

CTE Course Description and Standards Crosswalk

| Course Information | |
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| Course Name | Introduction to Nautical Skills |
| Course Number | NAU 1 |
| Number of High School Credits | .25 |
| Sequence or CTEPS (You must first have the Sequence or CTEPS entered into the EED-CTE system.) | Agriculture, Food and Natural Resources |
| Date of district Course Revision | 4/10/2024 |
| Career & Technical Student Organization (CTSO) | |
| CTSO embedded in this sequence | SkillsUSA |
| Occupational Standards | |
| Source of Occupational Standards | International Maritime Organization (IMO) Standards of Training & Certification for Seafarers (STCW) United States Coast Guard |
| Names/Numbers of Occupational Standards | IMO STCW 95 Table A-V1/1-4, USCG Table 10.910-2, USCG & IMO Service Regulations |
| Registration Information | |
| Course Description (brief paragraph – as shown in your student handbook or course list) | Introduction to Nautical Skills is a 6-week class for high school juniors and seniors. It is taught by licensed captains from AVTEC’s Maritime Training Center and is designed to introduce students to the maritime industry, providing them with a basis for working in a boating occupation. |
| Instructional Topic Headings (please separate each heading by a semi-colon) | Subjects covered in this course include: vessel terminology; safety; communications at sea; plotting your location with latitude and longitude; laying out a course line; time/distance/speed problems; knots and hitches; getting a job on a boat |
| Summative Assessments and Standards | |
| Technical Skills Assessment (TSA) | Y |
| Course addresses: | |
| New Alaska ELA and Math Standards | Y |
| Alaska Cultural Standards | Y |
| All Aspects of Industry (AAI) | Y |
| Core Technical Standards | Y |
| Employability Standards | Y |
| Employability Standards | |
| Source of Employability Standards | Alaska State Employability Standards |

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| Tech Prep | |
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| Current Tech Prep Articulation Agreement? (Y/N) | N |
| Date of Current Agreement | |
| Postsecondary Institution Name | |
| Postsecondary Course Name | |
| Postsecondary Course Number | |
| # of Postsecondary Credits | |

Additional CTE Course Information

| Author | |
|---|------------------|
| Course developed by | Matt Widaman |
| Course adapted from | Previous Version |
| Date of previous course revision | 5/19/17 |
| Course Delivery Model | |
| Is the course brokered through another institution or agency? (Y/N) | N |

Standards Alignment

| Student Performance Standards (Learner Outcomes or Knowledge & Skill Statements) | Specific Occupational Skills Standard | Common Technical Core Standards | New Alaska ENG/LA Standards | New Alaska Math Standard s | Alaska Cultural Standards | Employability / Career Readiness Standards | All Aspects of Industry/ Systems | Assessment |
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| 1. Students will understand and identify Vessel Terminology, including: Deck, Bow, Stern, Bulwark, Hull, House, Keel, Gunwale/Gunnel, and the Weather Deck. Students will also identify room terminology | IMO STCW 95 table A-VI/1-1 & A-VI/1-4 | | R4.2 | | E | A6 | Principles of Technology | Lab |
| 2. Students will use proper terminology in giving directions on a boat, and identify common equipment on deck as well as water-related terms. | IMO STCW 95 table A-VI/1-1 & A-VI/1-4 | | | | D | A6 | Principles of Technology Management | Lab report |
| 3. Students will identify the types of vessels and navigation items commonly used in the marine industry. | IMO STCW 95 table A-VI/1-1 & A-VI/1-4 | | R4.2 | | E, D, B | A5 | Management Technology Production Skills | Lab |
| 4. Students will recognize primary causes of boat deaths, and identify the types of Personal Floatation Devices (PFD's). | IMO STCW 95 table A-VI/1-1 & A-VI/1-4 | | R4.2 | | A, B | A6 | Health, Safety and Environment | Lab |
| 5. Students will understand the importance of trip preparation and planning and identify the primary areas of planning, including: weather, fuel, float plan, equipment, Load property, survival gear and personal survival kits | IMO STCW 95 table A-VI/1-1 & A-VI/1-4 | | R4.2 W4.2 | | A, B | A6 | Health, Safety and Environment | Lab Observation |
| 6. Students will be able to identify and correctly demonstrate the ability to tie the following knots: Square, Bowline, Sheet bend, Double Becket Bend, Clove Hitch, Cat's Paw, Figure 8, Running Bowline, French Bowline, Carrick Bend, Round Turn & Two Half Hitches, Fisherman's Bend, Barrel Hitch and Timber Hitch. | American Merchant Seaman's Manual Ch 1 Deck Exam Illustration Book - graph D030DG | | | | B, D, E | A2 | Labor, Technology Production Skills, Community | Lab |
| 7. Students will understand the importance of communication in the marine industry, including: station bill, emergencies on a ship, types of radio | IMO STCW 95 table A-VI/1-1 & A-VI/1-4 American Merchant Seaman's Manual Ch 13 | | R4.2 | | D | A6 | Principles of Technology Management | Lab |

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| calls, giving a May-Day call and spelling on the radio | | | | | | | | |
| 8. Students will be able to identify and demonstrate charting procedure in the marine industry including: discussing various global ‘projections’ onto charts and the distortions that come with each; measuring latitude and longitude in degrees, minutes, and tenths; pinpointing a location on the chart when given latitude & longitude, and conversely finding latitude and longitude when given a location; using the terms meridian and line of parallel; finding and using chart symbols and abbreviations including depth in fathoms, sea bed characteristics, and features of aids to navigation; use of chart tools and compass rose to lay out a course (rhumb) line; use of time/distance/speed calculations on the nautical slide rule to solve for any of the three; dead reckoning (calculating one’s future location on the globe when given your current location, direction, time, distance, and speed.) | American Merchant Seaman’s manual Ch 16 and US Code of Federal Regulation Title 46 (shipping) Table 10.910-2 | | R4.2 W4.2 | | D | A6 | Principles of Technology Management | Lab |
| 9. Students will demonstrate the use of a Nautical Slide Rule to calculate speed (knots), distance and time. | US Code of Federal Regulation Title 46 (shipping) Table 10.910-2 | | | M8.4.1 | A6 | | | Lab |
| 10. Students will apply their knowledge of Dead Reckoning to chart the fix, draw a course line, work time, distance and speed and apply to course line. | US Code of Federal Regulation Title 46 (shipping) Table 10.910-2 | | | M8.4.1 | | | Principles of Technology Management | Lab |
| 11. Students will identify and understand the importance of a Sea Service Form and a Merchant Mariners Credential. | USCG and IMO Service Regulations | | R4.2 W4.2 | | | | | |
| 12. Students will research and identify maritime careers, structure of jobs & | | | R4.2 | | | | | |

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| authority on ships and how to advance in the industry | | | | | | | | |
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Instructional Resources

List the major instructional resources used for this course: (websites, textbooks, essential equipment, reference materials, supplies)

United States Code of Federal Regulation (CFR) title 46 (shipping)

- International Maritime Organization (IMO) Standards of Training & Certification for Seafarers (STCW)
- International Maritime Organization (IMO): <http://www.imo.org/Pages/home.aspx>
- The American Merchant’s seaman’s manual
- US Coast Guard License Examination Preparation Deck Exam Illustration Book
- Alaska Marine Safety Education Association, Marine safety Instructor Training Manual
- International Code of Signals
- Standard chart equipment includes: Charting triangles, compass, divider, straight edge, nautical slide rule