

## CMI COURSE CURRICULUM COURSE ACTION

**Course Title:** Traditional Navigation and Seafaring    **Alpha Number:** MART 101    **CIP No.** 30.2901

**Type of Action:**

New Course (attach narrative justification for course creation)

Substantive Revision (attach narrative justification for changes, including assessment and/or achievement data and feedback from the advisory committee if relevant)

Select all that apply:

Change in number of credit hours

Change in prerequisite

Substantive change in course content

Change to SLOs     Other:

Non-substantive Revision

Select all that apply:

Change in Alpha Number or Title (unless letter abbreviation has not previously been used)


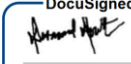
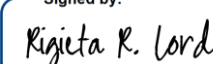

Edit to course description that does not alter the substance of the course

Change to recommended texts

Other: Change in number of contact hours to 75

Reinstitution of Archived Course (attach narrative justification for reinstitution, including evidence of demand, evidence of capacity, feedback from the advisory committee if relevant, and commentary that speaks directly to the reasons the course was initially archived))

Reaffirmation of Course (only allowable if course completion rate exceeds ISS, the benchmark has been met for the majority of SLO assessments, and there is no evidence of inequitable levels of achievement across subpopulations; attach evidence) of achievement across subpopulations; attach evidence) **Approvals:**

	Name	Signature	Date
<b>Department Chair</b>	Edward Adiniwin	DocuSigned by:  0A4D30580E1D40C...	9/2/2024
<b>Curriculum Committee Chair</b>	Desmond N. Doulatram	DocuSigned by:  Employee signature Department Co-Chair 8A4E9FDD06E14D5...	9/2/2024
<b>Dean</b>	Rigjeta R. Lord	Signed by:  E719CB3192EB4F4...	9/2/2024
<b>VPASA</b>	Dr. Elizabeth Switaj	DocuSigned by:  89BEB3BDDC23455...	10/30/2024

### CMI COURSE OUTLINE

**CIP No.** 30.2901

**Version No.** 002

MART101

Traditional Navigation and Seafaring  
**Course Title**

**Alpha Number**

**Previous Alpha Number:**

**Course Description:** Familiarizes students with traditional seafaring in the Pacific with focus on the sea Marshall Islands, the Micronesia Region and the Pacific. Introduces the methods of navigation and cultural importance of canoes. The participation of women as *ri-meto* will also be discussed.

**Course originally prepared by:** Dr. Irene Taafaki \_\_\_\_\_ November 2022

**Most recent revision by:** Maritime Program \_\_\_\_\_ WAVES August/2024

**Course mode(s):**  Face to Face (including Zoom)  Hybrid

**Credits calculated by:**  Credit Hour  Clock Hour  N/A

**Contact Hours:** 75

Type	No. of Hours	No. of Credits	Maximum No. of Hours Online
Lecture/Seminar/Workshop	30	2	15
Clinical			
Practicum			
Lab			
Fieldwork	45	1	
Studio Time			
<b>Total</b>	<b>75</b>	<b>3</b>	<b>15</b>

**Purpose(s) of Course:** Degree Requirement \_\_\_\_\_

Degree Elective Liberal Arts

General Education \_\_\_\_\_

Credit Certification Rating forming Part of a Navigational Watch

Rating forming Part of an Engine Room Watch

Developmental \_\_\_\_\_

CTE/TVET X

ABE/Adult HS \_\_\_\_\_

**Distribution Area:** Humanities \_\_\_\_\_  
 Social Sciences \_\_\_\_\_  
 Mathematics (Credit) \_\_\_\_\_  
 Science \_\_\_\_\_

**Prerequisite:** None

**Student Learning Outcomes:** Upon completion of this course, students will be able to:

1. Articulate the historical, social and economic importance of seafaring and navigation in the Marshall Islands, the Micronesia region and the Pacific.
2. Describe the wayfinding of Pacific Island navigators
3. Differentiate the types of traditional canoes constructed and used by Pacific peoples
4. Describe the materials used and the construction of the three styles of Marshallese canoes and the cultural meanings assigned to their key features.
5. Articulate the roles and responsibilities of Marshallese seafarers.
6. Appreciate the historical and cultural role of women in sailing and navigation and how this relates to current policies ensuring equal opportunity for women and men in all fields of employment.

