Crosswalking from U.S. Coast Guard Credentials to Academic Credit

One Community College’s Model for Fast-Tracking Academic Credential Attainment by Professional Mariners and Veterans
Dr. Sarah Kay Janes knows the hard work mariners do first-hand. As Associate Vice Chancellor of San Jacinto College’s Continuing and Professional Development (CPD) division, Dr. Janes spends a lot of time with Houston-area employers including maritime companies. She regularly sees workers navigating the Houston Channel to inland or near-shore work on barges, tugboats, tow boats and offshore supply boats. Through its Maritime Program, San Jac’s CPD division offers U.S. Coast Guard-approved courses for professional mariners from entry-level deckhands through captains on the world’s largest ships.

In 2012 San Jac launched its Associate Degree in Maritime Transportation program as a response to local industry employers’ request for a higher quality and more well-rounded professional mariners. The degree program combines USCG and STCW maritime training with college-level academic courses to provide mariners with practical knowledge and theoretical instruction that closely relates to their maritime career path.

In 2015 she saw an opportunity to help mariners and their employers. She convened a team to review 10 U.S. Coast Guard credentials and compare the competencies they represented to existing courses the colleges offered in its maritime division. The result was a “crosswalk” showing students who hold one or more of these 10 USCG credentials how they could apply to earn academic credit for their achievement without having to take – and pay for – courses that taught the same skills, competencies and knowledge.

Crosswalking is a tool used by colleges to award credit for prior learning (CPL). CPL allows students to demonstrate their academic or technical competency mastery and earn academic credit for that knowledge. San Jacinto places a high value on CPL as a means to help students “maximize the community college experience and use time efficiently through proper placement in a chosen degree program.”

Increasingly community colleges nationwide are employing CPL to help students accelerate time from enrollment to credential attainment. Colleges typically use one or more methods for determining and awarding academic credit for prior learning, including:

- Continuing education
- Exams
- High school articulation
- Licensure/certification
- Military experience

**Making the Transition to Student from Mariner**

Creating a crosswalk showing how mariners could turn their U.S. Coast Guard credentials and certifications into academic credit at San Jac created the first step on an academic pathway for workers who may have completed high school and had significant work experience but never attended college or earned post-secondary academic credit.

To be awarded academic credit for USCG credential, a student first meets with his or her San Jac counselor, faculty advisor, veteran’s coordinator or dual credit director. The next step is submitting a
completed application with required documentation. The student must be fully admitted to SJC and be currently registered, and have passed three hours of non-developmental course credit.

Students can receive CPL academic credit for up to 75% of a certificate or academic degree. While the student does not receive a letter grade for the awarded credit, it does count toward fulfillment of graduation requirements.

**Crosswalking to Credit Benefits Mariners AND Employers**

Getting mariners on an academic pathway to earn post-secondary certificates or degrees benefits both the mariner and his or her employer. “Our crosswalking work to award academic credit for prior learning as verified by the U.S. Coast Guard credential/certification helps mariners who have had no prior college education get on the path to a certificate or degree,” explains Dr. Janes. “It can be incredibly encouraging for those mariners to see themselves as moving quickly toward getting a degree while they work their way up the career ladder at work.”

Dr. Janes’ work means that mariners who enroll as SJC students can spend less time taking potentially redundant courses for competencies they have already mastered which also saves the student (and/or their employer) money.

Employers benefit from more highly-educated mariners as well. “Typically a more educated workforce produces fewer safety issues which translates into operations savings,” notes Victor Tufts, Maritime Credential and Training Services Coordinator at the Maritime Institute of Technology and Graduate Studies (MITAGS) in Maryland.

**CPL Crosswalk Coming at Critical Time for Industry Employers**

Several trends and industry forces are driving the need for more well-educated mariners. Across the industry the average age of maritime workers is 55; as the industry undergoes a surge in experienced mariners retiring there are not enough licensed and credentialed younger workers to take their place and fewer with both industry-valued credentials and academic certificates or degrees to qualify them for leadership positions.

The International Maritime Organization forecasts a potential industry shortfall of more than 45,000 workers to operate the tankers, barges, tugboats and cargo and container ships that navigate both inland, near-shore and international waterways. At the same time, the U.S. Bureau of Labor Statistics projects the growth rate for water transportation occupations at a “higher than average” rate of 20%.

