteorology and Oceanography Minor
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|-------------------------|------------|--|
| BIO 315 | Marine Biology | 3 | |
| CHEM 220 | Environmental Chemistry | 3 | |
| HIST 101 | American Civilization I | 3 | |
| | MES Elective | 3 | |
| | | | |
| | | | |
| | Total Credits: | 12 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| ES 305 | Remote Sensing | 3 | |
| HIST 102 | American Civilization II | 3 | |
| OCEA 415 | Marine Biogeochemistry | 3 | |
| OCEA 416 | Marine Biogeochemistry Lab | 1 | |
| | Free Elective | 3 | |
| | Science/Mathematics Elective | 3 | |
| | Total Credits: | 16 | |

| | | | |
|--------|----------------------------------|---|--|
| ES 505 | Environmental Sci. Internship I | 3 | |
| ES 515 | Environmental Sci. Internship II | 3 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| ES 420 | Environmental Pollution | 3 | |
| GEOL 301 | General Geology | 3 | |
| METE 350 | Synoptic Meteorology | 4 | |
| | Free Elective | 3 | |
| | Humanities or SocSci Elective | 3 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBLW 435 | Environmental Law & Policy | 3 | |
| METE 408 | Dynamic Meteorology | 3 | |
| OCEA 402 | Estuaries & Coastal Processes | 3 | |
| | Humanities or SocSci Elective | 3 | |
| | MES Elective | 3 | |
| | Total Credits: | 15 | |

Total Credits for Degree: 128

MES Electives

Mete. & Ocea. Minor cr.

| | | |
|----------|--|---|
| METE 402 | Tropical Cyclones | 3 |
| METE 411 | Marine Climatology | 3 |
| METE 422 | Weather Forecasting | 3 |
| OCEA 308 | Dynamic Oceanography | 3 |
| OCEA 414 | Marine Geology | 3 |
| | Alternatively, any course with the prefix BIO, ES, METE or OCEA | 3 |

Bachelor of Science Marine Operations- Deck License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|-----------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calculus I | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| ENGL 102 | Freshman English II | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| MATH 112 | Applied Calculus II | 3 | |
| NAUT 102 | Intro Vessel Ops & Seamanship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|-------------------------------|-------------|--|
| GBTT 251 | Transportation Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| MT 250 | Ship Construction & Stability | 2 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | Total Credits: | 17.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| CHEM 100 | Introductory Chemistry | 3 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| HIST 102 | American Civilization II | 3 | |
| GBTT 252 | Business of Shipping | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| NAVG 212 | Celestial Navigation | 4 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Total Credits: | 20 | |

| | | | |
|--------|-----------------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits 80.5

Bachelor of Science Marine Operations- Deck License Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| ENGR 541 | Ship Systems I | 3 | |
| GBMG 341 | Organizational Management | 3 | |
| MT 212 | Ship Management | 3 | |
| MT 321 | Intro to Cargo Ops & Stability | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| NAUT 314 | Rules of the Road | 2 | |
| NAUT 315 | Collision Avoidance | 3 | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| GBAC 311 | Financial Accounting | 3 | |
| GBUS 300 | International Business | 3 | |
| MATH 251 | Statistics | 3 | |
| MT 322 | Marine Cargo Operations | 3 | |
| NAUT 416 | Bridge Watchstanding | 3 | |
| NAVG 312 | Electr Nav & Voyage Planning | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|--------|-----------------------|---|--|
| MT 530 | Summer Sea Term III | 5 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBTT 457 | Port and Terminal Operations | 3 | |
| MT 408 | International Safety Mgt | 3 | |
| MT 426 | Maritime Communications | 3 | |
| NAUT 408 | License Seminar | 2 | |
| NAVG 402 | Advanced Marine Navigation | 2 | |
| | Humanities or SocSci elective | 3 | |
| | MT or GBAT or PS Elective | 3 | |
| | Total Credits: | 19 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBLW 435 | Environmental Law and Policy | 3 | |
| MT 435 | Maritime Security | 3 | |
| | Humanities or SocSci elective | 3 | |
| | MT or GBAT or PS Elective | 3 | |
| | MT or GBAT or PS Elective | 3 | |
| | | | |
| | Total Credits: | 15 | |