**SLO Mapping:** N/A

**Links to Program Learning Outcomes:**

SLO	Linked PLO	I/P/M	Explanation of Link
1	<p><u>PLOs for Certificate of Completion in Rating Forming Part of an Engine Room Watch /Certificate of Completion in Rating Forming Part of a Navigational Watch</u>                      PLO 10/12 Explain the relevance of Marshallese seafaring traditions to the present day.</p>	I	Students will describe the social and economic factors prompting the migration of peoples across the Pacific and their settlement of the islands and atolls of Oceania.
2	<p><u>PLOs for Certificate of Completion in Rating Forming Part of a Navigational Watch</u>                      PLO 6. Contribute to monitoring and controlling a safe watch. PLO 7. Observe safety precautions during the stowage and handling of cargoes. PLO 8. Keep a proper lookout by sight and hearing.</p>	I	Students will acquire an understanding of the traditional importance of the role of the Navigator how they were trained and what they were required to know and do

3	<p><u>PLOs for Certificate of Completion in Rating Forming Part of an Engine Room Watch /Certificate of Completion in Rating Forming Part of a Navigational Watch</u></p> <p>PLO 10/12 Explain the relevance of Marshallese seafaring traditions to the present day.</p>	I	<p>Students will survey and compare the different types of vessels constructed by the various cultures of the Pacific.</p>
4	<p><u>PLOs for Certificate of Completion in Rating Forming Part of an Engine Room Watch /Certificate of Completion in Rating Forming Part of a Navigational Watch</u></p>	I	<p>Students will describe the three styles and capacities of Marshallese sea-going vessels, how they were constructed and their technological fit for their respective purposes.</p>

	<p>PLO 10/12 Explain the relevance of Marshallese seafaring traditions to the present day.</p>		
--	--	--	--

<p>5</p>	<p><u>Certificate of Completion in Rating Forming Part of an Engine Room Watch</u></p> <p>PLO 7. As a member of the engine room crew, assist in the maintenance of relevant pumping systems, including the bilge and ballast system in accordance with established procedure and safety/statutory requirements.</p> <p><u>Certificate of Completion in Rating Forming Part of a Navigational Watch</u> PLO 1. Maintain, handle, and use ropes for shipboard applications in accordance with established shipboard practice. PLO 2. Provide a safe means of access to personnel embarking and disembarking the vessel. PLO 3. Perform support duties during mooring and anchoring operations. PLO 5. Carry out basic deck maintenance procedures. PLO 6. Contribute to monitoring and controlling a safe watch. PLO 7. Observe safety precautions during the stowage and handling of cargoes. PLO 8. Keep a proper lookout by sight and hearing. PLO 9. Perform the duties of a helmsperson.</p>	<p>I</p> <p>Students will describe the importance of the different roles and responsibilities of seafarers, how these were required for a successful and safe voyage, and the cultural status and rewards earned for their service.</p>
----------	---	---

6	<p><u>Certificate of Completion in Rating Forming Part of an Engine Room Watch/ or Certificate of Completion in Rating Forming Part of a Navigational Watch</u>                  PLO 9/11. Explain maritime career pathways.                  PLO 10/12. Explain the relevance of Marshallese seafaring traditions to the present day.</p>	I	<p>Students will explore and define the role played by women in the construction and launching of canoes, and as navigators and seafarers, and acquire an understanding of the factors that limit the recognition of their traditional role as seafarers.</p>
---	--	---	---

**Course Content:** Students in this course will be introduced to:

1. Pacific migration, 'sea roads' and settlement;
2. Wayfinding methods of ocean exploration and navigation across the Pacific using traditional, celestial, sea swells and wave knowledge;
3. Training navigators and seafarers – the use of the *rebellib* and *wapepe* learning tools
4. Canoe culture of Pacific peoples in general and the Marshallese people in particular
5. Materials used for construction;
6. Three types and uses of Marshallese canoe:
  - a. Walap
  - b. Tipnol
  - c. Kōrkōr
7. Marshallese canoes unique construction elements:
  1. Body of the canoe and outrigger (*majanij, rōkwoj, jouj, kipedped, douwe, kubaak*)
  2. *Jinen Wa*
    - a. Paddles,
    - b. Bailer (*lem*), . Jib (*lep*)
  3. Sail (*wujla*)
  0. Community involvement in canoe building and launching;
  0. The concept of balance and the canoe as an expression of cultural values;
  0. Women in Navigation 0. The decline and revival of the use of canoes as a viable means of transportation.