The strain on workforce pipeline development is being felt across numerous industry sectors, translating to significant need and opportunity within individual companies. For example, Crowley Maritime, a global leader in international shipping, announced intentions to hire 600 maritime workers by the year 2020. The 6,000 companies that make up the nation’s $70 billion commercial inland cargo towing industry are increasingly competing for workers after the U.S. Transportation Department stepped up cargo movement by water instead of interstates in 2007.
Mariners with post-secondary college credit, certificates or degrees represent more likely candidates to become future corporate leaders who can “move up from the vessel operations/boat side into shoreside operations,” notes Tufts. As the maritime transportation workforce experiences a projected surge of retirement among its most senior workers, employers are increasingly looking for the next generation of leaders from within. “It’s ideal to be able to move someone from running a boat to running the entire logistics, support and operations of a company because that person has the experience, knowledge and credibility to be a leader,” notes SMART Center Executive Director and PI Barbara R. Murray. However those types of advancements typically require both the industry credentialing associated with a merchant mariner credential AND an academic degree.

While many officer-level positions on board ships, vessels and boats are recruited out of the nation’s six maritime academies, men and women can come directly into the field from high school, the military or other work experience into non-officer positions. As they accrue more time working onboard – or providing approved, related near-shore support – they can qualify to earn U.S. Coast Guard credentials enabling them to move up the career ladder and into positions of greater responsibility (and pay) on board a ship.

“Our maritime crosswalk CPL program enables mariners who go straight into working on the water from high school or the military, or transferring out of another industry, to double the impact of their USCG credentials by providing a pathway to a college education and degree,” notes Dr. Janes.

**Description of San Jacinto College’s Selected USCG Credentials for CPL**

Dr. Janes focused on 10 USCG Credentials to be eligible for San Jac academic credit. Each of the credentials requires that an applicant meet general requirements (such as U.S. citizenship or possession of valid Merchant Mariner Credential, minimum age, pass a physical exam, etc.), complete required sea (on-the-water time) service, and pass required assessments. Following are descriptions of the competencies, skills and/or experience each USCG credential represents.

1. **Able Seaman** – Able Seaman stand watch on a ship or vessel’s bow or bridge to look for any obstructions in the boat’s path; s/he is responsible for measuring water depth and turning the wheel on the bridge or using emergency equipment as directed. To earn the USCG Able Seaman credential a mariner must have qualifying experience and approved training. There are several AB rating levels that depend on qualifying time on the water; with additional time on the water or at sea an AB can earn higher AB ratings.

2. **Vessel Security Officer Certification** – Able Seaman earn Vessel Security Officer certification through 360 days of approved service on any Coast Guard approved vessel (including tankers, towboats, cargo or passenger ships, or barges) OR at least 180 days of approved service and demonstrated knowledge or training in several key areas including:
   - basic vessel layout and construction
   - shipboard organization
   - shipboard safety
- protection of marine environment
- familiarity with key maritime definitions, terminology and operational practices

3. **RFPNW Certification** – Able Seaman earn RFPNW certification with 180 days of seagoing service OR successful completion of USCG approved training and a minimum of 60 days of approved seagoing service; in addition applicants must have one year of experience as Officer in Charge of Navigational Watch (OICNW) on vessels of 200 GRT/500ITC or more

4. **200+ Ton Certification** – Experienced mariners who have been licensed as Mater, Mate or OUPV for a minimum of 1 year can earn this certification through completion of an approved USCG course and appropriate sea time of between 180 – 720 days depending on vessel and location (i.e. near coastal or inland/great lakes)

5. **Tankerman** – This USCG credential is issued to qualified members of the deck department (above board on a ship or vessel) who are trained to supervise or assist in transferring liquid cargo such as liquefied gases. To be certified as a tankerman a mariner must have:
   - completed a USCG-approved course
   - earned the approved cargo course certificate
   - have a firefighting course certificate
   - be 18 years or older
   - pass a drug and physical exam
   - completed their sea service requirements

There are four types of tankerman endorsements that verify a mariner’s completion of a certain type and/or length of at-sea service:

- Tankerman-PIC endorsement means a mariner has completed 90 days service as deck or engineering officer on one or more tank ships or vessels certified to carry dangerous liquid (DL) or liquefied gases (LG)
- Tankerman-PIC (Barge) endorsement means a mariner has completed 60 days service on a shore- or vessel-based tank vessel certified to carry DL or LG, OR 180 days closely related service with tank barges
- Tankerman-Assistant endorsement is earned through successful completion of a USCG-approved tankerman course, exam and 90 days deck service on tank ship or vessel certified to carry DL or LG
- Tankerman-Engineer endorsement means a mariner has completed 90 days service as engineering officer in the engine department on tank ship or vessel certified to carry DL or LG or 90 days rating or cadet service in the engine department on the same vessel type

6. **100+ Ton Master Certification** – to earn this USCG certification, mariners must have 1080 qualifying days of service on ocean, near coastal or great lakes waters, serving in specific capacities. In addition applicants must have completed 360 days on appropriately-sized sail or auxiliary sail vessels, passed
required exams, and met general age and additional course requirements (i.e. First Aid, CPR and Approved Basic and Advanced Fire Fighting Course).

7. **500+ Ton Master Certification** – to earn this USCG certification mariners must have qualifying 1440 days of service on ocean, near coastal or great lakes waters, serving in specific capacities. In addition applicants must have completed 360 days on appropriately-sized sail or auxiliary sail vessels, passed required exams, and met general age and additional course requirements (i.e. First Aid, CPR and Approved Basic and Advanced Fire Fighting Course).

8. **Apprentice Mate** – to earn this certification a mariner must have completed a USCG-mate training program.

9. **Radar Observer Unlimited** – officers who serve on vessels equipped with RADAR earn this credential for completing a USCG-approved course in skills needed for risk assessment, collision avoidance, and navigation.

10. **Medical Care Provider** – mariners responsible for providing immediate first aid to ship personnel and assist a boat or vessel’s medical person in charge (PIC) earn this USCG Credential by completing a 40-hour/5-day course.
### Crosswalk for Academic Credit for Prior Learning (CPL)

#### If you have this USCG Certification:

<table>
<thead>
<tr>
<th>Certification</th>
<th>Credits</th>
<th>Course Name and Code</th>
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</thead>
<tbody>
<tr>
<td>US Coast Guard Able Seaman Certification</td>
<td>3 credits</td>
<td>Basic Safety and Survival Training (NAUT 1374)</td>
</tr>
<tr>
<td></td>
<td>3 credits</td>
<td>Practicum (NAUT 2364)</td>
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<tr>
<td></td>
<td>3 credits</td>
<td>Practicum (NAUT 2365)</td>
</tr>
<tr>
<td>+ Vessel Security Officer Certification + RFPNW Certification + 200 Ton or Above Master Certification</td>
<td>3 credits</td>
<td>Seamanship I (NAUT 1371)</td>
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<tr>
<td>US Coast Guard Tankerman Certification</td>
<td>2 credits</td>
<td>Marine Cargo Operations II (NAUT 1274)</td>
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<tr>
<td>US Coast Guard 100 Ton or above Master Certification</td>
<td>2 credits</td>
<td>Engineering Familiarization (NAUT 1273)</td>
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<td></td>
<td>2 credits</td>
<td>Seamanship II (NAUT 1276)</td>
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<td></td>
<td>4 credits</td>
<td>Terrestrial &amp; Coastal Navigation (NAUT 2471)</td>
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<tr>
<td></td>
<td>1 credit</td>
<td>Maritime Regulation and Management (NAUT 1174)</td>
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<tr>
<td></td>
<td>3 credits</td>
<td>Practicum (NAUT 2365)</td>
</tr>
<tr>
<td>US Coast Guard 500 Ton or above Master Certification</td>
<td>2 credits</td>
<td>Basic Stability and Ship Construction (NAUT 2274)</td>
</tr>
<tr>
<td>US Coast Guard Apprentice Mate, or higher towing license</td>
<td>4 credits</td>
<td>Integrated Operations for the Master Mariner (NAUT 2472)</td>
</tr>
<tr>
<td></td>
<td>1 credit</td>
<td>Upgrade to Apprentice Mate (NAUT 2171)</td>
</tr>
<tr>
<td>U.S. Coast Guard Radar Unlimited Certificate</td>
<td>2 credits</td>
<td>Radar Observer Unlimited (NAUT 2272)</td>
</tr>
<tr>
<td>U.S. Coast Guard Medical Care Provider Certificate</td>
<td>1 credit</td>
<td>Medical Care Provider (NAUT 1171)</td>
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Tools for Community Colleges Consider CPL for USCG Credentials

To help other community and technical colleges evaluate their programs and courses for possible crosswalking from USCG credentials to academic credit following are the syllabi for each San Jac course.