Total Credits for Degree: 158.5

Bachelor of Science Marine Operations - Engine License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calculus I | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies I | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| CHEM 100 | Introductory Chemistry | 3 | |
| ENGL 102 | Freshman English II | 3 | |
| ENGR 540 | Intro to Ship Systems | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| MATH 112 | Applied Calculus II | 3 | |
| PE 103 | Water Safety & Survival | 1 | |
| | | | |
| | Total Credits: | 17 | |

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|------------------------------|-------------|--|
| CHEM 212 | Materials Science I | 3 | |
| ENGR 503 | Manufacturing Process I | 1 | |
| ENGR 541 | Ship Systems I | 2 | |
| GBTT 251 | Transportation Systems | 3 | |
| HIST 101 | American Civilization I | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | Total Credits: | 18.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-------------|--|
| ENGR 504 | Manufacturing Process II | 1 | |
| ENGR 542 | Ship Systems II | 2 | |
| HIST 102 | American Civilization II | 3 | |
| GBTT 252 | The Business of Shipping | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| PHYS 214 | General Physics II | 4 | |
| PHYS 216 | General Physics Lab | 0.5 | |
| | | | |
| | Total Credits: | 16.5 | |

| | | | |
|----------|-----------------------------|---|--|
| ENGR 520 | Summer Sea Term II | 6 | |
| ENGR 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits 80

Bachelor of Science Marine Operations- Engine License Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|---------------------------|-----------|--|
| ENGR 242 | Statics | 3 | |
| ENGR 243 | Transport Processes | 3 | |
| ENGR 290 | Electrical Engineering I | 3 | |
| ENGR 543 | Ship Systems III | 3 | |
| GBMG 341 | Organizational Management | 3 | |
| MT 212 | Ship Management | 3 | |
| | | | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-----------------------------|-----------|--|
| ENGR 371 | Applied Naval Architecture | 3 | |
| ENGR 380 | Electrical Engineering II | 3 | |
| ENGR 544 | Ship Systems IV | 3 | |
| GBAC 311 | Financial Accounting | 3 | |
| MATH 251 | Statistics | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Total Credits: | 18 | |

| | | | |
|----------|------------------------|---|--|
| ENGR 530 | Summer Sea Term III | 5 | |
| ENGR 516 | Engine License Seminar | 0 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|-----------|--|
| GBTT 457 | Port and Terminal Operations | 3 | |
| GBUS 300 | International Business | 3 | |
| MT 408 | International Safety Mgt | 3 | |
| | Humanities or SocSci elective | 3 | |
| | MT or GBAT or PS Elective | 3 | |
| | MT or GBAT or PS Elective | 3 | |
| | Total Credits: | 18 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| ENGR 446 | Marine Engine Theory & Appl. | 3 | |
| GBLW 435 | Environmental Law and Policy | 3 | |
| MT 435 | Maritime Security | 3 | |
| | Humanities or SocSci elective | 3 | |
| | MT or GBAT or PS Elective | 3 | |
| | | | |
| | Total Credits: | 15 | |

Total Credits for Degree: 155

Bachelor of Science Marine Transportation - Deck License Lower Division

This page shows the first two years for all students majoring in Marine Transportation.

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|-----------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calculus I | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| ENGL 102 | Freshman English II | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| MATH 112 | Applied Calculus II | 3 | |
| NAUT 102 | Intro Vessel Ops & Seamanship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|-------------------------------|-------------|--|
| GBEC 121 | Macroeconomics | 3 | |
| GBTT 251 | Transportation Systems | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| MT 250 | Ship Construction & Stability | 2 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | | | |
| | Total Credits: | 17.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| GBAC 311 | Financial Accounting | 3 | |
| GBEC 122 | Microeconomics | 3 | |
| GBTT 252 | Business of Shipping | 3 | |
| MT 212 | Ship Management* | | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 251 | Statistics | 3 | |
| NAVG 212 | Celestial Navigation | 4 | |
| | Total Credits: | 19 | |

* for students pursuing minor in
Ship Management

| | | | |
|--------|----------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | or Cadet Observer | | |