**Higher Order Thinking Skills: Students in this course will experience:**

- Analyzing the basic elements of an idea, experience, or theory
- Making judgments about the value or soundness of information, arguments, or methods
- Applying theories or concepts to practical problems or in new situations

**Recommended Methods of Instruction**

- Demonstration
- Lecture
- Small group discussion
- Class discussion
- Audio-Visual Aids
- Laboratory

- Supervised Practice
- Field Trips \_\_\_\_\_ Other:
- Other: Guest speaker (s)

**Recommended Assessment Tool Type(s):**

- Case Study**
- \_\_\_\_\_ Critique of Performance
- \_\_\_\_\_ Exam/Quiz In-Course
- \_\_\_\_\_ Exam/Quiz Standardized (attach narrative describing development and validation process) \_\_\_\_\_
- Focus Group
- Group Project**
- \_\_\_\_\_ Individual Project
- \_\_\_\_\_ Observation
- \_\_\_\_\_ Portfolio Review
- Presentation**
- \_\_\_\_\_ Simulation
- \_\_\_\_\_ Skill Performance
- \_\_\_\_\_ Supervisor Evaluation
- \_\_\_\_\_ Survey
- Written Assignment**

**Required Forms of Regular and Substantive Interaction for Hybrid or Distance Education Courses (Selected at Least Two):**

- Direct instruction through:
- Live video lectures
- \_\_\_\_\_ Live audio-only lectures
- Live text chats
- \_\_\_\_\_ Assessing or providing feedback on a student's coursework
- \_\_\_\_\_ Providing information or responding to questions about the content of a course or competency through:
- \_\_\_\_\_ Live video discussions
- \_\_\_\_\_ Live audio-only discussions
- \_\_\_\_\_ Live text chats
- \_\_\_\_\_ Asynchronous message boards or text chats
- Facilitating a group discussion regarding the content of a course or competency through:
- Live video discussions
- \_\_\_\_\_ Live audio-only discussions
- Live text chats
- Asynchronous message boards or text chats \_\_\_\_\_

Other, specify:

**Note:** For distance education courses, if only two are selected, both must occur within the course on a weekly basis. If more than two are selected, the instructor may choose which two are used during each week.

**Equipment and Materials:**

Recommended texts:

Genz, J et al. *Voyaging in the Pacific* (to be published 2023) Hawaii. UH Manoa, Center for Pacific Islands Studies. (see appendix 1)

Genz, J. H. 2008. *Marshallese Navigation and Voyaging: Relearning and Reviving Indigenous Knowledge of the Ocean*. Dissertation submitted to U. of HI Anthropology. May, 2008.

Recommended resources:

The Canoe Is the People: Indigenous Navigation in the Pacific

<https://en.unesco.org/links/transmission/canoe>

PREL Pacific Storytellers Cooperative Canoes of the Marshall Islands

<https://www.youtube.com/watch?v=JHYCdKFOHIA>

Alan Tamayose and Shantell De Silva How did Polynesian wayfinders navigate the Pacific Ocean? - <https://www.youtube.com/watch?v=m8bDCaPhOek>

*Names of Canoe Parts* <http://www.canoesmarshallislands.com/2014/09/names-of-canoe-parts/>

Wa Kuk Wa Jimor – Marshallese Canoes Today <https://marshallese-manit.org/post-libraryjukle/outriggercanoes-part-1/>

[#postcards](#) [#canoe](#) [#Micronesian](#) Preserving Two Cultures with the Micronesian and Dakota Canoe | Postcards, PBS

Mimi George Ancestral Voyaging Knowledge in Oceania: Pacific Women’s Knowledge

[https://en.unesco.org/sites/default/files/links\\_avk\\_paper1\\_women\\_2021.pdf](https://en.unesco.org/sites/default/files/links_avk_paper1_women_2021.pdf)

Genz, Joseph. (2014). *Complementarity of Cognitive and Experiential Ways of Knowing the Ocean in Marshallese Navigation*. *Ethos* 42(3):332-351.

Genz, Joseph (2011). *Navigating the Revival of Voyaging in the Marshall Islands: Predicaments of Preservation and Possibilities of Collaboration*. *The Contemporary Pacific* 23(1):1-34.

Genz, Joseph, Jerome Aucan, Mark Merrifield, Ben Finney, Korent Joel and Alson Kelen. (2009). *Wave Navigation in the Marshall Islands: Comparing Indigenous and Western Scientific Knowledge of the Ocean*. *Oceanography* 22(2):234-245.

