

COURSE TITLE: DISCOVERING WESTERN OREGON'S BRIDGES

WA CLOCK HRS: 50

NO. OF CREDITS: 5 QUARTER CREDITS
[semester equivalent = 3.33 credits]

OREGON PDUs: 50

PENNSYLVANIA ACT 48: 50

INSTRUCTOR: Peter Chausse
walkportland@msn.com

COURSE DESCRIPTION:

In this diversified driving tour, you will make your way to Portland, the Columbia Gorge, the Willamette Valley and along the Oregon Coast. You will discover more than 50 magnificent bridges. You will learn the history behind each bridge, and you will have the opportunity to travel over many bridges on foot.

Along the way, you'll examine highway bridges, footbridges, sky-bridges, and covered bridges. Most importantly, you'll learn how to bring this information to students, through hands-on classroom lessons, and innovative field trips.

The Co-Instructor for this course is Jake Gordon, M.S. Ed.

LEARNING OUTCOMES: Upon completion of this course, participants will have:

1. The history of Oregon's highway and foot bridges, through bridge visits and through readings.
2. How to identify a variety of bridge styles including arch, suspension, vertical lift, bascule and fixed span bridges, and covered bridges.
3. How to identify a variety of bridge building materials, with visits to wooden, concrete, and steel bridges.
4. How to access bridges that are appropriate for field trips and field study.
5. How to develop classroom lessons that focus on bridge study and bridge design.
6. How to tie bridge study into the overall human and architectural history of Oregon.
7. How to integrate bridge study with math, literature, writing, art, social studies and other curriculum areas.

COURSE REQUIREMENTS:

Completion of all specified assignments is required for issuance of hours or credit. The Heritage Institute does not award partial credit.

HOURS EARNED:

Completing the basic assignments (Section A. Information Acquisition) for this course automatically earns participant's their choice of CEUs (Continuing Education Units), Washington State Clock Hours, Oregon PDUs, or Pennsylvania ACT 48 Hours. The Heritage Institute offers CEUs and is an approved provider of Washington State Clock Hours, Oregon PDUs, and Pennsylvania ACT 48 Hours.

UNIVERSITY QUARTER CREDIT INFORMATION

REQUIREMENTS FOR UNIVERSITY QUARTER CREDIT

Continuing Education Quarter credits are awarded by Antioch University Seattle (AUS). AUS requires 75% or better for credit at the 400 level and 85% or better to issue credit at the 500 level. These criteria refer both to the amount and quality of work submitted.

1. Completion of Information Acquisition assignments 30%
2. Completion of Learning Application assignments 40%
3. Completion of Integration Paper assignment 30%

CREDIT/NO CREDIT (No Letter Grades or Numeric Equivalents on Transcripts)

Antioch University Seattle (AUS) Continuing Education Quarter credit is offered on a Credit/No Credit basis; neither letter grades nor numeric equivalents are on a transcript. 400 level credit is equal to a "C" or better, 500 level credit is equal to a "B" or better. This information is on the back of the transcript.

AUS Continuing Education quarter credits may or may not be accepted into degree programs. Prior to registering determine with your district personnel, department head, or state education office the acceptability of these credits for your purpose.

ADDITIONAL COURSE INFORMATION

REQUIRED TEXT

A comprehensive Course Workbook that includes the required reading, field journal, and Driving Tour directions, is available from the instructor after registration.

None. All reading is online.

MATERIALS FEE

A comprehensive workbook that includes the required reading, field journal, and Driving Tour is available from the instructor. See Order Form provided by The Heritage Institute after registration.

ASSIGNMENTS REQUIRED FOR HOURS OR UNIVERSITY QUARTER CREDIT

A. INFORMATION ACQUISITION

Assignment #1: BEFORE YOU TRAVEL

- Read the articles in the workbook.
- These articles will focus on background information for each bridge and its history.
- You will respond to focus questions about the articles by writing short paragraph answers.

Send to instructor: walkportland@msn.com. Subject line to read 'OR Bridges #1'.

Assignment #2: BEFORE YOU TRAVEL

- Search for pertinent materials available to you in your school library, Education Service District and/or local library.
- Compile an annotated bibliography to submit to the instructor.

Send to instructor: walkportland@msn.com. Subject line to read 'OR Bridges #2'.

Assignment #3: BEFORE YOU TRAVEL

- Complete a web search of sites concerning any of the locations or topics involved in this study that may be appropriate for your personal studies and/or for future student use.
- Submit an annotated list to the instructor.

Send to instructor: walkportland@msn.com. Subject line to read 'OR Bridges #3'.