Total Lower Division Credits: 79.5

Bachelor of Science Marine Transportation - Deck License Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|-----------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calculus I | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| ENGL 102 | Freshman English II | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| MATH 112 | Applied Calculus II | 3 | |
| NAUT 102 | IntroVesselOps & Seamanship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|-------------------------------|-------------|--|
| GBEC 121 | Macroeconomics | 3 | |
| GBTT 251 | Transportation Systems | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| MT 250 | Ship Construction & Stability | 2 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | Total Credits: | 17.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| GBAC 311 | Financial Accounting | 3 | |
| GBEC 122 | Microeconomics | 3 | |
| GBTT 252 | Business of Shipping | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 251 | Statistics | 3 | |
| NAVG 212 | Celestial Navigation | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|--------|-----------------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits: 79.5

Bachelor of Science Marine Transportation - Deck License Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| ENGL 452 | Technical Writing | 3 | |
| GBMG 341 | Organizational Management | 3 | |
| GBMG 345 | Fundamentals of Marketing | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MT 321 | Intro to Cargo Ops & Stability | 3 | |
| NAUT 314 | Rules of the Road | 2 | |
| NAUT 315 | Collision Avoidance | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Total Credits: | 21 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| GBEC 427 | Financial Management | 3 | |
| HIST 102 | American Civilization II | 3 | |
| MT 322 | Marine Cargo Operations | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| NAVG 312 | Electr Nav & Voyage Planning | 4 | |
| | MT or GBAT or PS Elective | 3 | |
| | | | |
| | | | |
| | Total Credits: | 18 | |

| | | | |
|--------|-----------------------|---|--|
| MT 530 | Summer Sea Term III | 5 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBLW 431 | Business Law | 3 | |
| GBUS 300 | International Business | 3 | |
| MT 426 | Maritime Communications | 3 | |
| NAUT 408 | License Seminar | 2 | |
| NAVG 402 | Advanced Marine Navigation | 2 | |
| | Humanities or SocSci elective | 3 | |
| | | | |
| | | | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|--|------------|--|
| GBEC 429 | Seminar: Transport. Economics <i>or</i> | 3 | |
| GBMG 440 | Seminar: Strategy and Policy | | |
| GBMG 446 | Operations Research | 3 | |
| NAUT 416 | Bridge Watchstanding | 3 | |
| | Humanities or SocSci elective | 3 | |
| | MT or PS Elective | 3 | |
| | MT or PS Elective | 3 | |
| | Total Credits: | 18 | |

Total Credits for Degree: 158.5

**Bachelor of Science
Marine Transportation - Deck License
Ship Management Minor
Lower Division**

Freshman Year

| | Fall Semester | cr. | |
|----------|---------------------------------|------------|--|
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calculus I | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| ENGL 102 | Freshman English II | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| MATH 112 | Applied Calculus II | 3 | |
| NAUT 102 | Intro Vessel Ops & Seamanship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

| | | | |
|--------|-------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
|--------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|-------------------------------|-------------|--|
| GBEC 121 | Macroeconomics | 3 | |
| GBTT 251 | Transportation Systems | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| MT 250 | Ship Construction & Stability | 2 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | Total Credits: | 17.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBAC 311 | Financial Accounting | 3 | |
| GBEC 122 | Microeconomics | 3 | |
| MT 212 | Ship Management | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 251 | Statistics | 3 | |
| NAVG 212 | Celestial Navigation | 4 | |
| | | | |
| | Total Credits: | 19 | |

| | | | |
|--------|-----------------------------|---|--|
| MT 520 | Summer Sea Term II | 6 | |
| MT 521 | <i>or</i> Cadet Observer | | |

Total Lower Division Credits: 79.5

**Bachelor of Science
Marine Transportation - Deck License
Ship Management Minor
Upper Division**

Junior Year

| | Fall Semester | cr. | |
|----------|--------------------------------|------------|--|
| ENGL 452 | Technical Writing | 3 | |
| GBMG 341 | Organizational Management | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MT 321 | Intro to Cargo Ops & Stability | 3 | |
| MT 426 | Maritime Communications | 3 | |
| NAUT 314 | Rules of the Road | 2 | |
| NAUT 315 | Collision Avoidance | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | Total Credits: | 21 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| GBEC 427 | Financial Management | 3 | |
| HIST 102 | American Civilization II | 3 | |
| MT 322 | Marine Cargo Operations | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| NAUT 416 | Bridge Watchstanding | 3 | |
| NAVG 312 | Electr Nav & Voyage Planning | 4 | |
| | | | |
| | | | |
| | Total Credits: | 18 | |

| | | | |
|--------|-----------------------|---|--|
| MT 530 | Summer Sea Term III | 5 | |
| PE 411 | Medical Care Provider | 1 | |

