Leadership in a Dynamic Environment
CAS NS 329 (3 credits)

Course Catalog Description (max. 40 words):
Learn to be an effective leader while leveraging the individual strengths of a team. Use leadership theory and case studies to understand how decisions affect outcomes. Participate as an active member of a ship’s crew, progressively assuming full leadership role.

Instructor(s): Sea Education Association Nautical Science Faculty

Location: SEA campus in Woods Hole, MA and at sea on board one of SEA’s sailing school vessels.

Prerequisites: Admission to SEA Semester. Sophomore standing or permission of instructor.

Course Philosophy and Approach:
Leadership in a Dynamic Environment (LDE) develops the ability to manage teams effectively amidst changing circumstances. With ship operations as a backdrop, students discuss literature and case studies to explore the foundations of effective leadership and support: task triage, decision-making, shared mental models, and appropriate executive styles. During the first week, onshore at the SEA campus in Woods Hole, students meet in a seminar format to discuss these principles in multiple applications, with a focus toward developing as effective members of a ship’s crew. Weeks 2-5 of LDE take place at sea aboard an SEA sail training vessel, where students embark as active members of the crew. Students gain hands-on experience in executive and supporting roles, in an environment of true consequences. Aboard ship, a phased assumption of responsibility culminates in the role of Trainee Watch Officer (TWO), where routine operation of the vessel becomes the responsibility of the student team, under the oversight of senior staff.

Learning Outcomes:
1. Understand keys to effective team leadership and membership.
2. Recognize the effectiveness of different executive styles.
3. Learn to develop action plans that are adaptable to circumstances.

Evaluation:
Case Analysis (1) 10%
Live Case Analyses (2) 20%
Skills Practical Exam 20%
Leadership Journal 20%
Self-Assessment 10%
Staff Assessment 10%
Execution of Final Mission/Exercise 10%
Assignments:

**Case Analyses (1):** Case studies, with examples from maritime and non-maritime applications, will be used in the classroom to understand the successes and failures of leadership teams in changing circumstances. For this assignment, students will choose a case study, and write a short independent review developed on class content. These reviews will then serve as the foci for discussions in class at sea.

**Live Case Analyses (2):** Taking on leadership roles at sea will allow students to experience management at work in real time: planning, communication, flexibility, and assessment. The Live Case Analysis requires each student to prepare a written after-action review of an evolution that they have been part of, and to conduct a critique using background from the syllabus. A short presentation of findings will be made to the class. Two live case studies are assigned during the sea voyage, permitting different analytical perspectives.

**Skills Practical Exam:** This exam will take place at the end of the first training phase at sea. The exam is designed to establish proficiency in the baseline skills of the ship’s departments (deck, laboratory, engineering, and accommodations) prior to the assumption of leadership roles.

**Leadership Journal:** The journal is a logbook for leadership experiences. It will begin with an inventory of thoughts prior to sailing about which elements of leadership theory might be most important at sea. During the voyage, students will act alternately as team member, leader, trainee, and observer. Daily journal entries should be written to reflect on these experiences as they occur in context, and used as reference points in the development of personal leadership decisions. A rubric will be provided for periodic self-assessment.

**Self-Assessment:** Each student will evaluate their leadership abilities using a Likert scale assessment of 21 leadership skills. The numerical assessment will provide the foundation for a written self-evaluation of their leadership skills.

**Multi-Watch Mission/Exercise:** Near the end of the training voyage, the class will be presented with an operational objective for the ship that requires coordination between watch teams over a 24-hour period. Students will need to choose an executive and several team leaders, and then to plan, conduct, and debrief the mission, all in coordination with the ship’s chief instructional officers. Each watch team will receive a shared grade for this assignment, based partly on execution, and partly on how effectively the team can analyze its performance in review.

Expectations and Requirements:

- Punctual attendance and active participation is expected at every class meeting.
- Late assignment submissions are not accepted.
- The policy on academic accuracy, quoted below, will be strictly followed in this class.

The papers that you submit in this course are expected to be your original work. You must take care to distinguish your own ideas and knowledge from wording or substantive information that you derive from one of your sources. The term “sources” includes not only published primary and secondary material, but also information and
opinions gained directly from other people and text that you cut and paste from any site on the Internet.