San Jacinto Course: Basic Safety and Survival (NAUT 1374)

Course Description
This course combines the four modules of SCTW Basic Safety Training: Basic Firefighting, Personal Safety Social Responsibility, Personal Survival and First Aid CPR, with a module on Proficiency in Survival Craft to provide a comprehensive introduction to safety and survival at sea. The course provides required practical lifeboat and lifesaving training for certification as Life boatman by the U.S. Coast Guard. Hands on training will includes time on a fire training field, work in pools with life rafts and survival gear and launching and rowing a lifeboat.(3:2-2)

Textbooks/Material
This information is provided by the individual instructor.

Student Learning Outcomes
Upon successful completion of this course, the student will have the proficiency in and the knowledge required to:
A. Use and Maintain Personal survival gear.
B. Use and maintain survival craft.
C. Perform basic First Aid.
D. Respond to and manage a vessel fire emergency.
E. Launch and take command of a survival craft in an emergency situation.
F. Communicate effectively with other crew-members regarding safety and pollution prevention activities.
G. Understand safe work processes aboard vessels.

SJC Academic Credit for Prior Learning for NAUT 1374 Awarded for
- US Coast Guard Able Seaman Certification
- US Coast Guard 100Ton or above Master Certification with STCW and Lifeboatman endorsements

San Jacinto Course: Seamanship I (NAUT 1371/1372)

Course Description
This course is a study of seamanship designed to introduce the student to the maritime workplace and prepare them for employment. The students are prepared for the role of Able Bodied Seaman and assignment to lookout and watch keeping duties aboard inland, coastal and ocean going vessels. Vessel Security Officer responsibilities will also be addressed. This course is designed to teach new skills to the entry-level mariner with minimal sea-going experience and serves to increase awareness and promote safety in maritime surroundings.(3:3-1)
Textbooks/Material
This information is provided by the individual instructor.

Student Learning Outcomes
Upon successful completion of this course, the student will have the proficiency in and the knowledge required to:
A. Work in the maritime industry.
B. Understand and assume the duties and responsibilities of watch stander aboard a vessel.
C. Establish and maintain the level of situational awareness required to work safely while on deck and contribute to the safe navigation of the vessel as part of the bridge watch standing team.
D. Be proficient in Marlinspike seamanship, including knot tying and line handling.
E. Assume Helmsmen duties.
F. Assume Lookout duties.
G. Understand and undertake the responsibilities of Vessel Security Officer.
H. Respond to Emergency situations.
I. Perform Emergency Communications and Signaling.
J. Prevent Marine Pollution.
K. Use Vessel Terminology.
L. Practice professional deck Seamanship.
M. Use and maintain deck equipment and machinery.
N. Be proficient in Line handling and Line throwing.
O. Understand radio communication standards and use.
P. Develop organizational and study skills. (Includes study in time and money management, listening, note and test taking, textbook survey, critical thinking and problem solving, establishing personal and academic priorities, and memory retention.)
Q. Develop the ability to conduct research. (Includes use of technology research methodologies and information literacy.)
R. Develop self-responsibility. (Includes health and physical wellness, focus of control, stress management, interdependence, decision making and judgment, and boundaries.)

SJC Academic Credit for Prior Learning for NAUT 1371/1372 Awarded for:
- US Coast Guard Able Seaman Certification
- US Coast Guard Vessel Security Officer Certification
  - U.S. Coast Guard RFPNW Certification
- US Coast Guard 200Ton or above Master Certification

San Jacinto Course: Terrestrial and Coastal Navigation (NAUT 2471)
Course Description
This course is designed to teach the student the technical and practical concepts of Terrestrial Navigation. Areas covered include terrestrial coordinates, nautical charts, navigation publications, plotting and position lines, navigation aids, compass corrections, set and drift, charts and chart work, logbooks. This course provides the background introductory knowledge in planning a voyage and to support the tasks, duties and responsibilities in navigating vessels up to 200 tons. (4:3-2)
Student Learning Outcomes
Upon successful completion of the course, the student will:
A. Have basic skills needed to plot and navigate vessels of up to 200 tons.

