COURSE TITLE: **SUSTAINABILITY FOR YOUR CLASSROOM**

WA CLOCK HRS: **30**
OREGON PDUs: **30**
PENNSYLVANIA ACT 48: **30**

NO. OF CREDITS: **3 QUARTER CREDITS**
[semester equivalent = 2.00 credits]

INSTRUCTOR: **Peter Chausse**
walkportland@msn.com

COURSE DESCRIPTION:
Discover dozens of ways to involve your students in fun, environmentally sustainable, and earth-friendly projects. You will learn how to tie their learning in these areas to academic subjects.
Learn how to create native plant gardens, water, and energy conservation programs, recycling and composting stations, and functional, as well as earth-friendly eco-roofs.
In addition, low-energy transportation options will be discussed, including bicycling and public transportation. Learn about community-based art projects to beautify schools and your neighborhoods.

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

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

1. About transportation alternatives, and how to create successful “Walk or Bike to School” Programs.
2. How to develop successful reduce, reuse, recycle programs that are fun, effective and educational.
3. How to create earth friendly gardens, compost sites, and landscapes that encourage students to take an active role in their creation and maintenance.
4. How to turn asphalt wastelands into productive food garden resources by de-paving and replanting.
5. How to incorporate energy and water reduction programs in schools.
6. More about alternative energy sources, such as wind and solar energy.
7. How to create earth-friendly structures, such as cob benches, bioswales and eco-roofs.
8. How to organize environmentally friendly, community based art projects that can beautify school buildings, school grounds, and local neighborhoods.

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

- The handout information packet that is purchased from the instructor.
- Two books of your choice, or similar texts, from the bibliography provided.

None. All reading is online.

MATERIALS FEE

• The handout information packet that is purchased from the instructor. • Two books of your choice, or similar texts, from the bibliography provided.

ASSIGNMENTS REQUIRED FOR HOURS OR UNIVERSITY QUARTER CREDIT

A. INFORMATION ACQUISITION

Assignment #1: Read handout packet

- To expand your knowledge on sustainability projects, and to better understand the benefits of “green projects” for students and communities, read the handout packet.
- It contains a list of recommended texts and lesson ideas of how “green” or “sustainable projects” can be integrated with various curriculum areas.
- The handout includes information on current projects, lesson ideas and a listing of possible community resources.
- Decide how this information might prove valuable to you and your students, and summarize your thoughts in a 1-2 page paper.

Send to instructor: walkportland@msn.com. Subject line to read ‘Sustainability #1’.

Assignment #2: Read books on the subject

- Read two books from the bibliography. Or read two books of your own choice with the instructor’s prior approval.
- Comment (in a 1-2 page paper) on the effectiveness of these books in teaching students about sustainability, or in preparing meaningful experiences for students.
- In a 1-2 page paper identify the books read and comment on what portions of the reading will assist you in your teaching,

Send to instructor: walkportland@msn.com. Subject line to read ‘Sustainability #2’.

Assignment #3: Website research

- Visit sites where a variety of sustainable projects have been completed near your school or local neighborhood.
- Or visit websites to see how sustainable practices are benefiting schools and neighborhoods.
- Summarize your findings in a 1-2 page paper.

Send to instructor: walkportland@msn.com. Subject line to read ‘Sustainability #3’.

Assignment #4: Integrating sustainability studies

- Consider ways to integrate sustainability topics such as transportation, recycling, natural building, and low energy use with math, art, science, social studies, writing or other academic areas when appropriate.
- Write a 1-2 page paper summarizing your ideas.

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

Assignment #5: Explore local resources

- Consider local resources that might be available when teaching about green living including guest speakers, educational kits, field trips and community service projects.
- Decide how you can tie classroom learning experiences to the school or the community.
- Summarize your lesson ideas in a 1-2 page paper.

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

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 #6: Creating lessons

Design 3 lessons that focus on some aspect of sustainability, green practices, recycling, food creation, de-paving or any other aspect of this topic.

These lessons should be designed to meet your learning objectives.

They can focus on a variety of indoor and/or outdoor activities that can be tied together as part of a unit on sustainability, as individual lessons, or as lessons that can be integrated with other academic areas.