The responsibility for learning the proper forms of citation lies with you. Quotations must be placed properly within quotation marks and must be cited fully. In addition, all paraphrased material must be acknowledged completely. Whenever ideas or facts are derived from your reading and research, the sources must be indicated. (Harvard Handbook for Students, 305)

- Considerations for use of internet sources:
  As you browse websites, assess their usefulness very critically. Who posted the information and why? Can you trust them to be correct? Authoritative? Unbiased? (It’s okay to use a biased source as long as you incorporate it knowingly and transparently into your own work.) Keep track of good sources that might be useful for subsequent assignments, and annotate in your bibliography any sites you cite. Your annotation should include the name of the author or organization originating any material that you reference. If you can’t identify the source, don’t use it!

Readings:

Abrashoff, M.D. It’s your ship: Management Technique from the Best Damn ship in the Navy. Warner, 2002.


Le, B. The Junior Watch Officer’s Sheet Anchor. The Sea Education Association, 2003


The National Transportation Safety Board (NTSB): Case studies of marine casualties.
## Course Calendar:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Readings/Assignments Due</th>
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| **Pre-Program Reading** (will be provided to students prior to the beginning of the course) | • Perkins, D.N.T., *Leading at the Edge*  
• Davis, J., *High Tech Cowboys of the Deep Sea*  
• Abrashoff, M.D., *It’s Your Ship: Leadership From the Best Damn Ship in the Navy* |

### Week 1 (4.5 hrs) – At SEA Campus in Woods Hole, MA

- **The Principles of Leadership:**  
  • Academic Definitions of Leadership  
  • Attributes of Successful Leaders
- **Preparing for Sea:**  
  • The Trainee Watch Officer System  
  • Watch Standing and Leadership

#### Reading:

• Parrot, D. *Bridge Resource Management for Small Ships.*  
• SEA Operations Manual  
• Le, B., *JWO Sheet Anchor*

**First Leadership Journal Entry Due**

### Week 2 (30 hours) – At sea on board SSV Corwith Cramer in North Atlantic Ocean

- **Training Phase I: Apprenticeship**  
  • Shipboard Orientation  
  • Safety and Emergency Management  
  • The Watch: Shipboard Leadership Structures  
  • Principles of Communication  
  • Department Training: Seamanship and Sail Handling; Scientific Sampling; Navigation; Food Service and Sanitation
- **Live Case Analysis Presentation #1**

#### Reading:

Dupree, M. *Leadership Jazz: The Essential Elements of a Great Leader.*

**Daily Leadership Journal Entries**

**Case Analysis Due**

### Week 3 (30 hours) – At sea on board SSV Corwith Cramer in North Atlantic Ocean

- **Training Phase I continues: Maritime Applications of Leadership**  
  • Conventional Leadership Structures

**Daily Leadership Journal Entries**
### Training Phase II: Task Management

- Bridge Resource Management
- Error Chains and Accident Prevention

#### Live Case Analysis Presentation #2

### Week 4 (30 hours) - At sea on board SSV Corwith Cramer in North Atlantic Ocean

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<thead>
<tr>
<th>Training Phase II, continued</th>
<th>Daily Leadership Journal Entries</th>
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<tbody>
<tr>
<td>Training Phase III: The Trainee Watch Officer (TWO)</td>
<td>Written Assessment by Staff (Day 18)</td>
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<td>• First TWO Watch</td>
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### Week 5 (30 hours) – At sea on board SSV Corwith Cramer in North Atlantic Ocean

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<tr>
<th>Training Phase III: The Trainee Watch Officer (TWO), continued:</th>
<th>Daily Leadership Journal Entries</th>
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<tr>
<td>• Second TWO Watch</td>
<td><strong>Self-Assessment Due (Day 25)</strong></td>
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<tr>
<td>• Daily Post-Watch Progress Meetings</td>
<td><strong>Written Assessment by Staff (Day 25)</strong></td>
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<td>• Post-TWO Watch Debriefing</td>
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<td>• End-of-Cruise Debrief with Captain and Chief Scientist</td>
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*Multi-Watch Mission/Exercise*

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**Reading:**

- Parrott, D. *Bridge Resource Management for Small Ships.*
- NTSB Case Studies

**Skills Practical Exam (Day 10)**