Assignment #4: AS YOU TRAVEL

- Travel to 30 of the bridges listed in the Driving Tour.
- Record what you actually find at each site in the "Field Journal".
- The Field Journal will ask you to compare what you read about each site in the workbook to what you actually find by writing a paragraph or two about each site.
- Provide pictures, pamphlets, maps and notes about other pertinent information to confirm actual site visits.

Send to instructor: walkportland@msn.com. Subject line to read 'OR Bridges #4'.

Assignment #5: AS YOU TRAVEL

- Give your impression of each bridge and make teaching suggestions.
- Discuss how the site could be used to expand your teaching regarding any curriculum area.
- Focus on how your bridge study can be related to academic areas, such as math, science, reading, writing, history, art or photography.

Send to instructor: walkportland@msn.com. Subject line to read 'OR Bridges #5'.

Assignment #6: AFTER YOU TRAVEL

- After you have completed all your bridge visits, decide which bridge visits that were most valuable to you.
- Discuss in 2-3 pages which ideas will work best for your students.

Send to instructor: walkportland@msn.com. Subject line to read 'OR Bridges #6'.

ADDITIONAL ASSIGNMENTS REQUIRED FOR UNIVERSITY QUARTER CREDIT

B. LEARNING APPLICATION

In this section you will apply your learning to your professional situation. This course assumes that most participants are classroom teachers who have access to students. If you are not teaching in a classroom, please contact the instructor for course modifications. If you are a classroom teacher and start or need to complete this course during the summer, please try to apply your ideas when possible with youth from your neighborhood, at a local public library or parks department facility, (they will often be glad to sponsor community-based learning), or with students in another teacher's summer classroom in session.

Assignment #7: Lesson creation

NOTE ON LESSON CREATION:

In creating your lessons utilize the information provided in the workbook, your completed Field Journal and any other information gathered on your site visits. The lessons may include student work and can focus on the history of bridges, bridge building materials, different types of bridges, reasons for bridges, bridge design activities, or any other portion of the curriculum that would be appropriate. The lessons can also focus on the geometry of the bridge design, or the physics of each bridge, regarding compression, tension and other concepts. Other ideas would include how the bridge links cultural neighborhoods, or how it links communities over natural barriers. You could discuss how the bridge has altered the history of the area. Other academic integration can revolve around geography, art, or photography lessons. Writing activities can focus on descriptive accounts of bridges, narrative writing based on field trips to bridges, or creative writing, using bridges as a theme. State the topic, age level, learner outcomes, procedure, disciplines to be integrated and assessment techniques to be used.

Assignment #7-A:

- Create two lessons or adapt existing ones lesson to reflect what you've learned in this course.
- Implement your lesson with students in your classroom.
- Write a 250-500 word commentary on what worked well and what could be improved.
- Include any student feedback on your lesson.
- Share what you've learned with other teachers taking our courses by also contributing your Lesson to The Heritage Institute Lesson Library [here](#).
- Send your modified lesson and your commentary via email to your instructor.
- **Send to instructor: walkportland@msn.com. Subject line to read 'OR Bridges #7'.**

OR

Assignment #7-B:

Use this option if you do not have a classroom available.

- Create two lessons or adapt existing ones to reflect what you've learned in this course. (Do not implement it.)
- Share what you've learned with other teachers taking our courses by contributing your Lesson to The Heritage Institute Lesson Library [here](#).
- Write a 500+ word article concerning any noteworthy success you've had as a teacher with one or more students.
- Please refer to the guidelines on our blog [What Works: Teaching at its Best](#) prior to writing your article.

- When you submit your article to your instructor, please also email a copy to [Renee Leon](#) THI blog curator and media specialist.
- Indicate whether or not you are OK with having your article considered for publishing on our website.
- Submit your modified lesson along with your article via email to your instructor.
- **Send to instructor: walkportland@msn.com. Subject line to read 'OR Bridges #7B'.**

Assignment #8: Colleague feedback

Evaluate your teaching unit by gaining the feedback of a colleague. Make plans for future lessons with modifications. To document completion of this assignment, include the following:

- the date of the presentation
- to whom the presentation was made
- why you chose this person
- a report of the feedback highlighting strengths, weaknesses and suggested modifications

Send to instructor: walkportland@msn.com. Subject line to read 'Sustainability #8'.

Assignment #9: (500 Level ONLY)

Option A):

- Write a 3-5 page paper comparing and contrasting the sites you visited in this course with your community.
- Discuss how these ideas can be implemented close to your school.
- For instance, take a neighborhood walk to find bridges in your community and compare local street bridges and overpasses with larger bridges that cross major rivers.
- Focus on geometrical shapes and patterns seen in the local community and in various types of architecture, and relate those to shapes seen in bridge designs elsewhere.
- You could also use a neighborhood walk to compare the materials seen in local architecture with those seen on larger bridges in Portland or at the Oregon Coast.
- You can work with students to design bridges of various sizes and shapes, using the same geometrical and engineering concepts that you have seen both locally and throughout Oregon as you studied bridges.