Use your district's approved lesson plan format or include the following information:

- The grade level.
- Student learning outcomes for each lesson.
- The in-class and out-of class activities that will take place.
- Materials and texts, student projects and additional personnel that might be needed.
- Evaluation criteria indicating how learning will be assessed, rubrics, performance standards, etc.

NOTE:

The handout packet purchased from the instructor details a variety of lesson ideas.

Possible lessons include: planting a native plant garden, planting vegetables on school grounds to harvest when grown, designing a water garden, developing solar panels, creating benches made of cob or other natural or recycled products, developing a recycling program, limiting water and food waste, creating more energy efficient transportation plans, beautifying the school and neighborhood with art projects, developing a community library, de-paving and planting an area, or any other projects that might seem appropriate.

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

Assignment #7: Teach lesson or option

- Teach the lessons to your students.
- Write a 1-2 page paper summarizing the results of the lesson implementation, including new ideas or modifications that could be made to improve the lessons.

- If you want, share your lesson with other teachers taking Heritage courses, by uploading it to the lesson plan library (https://www.hol.edu/lesson-plan-library
- **Send to instructor: walkportland@msn.com. Subject line to read 'Sustainability #7-A'.**

OR

Assignment #7-B:

Use this option if you do not have a classroom available and will not be implementing your lesson with students.

- Share what you've learned with other teachers taking our courses by contributing your Lesson to The Heritage Institute Lesson Library here. https://www.hol.edu/lesson-plan-library
- 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.
- **Send to instructor: walkportland@msn.com. Subject line to read 'Sustainability #7-B'.**

Assignment #8: (500 Level ONLY)
Option A)

- Conduct an internet search for websites containing information on any aspect of sustainability (food, transportation, eco-building, energy, recycling), and related topics.
- Create a 2-3 page bibliography of the sites that you found.
- Detail how these websites can be used with students to stimulate learning.

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

OR

Option B)

- Create an original research or hands-on project for your students that will focus on some aspect of sustainability.
- Discuss what you would like to do with the instructor before you begin.
- Explain the goals, implementation and results of the project.

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

C. INTEGRATION PAPER
Assignment #9: (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 c*ourse 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

SUSTAINABILITY FOR YOUR CLASSROOM

Bartlett, Peggy F. & Geoffrey Chase. "*Sustainability on Campus: Stories& Strategies for Change*." 2004. This book outlines a variety of sustainable practices that have been successfully initiated on high school and college campuses. Methods of implementation, materials, student input and costs are documented.

Bridgett, Leslie. *"A Guide to Green School Success: A Maryland Initiative."* 2006.

In this book, a variety of elementary school projects are discussed, including birdhouse design and wetlands reclamation, recycling, green building and other pertinent concepts.

Clark, Snell & Tim Callahan. "*Building Green: A Complete How to Guide to Alternative Building Methods: Earth, Plaster, Straw, Bale, Cordwood, Cob and Living Roofs." 2005*

This is an excellent guide for developing school, home, neighborhood and community based earth friendly building projects. Ideas are discussed for obtaining materials, and working in groups to complete projects.

Dunnet, Nigel & Andy Clayden. *Rain Gardens: Managing Water Sustainability in the Garden and Designed Landscape* 2007. This book discussed storm water planters, bioswales, green roofs, rainwater harvesting and other related topics.

Flores, Heather Coburn. "*Food Not Lawns: How to Turn Your Yard into a Garden and your Neighborhood Into a Community." 2006.* Chelsea Green Publishing. White River Junction, Vermont

Activist and urban planner Heather Flores shares her nine step plan to help readers build fertile soil, raise their own food, promote biodiversity, and increase natural habitat. Lawns give way to gardens which help build stronger schools, neighborhoods and communities.

Harlow, Rose & Sally Morgan. *"Garbage & Recycling. Young Discoverers: Environmental Facts & Experiments". 2001.* This book is filled with activities and experiments to promote environmental science. Ideas are discussed for sorting garbage and recycling, for building compost heaps and other environmentally sustainable practices.

Sales, M.G. F., C. Delerue-Matos, and I.B. Martins. "*A Waste Management School Approach Towards Sustainability." 2006.* This book focuses on sustainable resource management and environmental efficiency.