Senior Year

| | Fall Semester | cr. | |
|----------|-------------------------------|------------|--|
| GBLW 431 | Business Law | 3 | |
| GBMG 443 | Cross-Cultural Management | 3 | |
| GBUS 300 | International Business | 3 | |
| NAUT 408 | License Seminar | 2 | |
| NAVG 402 | Advanced Marine Navigation | 2 | |
| | Humanities or SocSci elective | 3 | |
| | | | |
| | | | |
| | | | |
| | | | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|--|------------|--|
| GBEC 429 | Seminar: Transport. Economics <i>or</i> | 3 | |
| GBMG 440 | Seminar: Strategy and Policy | | |
| GBMG 446 | Operations Research | 3 | |
| MT 350 | Haz Mat & Oil Spill Response <i>or</i> | 3 | |
| MT 435 | Maritime Security | | |
| MT 404 | Environmental Management | 3 | |
| MT 408 | International Safety Management | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Total Credits: | 18 | |

Total Credits for Degree: 158.5

Bachelor of Science Maritime Studies - Intern Lower Division

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CHEM 121 | General Chemistry I | 3 | |
| CHEM 122 | General Chemistry I Laboratory | 1 | |
| CS 100 | Intro to Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 111 | Applied Calculus I | 4 | |
| PS 111 | Professional Studies | 2 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| ENGL 102 | Freshman English II | 3 | |
| GBUS 100 | Intro to Business & Economics | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MATH 112 | Applied Calculus II | 3 | |
| METE 201 | Meteorology for Mariners | 3 | |
| PE 100 | Swimming | 1 | |
| | | | |
| | | | |
| | Total Credits: | 16 | |

Sophomore Year

| | Fall Semester | cr. | |
|----------|---------------------------------|-------------|--|
| GBEC 121 | Macroeconomics | 3 | |
| GBTT 251 | Transportation Systems | 3 | |
| HIST 102 | American Civilization II | 3 | |
| HUMN 201 | World Literature & Culture I | 3 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| PHYS 211 | General Physics I | 3 | |
| PHYS 213 | General Physics I Lab | 0.5 | |
| | Total Credits: | 16.5 | |

| | Spring Semester | cr. | |
|----------|-------------------------------|-----------|--|
| ENGL 452 | Technical Writing | 3 | |
| GBEC 122 | Microeconomics | 3 | |
| GBTT 252 | Business of Shipping | 3 | |
| HUMN 202 | World Literature & Culture II | 3 | |
| MATH 251 | Statistics | 3 | |
| PE 2xx | Lifetime Sports | 1 | |
| | | | |
| | Total Credits: | 16 | |

Total Lower Division Credits: 65.5

Bachelor of Science Maritime Studies - Intern Upper Division

Junior Year

| | Fall Semester | cr. | |
|----------|------------------------------|-----------|--|
| BIO 201 | General Biology <i>or</i> | 4 | |
| OCEA 101 | General Oceanography | | |
| GBLW 4xx | Law Elective | 3 | |
| | Foreign Language/Culture I | 3 | |
| | Track Option Course | 3 | |
| | Track Option Course | 3 | |
| | | | |
| | | | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|---------------------------------|-----------|--|
| BIO 210 | Ecology <i>or</i> | | |
| HIST 465 | History of Science <i>or</i> | 3 | |
| OCEA xxx | Oceanography Elective | | |
| GBLW 4xx | Law Elective | 3 | |
| | Foreign Language/Culture II | 3 | |
| | Track Option Course | 3 | |
| | Track Option Course | 3 | |
| | Total Credits: | 15 | |

Senior Year

| | Fall Semester | cr. | |
|----------|---|-----------|--|
| ENGL 456 | Advanced Technical Writing <i>or</i> | 3 | |
| HUMN 465 | Humanities Research Methods | | |
| HUMN 505 | Humanities Internship I | 3 | |
| | Humanities or SocSci elective | 3 | |
| | Track Option Course | 3 | |
| | Track Option Course | 3 | |
| | | | |
| | | | |
| | Total Credits: | 15 | |

| | Spring Semester | cr. | |
|----------|--|-----------|--|
| GBEC 424 | Intl. Economics and Finance <i>or</i> | | |
| GBMG 341 | Organizational Management | 3 | |
| HUMN 490 | Seminar in Maritime Studies | 3 | |
| HUMN 515 | Humanities Internship II <i>or</i> | 3 | |
| | Free Elective | | |
| | Humanities or SocSci elective | 3 | |
| | Track Option Course | 3 | |
| | Total Credits: | 15 | |

Total Credits for Degree: 126.5

Bachelor of Science Maritime Studies Track Option Courses

All students take a total of 7 courses, with 3 or 4 courses from each track.
Courses with indication of FLC are Foreign Language/Culture Electives.