Send to instructor: walkportland@msn.com. Subject line to read 'Sustainability #9-A'.

OR

Option B):

Prepare a photo-journal/display of the sites visited in this course for use within your teaching setting. Discuss how you will use the project with a statement of:

- how the display will integrate with current curricula
- timetable for when it will be used,
- description of student learning outcomes and
- how you will assess the effectiveness of the project

The size of photo-journal/display is to be discussed with and pre-approved by the instructor.

Send to instructor: walkportland@msn.com. Subject line to read 'Sustainability #10-B'.

OR

Option C):

- Another assignment of your own design with prior approval of the instructor.

Send to instructor: walkportland@msn.com. Subject line to read 'Sustainability #10-C'.

C. INTEGRATION PAPER

Assignment #10: (Required for 400 and 500 Level)

SELF REFLECTION & INTEGRATION PAPER

(Please do not write this paper until you've completed all of your other assignments.)

1. What did you learn vs. what you expected to learn from this course?
2. What aspects of the course were most helpful and why?
3. What further knowledge and skills in this general area do you feel you need?
4. How, when, and where will you use what you have learned?
5. How and with what other school or community members might you share what you learned?

Send to your instructor at their email address. Subject line to read "(put course name here) Integration Paper"

INSTRUCTOR COMMENTS ON YOUR WORK:

Instructors will comment on each assignment. If you do not hear from the instructor within a few days of posting your assignment, please get in touch with them immediately.

QUALIFICATIONS FOR TEACHING THIS COURSE:

Peter Chausse, B.S. is a former elementary school teacher, who has specialized in teaching his students about trees, plants, urban parks and natural areas.

Before beginning his teaching career, Peter earned a degree in Forestry from the University of Maine. His training included coursework in Dendrology (tree identification), Forest Management and wood product usage.

In the early 1980's, Peter worked for the U.S. Forest Service in the state of Washington, where he focused on tree identification and scientific observations. Since 1994, Peter has taught a course through The Heritage Institute titled, 'Studying Portland's Trees' During the course, participants learn how to recognize several dozen tree species as they explore Portland's parks and historic neighborhoods on foot. Ideas for the integration of tree study with math, art, science, literature, writing and social studies activities are presented and discussed.

Peter has had a lifelong love of trees, and is eager to help you acquire more tree knowledge. He is also dedicated to helping you bring this information to your students in fun and meaningful ways.

Co-Instructor:

Melissa Juska, M.L.S., has worked in elementary education since 2013 as an art teacher and school librarian. She holds a Bachelor of Fine Arts, a Master of Library and Information Studies, and teaching certifications in PreK-12 Visual Arts, Library Media, and Integrated Science. In 2016, she joined the Master Naturalist volunteer program to pass on her knowledge and love of the natural world through citizen science, outreach, and community service. Melissa is excited to share her passion for nature, art, and education with teachers and their students.

BIBLIOGRAPHY

DISCOVERING WESTERN OREGON'S BRIDGES

Bottenberg, Ray. *Images of America. Bridges of the Oregon Coast*. 2006. Arcadia Publishing, San Francisco.

This book chronicles the creation of six significant highway bridges along the Oregon Coast. Historical photographs and anecdotes bring the bridges to life and their significance is explained. The book also focuses on the life of Conde McCullough, Oregon's master bridge builder.

Smith, Dwight. *Historic Highway Bridges of Oregon*. 1989. Oregon Historical Society Press. Portland, OR

More than 100 historic highway bridges in Oregon are highlighted in this book, along with historic photos. An introductory section explains the different types of engineering designs. Factual information and map locations are listed making this a great resource book.

Webber, Bert & Margie. 1999. *Oregon's Covered Bridges*. Webb Group Research Publishers, Medford, Oregon.

This is a complete guide to the 50 plus covered bridges in Oregon. All bridges have been photographed, and locations are given. Reasons behind the building of the bridges are outlined. Engineering and bridge building information is also discussed.

Wood-Wortman, Sharon and Ed Wortman. *The Portland Bridge Book*. 2006 3rd Edition, Urban Adventure Press. Portland, Oregon

This thorough exploration of Portland's bridges contains historic photos, and pertinent bridge information for all Willamette and Columbia River bridges. In addition, the text ties each bridge with historical events. A section titled, "Bridges 101" is a great resource in explaining different types of bridges and engineering designs.

Wood Wortman and Kirsten Rian. *Walking Bridges Using Poetry as a Compass*. 2008. Urban Adventure Press, Portland, OR

This book focuses on bridge walking adventures in Portland, and includes student anecdotes and poetry relating to bridges. Five self guided Portland bridge explorations are outlined.