Genz, Joseph and Ben Finney. (2006). *Preservation and Revitalization of Intangible Cultural Heritage: A Perspective from Cultural Anthropological Research on Indigenous Navigation in the Republic of the Marshall Islands*. *Micronesian Journal of the Humanities and Social Sciences* 5(1/2):306-313.

Huffer, Elise **Women and Navigation: Does the Exception Confirm the Rule?** *International Journal of Maritime History*, XX, No.2 (December 2008),265-284 <https://zeymarine.com/top-10-female-sailors-inhistory/>

**Women** in **Maritime** – **IMO**  
<http://www.imo.org/en/OurWork/TechnicalCooperation/Pages/WomenInMaritime.aspx> **Turning the Tide** video: <https://www.youtube.com/watch?v=BTn0rzYF5cE>



**Maritime Facts and Figures: WOMEN IN MARITIME**  
<https://imo.libguides.com/c.php?g=659460&p=4717027>

Paromita Mukherjee **8 Career Options For Women Seafarers After Sailing At Sea**  
<https://www.marineinsight.com/careers-2/8-career-options-for-women-seafarers-after-sailing-at-sea/>

**Women in the Maritime Industry** <https://core.ac.uk/download/pdf/217237093.pdf>

**College Mission:**

The College of the Marshall Islands will provide our community with access to quality, higher and further educational services, prioritize student success through engagement in relevant Academic, **Career and Technical Education**, and be a **center for the study of Marshallese Culture**. It will also provide intellectual resources and facilitate research specific to the needs of the nation.

*EC approved 4th Nov, 2020. BOR approved 1st December, 2020*

**Connection to College Mission:**

To be a center for the study of Marshallese culture, Marshallese culture must be central to the CMI curriculum, including its Academic and Technical and Vocational programs. The course Traditional Navigation and Seafaring will engage students in the acquisition of degree-level knowledge, understanding and appreciation of the past Marshallese voyaging culture. For students registered in the Certificates in Navigational Watch and Maritime Engineering, the course will connect their career pathway to their heritage and provide insight into possibilities for a more sustainable future.

**Department Mission:**

To provide high-quality educational services in maritime related vocational training to the Marshallese people and students from other nations who desire career opportunities in the area of maritime studies.

**Connection to Department Mission:**

The course Traditional Navigation and Seafaring connects students to the rich maritime history of Oceania and is particularly relevant to the Marshallese context. For students registered in the Certificates in Navigational Watch and Maritime Engineering, the course will connect their career pathway to their heritage and provide insight into possibilities for a more sustainable maritime future, essential for the reduction in GHG emissions.

CC Approved: January 9 2023

**Justification for Hybrid**

Using a hybrid format in the Traditional Maritime is crucial for modernizing maritime education and addressing contemporary learning needs. This approach blends online theoretical instruction with in-person practical training, ensuring students can flexibly manage their studies while still receiving essential hands-on experience. The online component allows for interactive and self-paced learning of navigation principles, maritime regulations, and safety protocols, making it accessible to a broader audience, including those currently employed or with geographic limitations. Simultaneously, in-person sessions focus on practical skills and simulations, maintaining the integrity of experiential learning vital for navigation and seafaring proficiency.

Draft outline for *Voyaging in the Pacific* - with permission of the author

UH Manoa, Center for Pacific Islands Studies

Lead co-author, Joe Genz (UH Hilo)

### **Chapters**

#### 1. Introduction

Fleet of Canoes

Oceania

SIDEBAR: Chronology and Catalysts of Renaissances within the Pacific

Seafaring, Voyaging, and Navigation

SIDEBAR: Different ways of knowing, ways of representing knowledge

SIDEBAR: Language and Navigation

SIDEBAR: Voyaging within and beyond “Oceania”

Voyaging in the Classroom

#### 0. Oceania’s Deep Time

The Value of Mythology

SIDEBAR: Maui/Motikitiki/Maui-a-tikitiki pulling islands from the sea

SIDEBAR: Lata/Rata developing the voyaging canoe

A Hero’s Tale

What Holistic Anthropology Tells Us About Ancient Voyaging in the Pacific

Insights from Experimental and Simulated Voyaging

Classroom Activity

#### 0. Canoe Culture

Canoe Designs

Canoes of the Caroline Islands

Canoes of the Marshall Islands

Wayfinding or Non-Instrument Navigation

Classroom Activity

#### 0. People of the Sea

SIDEBAR: A Sea of Islands

Post-settlement regional migrations and interaction spheres

Sawei

Fiji, Samoa, Tonga  
Mangareva, Pitcairn, Henderson Interaction Sphere  
Kula Ring            SIDEBAR: Tupaia's map.  
Classroom Activity