School Recycling Programs. A Handbook for Educators: Plastic Comb

This book chronicles successful school recycling programs throughout the United States. Ideas for establishing and maintaining effective school wide programs are discussed.

Sobel, David, James Tylor & The Center for Ecoliteracy. *"Place Based Education: Connecting Classrooms & Communities."* 2004. The Orion Society. Great Barrington, MA.

Place based education is the process of using the local community and the environment as a starting point to teach concepts in language arts, math, social studies and science. This book emphasizes real world learning experiences that are based on environmental improvements, both at school, and in the community.

Stacey, Eric G. *"A Passion for Sustainability: What Makes Portland, Oregon the Most Sustainable City in the U.S."* 2008. DVD

This video explains how businesses in Portland, Oregon have adapted sustainable practices, making Portland, the most sustainable city in America.

ADDITIONAL RESOURCES

Thompson, William J. '*Sustainable Landscape Construction: A Guide to Green Building Outdoors."* 2007. Island Press. This book discusses ways to make sites healthy by providing appropriate soils, and landscape designs. Ideas can be modified for school, home and community projects.

Timpson, William M., Brian Dunbar, Gailmarie Kimmel, Brett Bruyere, Peter Newman and Hillary Mizia. *"147 Tips for teaching Sustainability: Connecting the Environment, Economy & Society."* 2006. Atwood Publishing.

Easy to implement ideas for making students aware of their environment, as they study their local community, their lifestyles, and the products they use. Recycling, compost and more are discussed.

Weismann, Adam & Katy Bryce *"Building with Cob: A Step by Step Guide"* 2006

Step by step instructions for creating cob structures, and advice on how to construct cob benches, and other hands-on projects appropriate for school and home.

WEBSITES

www.cityrepair.org

This website features videos outlining a rationale for community based environmental projects, and ideas for "placemaking sites." The website outlines a rationale for sustainable projects that repair school grounds, neighborhoods and communities

www.depave.org.

This website explains the benefits of de-paving asphalt areas and replacing them with vegetable gardens, water gardens and other environmentally friendly projects.

www.ecoliteracy.org

This exceptional website explains the concept of sustainability, and outlines educational programs, including sustainable projects at schools.

http://www.facingthefuture.org/Curriculum/BuyFacingtheFutureCurriculum/tabid/59/Default.aspx#Teacher%20Lesson%20Plan%20Book

This website is a link to educational curriculum for teachers and brings global thinking to students with ideas that can be implemented at the local and community levels. Lessons are discussed which focus on recycling, reduction of resources, sustainable practices, and other pertinent topics.

http://www.pdx.edu/sustainability/

Portland State University has been acclaimed as one of the country's greenest schools. This website outlines their practices for recycling, green building projects, and long term planning. Many of the ideas discussed can be implemented at schools anywhere in the nation.

http://www.dep.state.pa.us/dep/deputate/airwaste/wm/recycle/school/School_Guide.htm

This easy to negotiate website outlines a step-by-step process for developing an effective recycling program at your school.

http://www.awarenessideas.com/Recycling-Decals-s/24.htm?gclid=CKaGu5G515YCFQkiagodsh4v2Q

This website looks at the idea of combining recycling campaigns with fund raising efforts, by looking at ways to market decals, T-shirts and other items that promote recycling, energy conservation and sustainability.

ADDITIONAL RESOURCES

http://www.p2pays.org/recycleguys/schools.asp

This website outlines ideas for school recycling, composting and energy conservation programs. Step by step ideas help you get started

on effective sustainable programs that are easy to establish and maintain.

http://www.naturalbuildingnetwork.org/workshops.htm

This website provides information about natural building organizations that can provide help in creating benches, sheds and even homes made of cob, earth and other materials. Suggestions for the acquisition of materials and advice on how to create these earth friendly structures for schools and neighborhoods is discussed.

http://ilovecob.com/archive/nasnb-photos

This website focuses on the process of mixing cob and creating cob structures. The process is safe, fun for all members of the family, and earth friendly. Information about cob workshops and links to cob builders in a variety of locations is provided.

http://schoolofeverything.com/subject/cob-building/all/teacher_profile

This website enables you to learn more about how to implement strategies in a variety of areas, from teachers who have successfully implemented programs with students.