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Oregon State University
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Course Name: Permaculture Water Management Self Paced
Instructor name: Neil Bertrando(he/him)
Instructor email: Neil Bertrando bertrnei@oregonstate.edu
Office Hours: By appointment, please email to set up a Zoom
Link to OSU Permaculture Program Website: https://permaculturedesign.oregonstate.edu/
Link to OSU Permaculture Team Website: https://workspace.oregonstate.edu/osu-permaculture-design-team

Course Description

Teaches assessment, mapping, and site designs for installing water retention landscapes using integrated water management strategies. Introduces assessment and analysis of rainwater runoff patterns and calculation of runoff quantities and water usage amounts. Teaches principles of water harvesting used to create functional site designs. Examines rainwater harvesting systems case study designs and teaches to identify both water and solar site resources. Creates an integrated permaculture site design based on design principles, water flow and quantity analysis, and overall site condition assessment. Covers rainwater harvesting cisterns, water harvesting earthworks, their integration with greywater treatment, passive solar design, and planning for vegetation.

Communication

Please check the Start Here area and the course syllabus before you ask general course "housekeeping" questions (i.e. who do I contact if I have a problem?). If you don't see your answer there, then please contact the teaching assistant.

Post all course-related questions in the Discussion Forum so that the whole class may benefit from our conversation. Please contact the teaching assistant privately for matters of a personal nature. A reply to course related questions will be sent within 1-2 weeks unless the teaching assistant is on vacation or leave.

Instructor Feedback

All feedback is provided by the teaching assistant. Feedback is provided primarily as a discussion reply to your comments on discussion boards. **Please check your Canvas settings to ensure you receive notifications at your desired settings.** To do this go to your Canvas "account" tab, click on "notifications" and adjust settings to meet your needs. Most likely, this will be the 'Discussions - New Reply' setting. You can have these notifications delivered to your email, sent as a text, etc.

Technical Assistance

If you experience any errors or problems while in your online course, contact 24-7 Canvas Support through the Help link within Canvas. If you experience computer difficulties, need help downloading a browser or plug-in, or need assistance logging into a course, contact the IS Service Desk for assistance. You can call (541) 737-8787 or visit the IS Service Desk online.

Required Readings

A. Lancaster, Brad. "Rainwater Harvesting for Drylands and Beyond, Volume 1, 3rd edition" Rainsource Press. 2019

B. Lancaster, Brad. "Rainwater Harvesting for Drylands and Beyond, Volume 2, 2nd edition" Rainsource Press. 2019

   a. Students can purchase the books directly from Brad Lancaster here: https://www.harvestingrainwater.com/shop/

   b. If you prefer, Brad's Website contains links to purchase digital editions on each book's page

Measurable Student Learning Outcomes

A "learning outcome" highlights the specific and measurable skills, attributes, and knowledge that I expect you as a learner to achieve and demonstrate through this course..

1. Define key rainwater harvesting concepts, terms, and principles
2. Assess a site for water retention potential and water uses
3. Make strategic decisions about what features and systems to use for a site
4. Design a conceptual integrated plan for a water retention landscape

Note: Due to the self paced nature of this course, you will be provided with tools and questions to assist in these learning outcomes. However, to get detailed feedback on assignments that assess performance in these learning outcomes, you will need to enroll in the 'Practicum' session which includes instructor engagement, feedback and rubric-graded assignments

Evaluation of Student Performance

This is a Self Paced and self-driven course. There will be no quantitative evaluation of student performance. You may get periodic qualitative feedback on assignments and/or discussion submissions.

Course Schedule, Assignments & Discussion

This is a self paced course, so the schedule is entirely up to you. The teaching assistant will periodically review and respond to posts in the assignment and discussion boards. Each Lesson contains about 5-8 hours worth of videos and required readings, as well as additional links and resources.

All assignments and discussion boards are ungraded and are offered to facilitate conversation, additional learning, and awareness of other student's situations.