TRACK I: THE ARTS

| | | cr. | | | cr. |
|----------|---------------------------|-----|----------|--------------------------------|-----|
| ENGL 407 | Poetry | 3 | ENGL 468 | Biography/Autobiography | 3 |
| ENGL 408 | Modern Poetry | 3 | ENGL 470 | Major British Authors | 3 |
| ENGL 409 | Drama | 3 | ENGL 471 | Major American Authors | 3 |
| ENGL 410 | Greek Drama | 3 | ENGL 474 | Film I | 3 |
| ENGL 411 | The Novel I | 3 | ENGL 475 | Film II | 3 |
| ENGL 412 | The Novel II | 3 | ENGL 477 | Film and Fiction Studies | 3 |
| ENGL 413 | Novels of Latin America | 3 | HUMN 300 | Humanities III | 3 |
| ENGL 415 | Literature of Colonialism | 3 | HUMN 400 | History of Art | 3 |
| ENGL 418 | Contemporary Literature | 3 | HUMN 401 | Studio Drawing and Painting | 3 |
| ENGL 420 | Comedy | 3 | HUMN 402 | Images of Men, Women, Machines | 3 |
| ENGL 423 | Shakespeare | 3 | HUMN 403 | A History of Western Music | 3 |
| ENGL 426 | Science and Literature | 3 | HUMN 404 | Art and Technology | 3 |
| ENGL 453 | Creative Writing | 3 | | | |

TRACK II: THE HUMANITIES

| | | cr. | | | cr. |
|----------|----------------------------------|-----|----------|----------------------------------|-----|
| ENGL 416 | Literature of the Sea | 3 | HIST 425 | History of Technology | 3 |
| ENGL 450 | Speech | 3 | HIST 436 | Sports and American Society | 3 |
| HIST 401 | Topics in European Civil. I | 3 | HUMN 407 | Literature of Leadership | 3 |
| HIST 402 | Topics in European Civil. II | 3 | HUMN 412 | Models for Decision Making | 3 |
| HIST 415 | Topics in American Social Hist. | 3 | HUMN 458 | Moral Choices in Literature | 3 |
| HIST 416 | U.S. Maritime Hist. to Civil War | 3 | HUMN 460 | The Bible as/in Literature | 3 |
| HIST 417 | U.S. Maritime Hist. after 1865 | 3 | HUMN 461 | Religion | 3 |
| HIST 418 | Hist. of American Foreign Policy | 3 | SPAN 101 | Spanish I | 3 |
| HIST 421 | Vietnam and America | 3 | SPAN 102 | Spanish II | 3 |
| HIST 422 | Turning Points in U.S. History | 3 | SS 400 | Fund. of International Relations | 3 |

**Associate in Applied Science
Marine Technology: Small Vessel Operations
Assistant Engineer Limited License**

Freshman Year

| | Fall Semester | cr. | |
|----------|-----------------------------------|------------|--|
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| ENGR 503 | Manufacturing Proc. I | 1 | |
| GBUS 100 | Intro Business & Economics | 3 | |
| LEAD 101 | Leadership and the Maritime Exper | 1 | |
| MATH 90 | Intro to College Math | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|------------------------------|------------|--|
| ENGL 102 | Freshman English II | 3 | |
| ENGR 100 | Engineering Graphics | 1 | |
| ENGR 504 | Manufacturing Processes II | 1 | |
| ENGR 540 | Introduction to Ship Systems | 3 | |
| MATH 251 | Statistics | 3 | |
| PS 111 | Professional Studies | 2 | |
| | Science Elective * | 3 | |
| | | | |
| | Total Credits: | 16 | |

* CHEM 100 or PHYS 211 with PHYS 213 (lab)

| | | | |
|----------|-------------------|---|--|
| ENGR 510 | Summer Sea Term I | 6 | |
|----------|-------------------|---|--|