SJC Academic Credit for Prior Learning for NAUT 2471 Awarded for:
- US Coast Guard 100Ton or above Master Certification

Medical Care Provider (NAUT 1171)

Course Description
This course is designed for licensed deck officers who provide immediate first aid to ship's personnel and to assist the ship's medical person-in-charge. The course provides training for candidates who provide medical care to the sick and injured when they remain on board ship. (1:1-0)

Textbooks/Material
This information is provided by the individual instructor.

Student Learning Outcomes
Upon successful completion of the course, the student will be able to:
A. Conduct a primary and secondary survey of a sick and injured crewmember.
B. Immobilize the patient.
C. Initiate immediate treatment to preserve life.

SJC Academic Credit for Prior Learning for NAUT 1171 Awarded for:
- U.S. Coast Guard Medical Care Provider Certificate

San Jacinto Course: Maritime Regulation and Management (NAUT 1174)

Course Description
This course covers an in-depth examination of the laws and regulations surrounding the maritime transportation industry, and how the industry responds. The Jones Act, EPA, SOLAS, MARPOL, STCW, Flag, Class and Port State Control and Subchapter M will be reviewed. Case studies of well-known industry incidents will be reviewed. Industry responses such as the AWO/RCP-ISM Code and SEMS will be discussed. Students will learn about vessel safety and environmental management systems as well as document control, internal auditing, corrective and preventive action, change management and risk analysis and control. (1:1-0)

Textbooks/Material
This information is provided by the individual instructor.

Student Learning Outcomes
Upon successful completion of the course, the student will have the proficiency in and the knowledge required to:
A. Understand the legal and regulatory environment in which vessels operate.
B. Understand how to perform elementary risk analysis.
C. Effectively utilize a vessel's safety and environmental management system.
D. Understand the compliance verification process.
E. Operate in a document-controlled environment.

San Jacinto Course: Basic Stability and Ship Construction (NAUT 2274)

Course Description
This course provides the background knowledge for a thorough understanding of the calculations for vessel stability and trim, basic ship construction features and terminology, and principles of stability. Subjects include: ship dimensions, ship stresses, hull structure, rudders and propellers, displacement, buoyancy, static and initial stability, list, trim and free surface effect, principles, terms and procedures used in the determination of transverse, longitudinal and damage stability of ships. Also included are analyses of case studies involving loss of stability and how to perform trim and stability calculations. The course covers ship design and construction as it relates to all types of vessels as well. Topics include hull structure and components, vessel design process, design stresses, tonnage measurements and load line assignments. This course aims to meet the mandatory minimum requirements for knowledge, understanding and proficiency in Table A-II/2 of STCW 1995 for the function Navigation at the Officer in Charge of a Navigational Watch on vessels of 500 or more gross tonnage (ITC) Level. (2:2-1)

Textbooks/Material
This information is provided by the individual instructor.

Student Learning Outcomes
Upon completion of the course, the student will have the proficiency in and the knowledge required to:
A. Enable the mariner to safely load bulk, container and liquid cargo safely within ship’s stability parameters.
B. Understand the effect that fuel load and fuel burn has on the stability of the ship.
C. Understand the affect that trim and list has on the stability of the ship and how to compensate for those effects.
D. Understand ship construction so as to make safe and competent operational cargo decisions.
E. Understand vessel stress and how that affects cargo and fuel loading.
F. Perform required basic and algebraic mathematical calculations for all of the above.