- o **Lesson 1**: **Landform & Watershed**
    - ■ Assignment: Contour Lines
    - ■ Discussion: Introduce Yourself, Precipitation
- o **Lesson 2: Urban Watersheds**
    - ■ Assignment: Your site's water context and your relationships with water
    - ■ Discussion: Driest Location
- o **Lesson 3: Assessing Water Potential**
    - ■ Assignment: One Page Site Assessment
    - ■ Discussion: Climate
- o **Lesson 4: Design Principles**
    - ■ Assignment: Rainwater Harvesting Principles Site Walk
    - ■ Discussion: Rainwater Harvesting (RWH) Principles
- o **Lesson 5: Home-Scale Assessment & Passive Systems**
    - ■ Assignment: Permaculture Apprentice Water Needs Assessment Worksheet

- Discussion: Drinking Water
  - **Lesson 6: Wastewater Recycling**
    - Assignment: Wastewater Assessment
    - Discussion: Wastewater
  - **Lesson 7: Active Systems and Integrated Home-Scale Design**
    - Example Assignment: Active Rainwater and Integrated Home-Scale Water Harvesting Design
    - Discussion: Site Application
  - **Lesson 8: Ponds**
    - Assignment: Potential Pond Locations
    - Discussion: Water Body
  - **Lesson 9: Earthworks**
    - Assignment: Water Harvesting Earthworks
    - Discussion: Water Harvesting Example
  - **Lesson 10: Village-Scale Design**
    - Example Assignment: Broad Acre Integrated Water Management Design
    - Discussion: Opportunities for Collaboration

Course Policies

Access

This course is available to you in perpetuity as long as it is available through the OSU PACE Canvas platform. After 6 months to 1 year, OSU PACE Canvas may automatically disenroll you from the course. In order to renew your access, all you need to do is send an email request to pace@oregonstate.edu

Self Paced Policy

This course is designed to be engaged with and completed at whatever pace you desire. There are no graded assignments or deadlines. Enjoy!

Religious Holidays

Oregon State University strives to respect all religious practices. Since the course is self paced, you can observe any and all holidays.

Guidelines for a Productive and Effective Online Classroom

Active interaction with peers and your instructor provides additional value in this online course, so please pay attention to the following:
- Unless indicated otherwise, please complete the readings and view other instructional materials for each Lesson before participating in the discussion board.
- Read your posts carefully before submitting them.
- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.

Ground Rules for Online Communication & Participation

Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university's regulations regarding civility. Civility is an essential ingredient for

academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

- *Online threaded discussions* are public messages, and all writings in this area will be viewable by the entire class or assigned group members. If you prefer that only the instructor sees your communication, send it to me by email, and be sure to identify yourself and the class.
- Posting of personal contact information is discouraged (e.g. telephone numbers, address, personal website address).
- *Online Instructor Response Policy:* Since this is a self paced course, I will check on the discussion boards every couple of weeks. Please email directly if you need a faster response. I check email frequently and will respond within 48 hours Monday through Friday, unless I have a notification about being away for a period of time. I cannot guarantee a response on the weekend or on National holidays.
- *Observation of "Netiquette":* All your online communications need to be composed with fairness, honesty and tact. Spelling and grammar are very important in an online course. What you put into an online course reflects on your level of professionalism.
- Here are a couple of references that discuss
  - writing online: http://goto.intwg.com/
  - netiquette: http://www.albion.com/netiquette/corerules.html.

Expectations for Student Conduct

Student conduct is governed by the university's policies, as explained in the Student Conduct Code. Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility.

Statement Regarding Students with Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval, please contact DAS immediately at 541-737-4098 or at http://ds.oregonstate.edu. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Reach Out for Success

University students encounter setbacks from time to time. If you encounter difficulties and need assistance, it's important to reach out. Consider discussing the situation with an instructor or academic advisor. Learn about resources that assist with wellness and academic success. Ecampus students are always encouraged to discuss issues that impact your academic success with the Ecampus Success Team. Email ecampus.success@oregonstate.edu. to identify strategies and resources that can support you in your educational goals.

If you feel comfortable sharing how a hardship may impact your performance in this course, please reach out to me as your instructor.

- **For mental health:**
  Learn about counseling and psychological resources for Ecampus students. If you are in immediate crisis, please contact the Crisis Text Line by texting OREGON to 741-741 or call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255).

- **For financial hardship:**

Any student whose academic performance is impacted due to financial stress or the inability to afford groceries, housing, and other necessities for any reason is urged to contact the Director of Care for support (541-737-8748).