Sophomore Year

| | Fall Semester | cr. | |
|----------|-----------------------------------|------------|--|
| ENGR 541 | Ships Systems I | 2 | |
| ENGR 561 | Small Vessels Engineer I | 4 | |
| HIST 101 | American Civilization I | 3 | |
| MT 250 | Ship Construction & Stability | 2 | |
| NAUT 308 | Nautical Ops: Safety | 2 | |
| PE 101 | Lifetime Fitness and Conditioning | 1 | |
| PS 410 | Tugs & Towing I | 3 | |
| | Total Credits: | 17 | |

| | Spring Semester | cr. | |
|----------|----------------------------|------------|--|
| ENGR 542 | Ship Systems II | 2 | |
| ENGR 562 | Small Vessels Engineer II | 4 | |
| MT 322 | Marine Cargo Operations | 3 | |
| MTEO 201 | Small Vessel Resource Mgmt | 3 | |
| PE 411 | Medical Care Provider | 1 | |
| | Free Elective | 3 | |
| | | | |
| | Total Credits: | 16 | |

| | | | |
|----------|-------------------------------|---|--|
| MTEO 521 | Cadet Obs Assist Engineer I | 2 | |
| MTEO 522 | Cadet Obs Assist Engineer II | 2 | |
| MTEO 523 | Cadet Obs Assist Engineer III | 2 | |

Total Credits for Degree**77**

Associate in Applied Science Marine Technology: Small Vessel Operations Deck Limited License

Freshman Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| CS 100 | Intro To Business Computing | 2 | |
| CS 101 | Computer Laboratory | 1 | |
| ENGL 101 | Freshman English I | 3 | |
| LEAD 101 | Leadership/Maritime Experience | 1 | |
| MATH 90 | Intro to College Math | 4 | |
| PE 103 | Water Safety & Survival | 1 | |
| PS 111 | Professional Studies | 2 | |
| PS 112 | Basic Safety Training | 2 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|---------------------------------|-----------|--|
| ENGL 102 | Freshman English II | 3 | |
| GBUS 100 | Intro to Business and Economics | 3 | |
| HIST 101 | American Civilization I | 3 | |
| MT 250 | Ship Construction & Stability | 2 | |
| NAUT 102 | Intro Vessel Ops & Seamanship | 1 | |
| NAVG 112 | Terrestrial Navigation | 4 | |
| PE 101 | Lifetime Fitness & Conditioning | 1 | |
| | | | |
| | Total Credits: | 17 | |

| | | | |
|-----------|------------------------------|---|--|
| MT 510 | Summer Sea Term I | 6 | |
| MTDO 524* | Cadet Observer Lim Tonnage I | 2 | |

* MT 520 Summer Sea Term II 6
may be substituted for MTDO 524. Note
that MT 520 has prerequisites of MT 510,
METE 201, NAVG 212.

Sophomore Year

| | Fall Semester | cr. | |
|----------|--------------------------------|-----------|--|
| METE 201 | Meteorology for Mariners | 3 | |
| MT 321 | Intro to Cargo Ops & Stability | 3 | |
| NAUT 308 | Nautical Operations: Safety | 2 | |
| NAUT 314 | Rules of the Road | 2 | |
| NAUT 315 | Collision Avoidance | 3 | |
| PS 410 | Tugs and Towing I | 3 | |
| | Total Credits: | 16 | |

| | Spring Semester | cr. | |
|----------|------------------------------|-----------|--|
| MT 322 | Marine Cargo Operations | 3 | |
| NAUT 416 | Bridge Watchstanding | 3 | |
| NAVG 312 | Electr Nav & Voyage Planning | 4 | |
| PE 411 | Medical Care Provider | 1 | |
| PS 411 | Tugs & Towing II | 3 | |
| | | | |
| | Total Credits: | 14 | |

with Ocean Endorsement Option:

| | | | |
|----------|-------------------------|-----------|--|
| MT 426 | Maritime Communications | 3 | |
| NAVG 212 | Celestial Navigation | 4 | |
| | Total Credits: | 21 | |

| | | | |
|----------|-------------------------------|---|--|
| MTDO 525 | Cadet Observer Lim Tonnage II | 4 | |
|----------|-------------------------------|---|--|

Total Credits for Degree 75
with Ocean Endorsement 82