San Jacinto Course: Marine Cargo Operations II (NAUT 1274)

Course Description
This course is an in-depth study of the transport of bulk liquid cargoes by tankship. The course topics include: vessel design/construction, oil/chemical cargo characteristics, cargo system design, cargo pumps, loading/discharging operations, venting/vapor control systems, ballasting/de-ballasting operations, tank cleaning, gas freeing/enclosed space entry, inert gas systems, crude oil washing operations, oil pollution regulations and control, and tanker safety. It includes basic safety and pollution prevention precautions and procedures, layouts of different types of oil tankers, types of cargo, their hazards and their handling equipment, general operational sequence and oil tanker terminology. The course takes full account of the annex to resolution 10 adopted by the International Conference on Training and Certification of Seafarers, 1978. Any applicant successfully completing this course will satisfy the training requirements of 46 CFR for an endorsement as Tankerman PIC Barge-Dangerous Liquids.

Textbooks/Material
This information is provided by the individual instructor.

Student Learning Outcomes
Upon successful completion of this course, the student will have the proficiency in and the knowledge required to:
A. Enable the mariner to serve on tank vessels.
B. Safely load, discharge and carry of dangerous liquid cargos in bulk.
C. Understand regulations applicable to the carriage of bulk liquid cargos and prevention of pollution of the maritime environment.
D. Perform basic oil spill response.
E. Properly use personal protective equipment during operations.
F. Perform required record keeping.

SJC Academic Credit for Prior Learning for NAUT 1274 Awarded for:
• US Coast Guard Tankerman Certification

San Jacinto Course: Seamanship II (NAUT 1276)

Course Description
This course is an introduction to vessel characteristics, vessel operations and ship handling with a focus on inland, coastal, oil and towing vessels. Ship handling in inland waters, narrow channels as well as maneuvering in heavy seas, docking, undocking, mooring will be discussed. The make-up of tows and the use and maintenance of towing machinery and gear will be discussed. (2:2-1)

Textbooks/Material
This information is provided by the individual instructor.

Student Learning Outcomes
Upon successful completion of this course, the student will have the proficiency in and the knowledge required to:
A. Work aboard vessels in the inland and coastal maritime industry.
B. Understand and assume the duties and responsibilities of crew member aboard a towing vessel.
C. Assist in making up a tow along-side or ahead.
D. Spot a barge at a marine terminal.
E. Understand oilfield crew, supply and anchor handling operations.

**SJC Academic Credit for Prior Learning for NAUT 1276 Awarded for:**
- US Coast Guard 100Ton or above Master Certification

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**San Jacinto Course: Upgrade to Apprentice Mate (NAUT 2171)**

**Course Description**
This course provides instruction in subjects pertaining to a mariner in training to become master or mate (pilot) of towing vessels or master of towing vessels (harbor assist). (1:1-0)

**Textbooks/Material**
This information is provided by the individual instructor.

**Student Learning Outcomes**
Upon completion of the course, students will be able to:
A. Safely and effectively operate a vessel of up to 200 GRT in the Near Coastal/Inland/Great Lakes operating environment.
B. Operate within the applicable rules, regulations and operating procedures required by the area of operations.
C. Manage vessel operations to maximize vessel and crew safety.

**SJC Academic Credit for Prior Learning for NAUT 2171 Awarded for:**
- US Coast Guard Apprentice Mate, or higher towing license

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**San Jacinto Course: Integrated Operations for the Master Mariner (NAUT 2472)**

**Course Description**
This course serves as a capstone to the entire AAS in Maritime Technology program. A seminar style course reviews and integrates all leaning in the program into the coherent body of knowledge necessary to serve as Master of vessels of up to 200 tons.

The course first builds the knowledge required for a license as Master, 100 GRT, which includes the applicable regulations and operational procedures necessary to operate a vessel of up to 100 Gross Tons in the Near Coastal/Inland/Great Lakes operating environment. Professional training includes navigation, tidal calculations, international and inland rules of the road, coastal pilotage, meteorology, anchoring and mooring, docking, and undocking operations, voyage and passage planning, stability and vessel construction, and marlinspike seamanship.

The course will then examine the body of knowledge necessary to Upgrade Master 100 Tons to Master 200 Tons course and presentation of the Certificate of Training at a Regional Exam Center WITHIN ONE YEAR of the completion of training, will satisfy the exam requirements of 46 CFT 10.207 for upgrade of a license from Master 100Tons Near Coastal to Master 200 Tons Near Coastal.
Students will develop a good understanding of the subjects for upgrade from not more than 100 to not more than 200-Ton Great Lakes, Inland and Near Coastal Master licenses. The level of understanding will meet the standard for passing the upgrade from not more than 100-Ton to not more than 200-Ton Coast Guard examination given in the Regional Examination Centers.(4:3-2)

Textbooks/Material
This information is provided by the individual instructor.