0.        Contemporary Currents

Decline of Voyaging

Hawai'i: Polynesian Voyaging Society

Yap: Waa'gey

Marshall Islands: Waan Aelon in Majel

Fiji: Drua Sailing Experience Youth Training program

Classroom Activity

0.        Sustainable Sea Transport as Climate Change Adaptation

Socio-cultural Impacts of Climate Change

Historical Context

Current Pacific domestic shipping scenarios

Micronesian Center for Sustainable Sea Transport

Classroom Activity

**Special Features:**

The roles of women in Marshallese seafaring

Navigation and future horizons of Indigenous education, STEM education, and roles of institutions of higher learning

Regional Vision - Blue Pacific

Weather and the Sacred (Hawaiian Weather Deities)

Huaka'i to Kūkaniloko - Value of "Lived" Experiences

**Boxes: Biographies of Voyagers**

Pius "Mau" Piailug

Maria Labushoilam

Nainoa Thompson

Kālepa Babayan

Kaʻiulani Murphy

Lijon Eknilang

Captain Korent Joel

Ben Finney

David Lewis

### **Recommended Readings**

Ammarell, Gene. 1999. *Bugis Navigation*. New Haven: Yale University Southeast Asia Studies.

D'Arcy, Paul. 2006. *The People of the Sea: Environment, Identity, and History in Oceania*. Honolulu: University of Hawaiʻi Press.

Evans, Jeff. 2021. *Reawakened: Traditional Navigators of Te moana-nui-a-Kiwa*. Honolulu: University of Hawaiʻi Press.

Finney, Ben R. 1979. *Hokuleʻa: the Way to Tahiti*. New York: Dodd, Mead & Company.

Finney, Ben R.. 1994. *Voyage of Rediscovery*. Berkeley: University of California Press.

Finney, Ben R.. 2003. *Sailing in the Wake of the Ancestors: Reviving Polynesian Voyaging*. Honolulu: Bishop Museum Press.

Feinberg, Richard. 1988. *Polynesian Seafaring and Navigation: Ocean Travel in Anutan Culture and Society*. Kent: Kent State University Press.

Genz, Joseph. 2018. *Breaking the Shell: Voyaging from Nuclear Refugees to People of the Sea in the Marshall Islands*. Honolulu: University of Hawaiʻi Press.

Gladwin, Thomas. 1970. *East is a Big Bird: Navigation and Logic on Puluwat Atoll*. Cambridge, MA: Harvard University Press.

Goodenough, Ward. 1953. *Native Astronomy in the Central Carolines*. Philadelphia: University of Pennsylvania Press.

Haddon, Alfred C., and James Hornell. 1975. *Canoes of Oceania. Bernice Pauahi Bishop Museum Special Publications*. Honolulu: Bishop Museum Press. (Original: 1936–1938.)

Howe, K.R. (ed). *Vaka Moana: Voyages of the Ancestors: The Discovery and Settlement of the Pacific*. Honolulu: University of Hawaiʻi Press (Original: 2006).

Huth, John Edward. 2013. *The Lost Art of Finding Our Way*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.

Irwin, Geoffrey. 1992. *The Prehistoric Exploration and Colonization of the Pacific*. Cambridge, UK: Cambridge University Press.

Kirch, Patrick V. 2000. *On the Road of the Winds: An Archaeological History of the Pacific Islands Before European Contact*. Berkeley: University of California Press.

Kyselka, Will. 1987. *An Ocean in Mind*. Honolulu: University of Hawai'i Press.

Lewis, David. 1994. *We, the Navigators: The Ancient Art of Landfinding in the Pacific*. Second Edition. Honolulu: University of Hawai'i Press. (Original: 1972).

Low, Sam. 2013. *Hawaiki Rising: Hōkūle'a, Nainoa Thompson, and the Hawaiian Renaissance*. Waipahu, HI: Island Heritage Publishing.

Nicole A. Mello. 2017. *Ko 'a Heiau Holomoana: Voyaging Set in Stone*. MA Thesis. University of Hawai'i at Hilo.

Thomas, Steve. 1987. *The Last Navigator*. New York: Henry Holt and Company.