Student Learning Outcomes
Upon successful completion of this course, the student will have the proficiency in and the knowledge required to present their Certificate of Training at a USCG Regional Exam Center within one year of the completion of training, will satisfy the exam requirements of 46 CFR 10.207 for upgrade of a license from Master 100 Tons Near Coastal to Master 200 Tons Near Coastal.

Students will possess the theoretical knowledge to serve as master of vessels of up to 200 tons, which when married with further sea-time after graduation will afford them a career as a Master Mariner.

SJC Academic Credit for Prior Learning for NAUT 2472 Awarded for:
- US Coast Guard Apprentice Mate, or higher towing license

San Jacinto Course: Radar Observer, Unlimited (NAUT 2272)

Course Description
This course covers the proper use of radar for risk assessment, collision avoidance, and navigation. Trainees use commercial radar equipment with landmasses, environmental effects and vessel returns generated by Transas simulation. (2:2-1)

Textbooks/Material
This information is provided by the individual instructor.

Student Learning Outcomes
Upon completion of this course the student will be able to:
A. Use radar principles
B. Set up and tune
C. Plot radar
D. Use radar navigation
E. Understand collision regulations
F. Demonstrate all practical assessments

SJC Academic Credit for Prior Learning for NAUT 2272 Awarded for:
- U.S. Coast Guard Radar Unlimited Certificate

San Jacinto Course: Engineering Familiarization (NAUT 1273)

Course Description
This course is intended for both deck and engineering ratings that have little or no experience in the engine room that served on board a vessel as part of the regular complement and covers the mandatory minimum training requirements for engineering. The training includes basic safety and pollution prevention precautions and procedures, layouts of different types of engine rooms, types of hazards and handling equipment, general operational sequence and engine room terminology. (2:2-1)

**Student Learning Outcomes**
Upon completion of this course the student will be able to:
A. Familiarize deckhands with the engine room environment and the ability to safely monitor such spaces while conducting machinery space rounds.
B. Towing and offshore supply industry and vessel familiarization, as well as the duties of the duty engineer.
C. Auxiliary plants, miscellaneous systems, and auxiliary machinery.
D. Diesel propulsion plants and machinery.
E. Machinery space rounds.
F. Sea project indoctrination.

**SJC Academic Credit for Prior Learning for NAUT 1273 Awarded for:**
- US Coast Guard 100Ton or Above Master Certification

**San Jacinto Course: Practicum (NAUT 2364/2365)**

**Course Description**
This is a practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. The Practicum is an internship with a maritime company where the student is typically fulfilling a deckhand position. The goal is for the student to apply their classroom knowledge and combine with on-the-job training. Students are expected to participate in vessel activities and follow company policy and procedures. Always remember, safety first! (3:0-30)

**Textbooks/Materials**
Student will need to provide work clothes and toiletries for the duration of their internship on assigned vessel. Personal Protective Equipment (PPE) will be provided by employer in most cases. Students will need to provide own transportation as required by employer for pre-employment physical, drug testing, crew change, etc. Student must have valid TWIC and current driver’s license and clean background highly recommended.

**Student Learning Outcomes**
As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the maritime and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the maritime industry. The following are also goals of summer internship:
- Students get at least 40–12 hour days or 60-8 hour days of sea time
- Students gain on the job training on commercial vessels
- Students get daily interaction with mariners and vessel operations
Grading Formula
Final Practicum grade shall be determined by the following:
20% - Vessel Equipment Report
20% - Diagrams
20% - Report on senior member of the crew
20% - Evaluation from company representative
20% - Weekly log - describe your duties and tasks, what you are learning, & where your vessel is

SJC Academic Credit for Prior Learning for NAUT 2364/2365 Awarded for:
- US Coast Guard Able Seaman Certification
- US Coast Guard 100Ton or above Master Certification

For more information on creating effective crosswalk models to award credit for prior learning to mariners and veterans holding USCG credentials please contact:

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