**NDT 299: Capstone**

**Instructor:** Scott Ballard

**Office:** IA-124

**Phone:** N/A

**Email:** ballars@linnbenton.edu

**Office Hours:** **The primary way to communicate with the instructor is email**. We will schedule Zoom and telephone conferences as needed, but all communication will start with email.

**CRN:**  44504

**Credits:**  2

**Prerequisites:** 1-year NDT coursework or instructor approval

**Class Meeting Days/Times/Locations (2-4 hours):**

1. This class is primarily independent (self-paced) with a few mandatory check-ins and meetings
2. Meeting Location: Zoom
3. Scheduled meetings/times:
	1. Friday 4/17/20 @10:00 am – Zoom
	2. Monday 4/20/20 @10:45 am – Zoom (this time is approximate)
	3. Wednesday 4/29/20 @11:00 am – Zoom – group proposal check-in, discussion
	4. Wednesday 5/13/20 @11:00 am – Zoom – Midterm check-in, discussion
	5. TBA – Final Presentations will be scheduled the last two weeks of the term (June 1- June 10)
4. All meetings will be recorded and posted on Moodle

**Course Description:**

NDT 299 is to provide 2nd year NDT Majors an opportunity to develop an in-depth body of work in a specific (approved) NDT discipline. This body of work will include topical research, an interview with an NDT Level II or Level III (extra credit), a written procedure including a lab with the intention of future use in the LBCC NDT program, and a presentation to your peers and faculty.

**Course Outcome & Requirements:**

To complete NDT 299, students will perform the following tasks:

1. **25 Points (1-2 hours)** Capstone Project PROPOSAL
	1. Students will complete the Capstone project proposal form, defining their NDT discipline of choice. The capstone project proposal form is available on the NDT 299 Moodle page and must be submitted for approval before project work begins.
2. **15 Points EXTRA CREDIT!!** NDT Expert Interview:
	1. In a perfect world. A non Covid-19 Pandemic the sky has fallen world, each student would have a mentor to connect with.
	2. Students going the extra mile to communicate with an industry expert and providing documentation of an interview or formal discussion of the NDT topic will receive ***up to*** 15 points extra credit. Documentation can be a confirming email to your instructor from NDT expert or your instructor cc’d on an email exchange.
	3. Current LBCC NDT instructors are NOT acceptable.
3. **50 Points (2-4 hours)** Annotated Bibliography:
	1. Students will research a minimum of 7 academic articles on the NDT topic of their Capstone project.
		1. Examples of annotated bibliographies will be available on Moodle
		2. LBCC writing lab use is highly recommended and information on how to access the writing resources will be provided on Moodle
4. **100 Points (6-12 Hours)** Capstone Lab Project:
	1. Define the target audience of this project. A few ideas…..
		1. A promotional lab designed to be performed for LBCC administrators or board members OR…
		2. An informational lab for a high school or middle school open house
		3. A complete tutorial intended for a single or multi-day high school workshop
		4. A lab for an Intro to NDT class
		5. A lab for welders or Metallurgy students
		6. OR…. What ideas do you have?
	2. students shall create a lab that is reproduceable in the LBCC NDT facility.
	3. The lab shall follow the basic lab template provided on Moodle
5. **50 Points (1-3 Hours)** Presentation:
	1. Finished products will be presented during the final two weeks of the term via Zoom.
	2. Presentations are expected to be 5-10 minutes in length.
	3. Presentations might include:
		1. Brief overview of research & information
		2. Introduction and instruction of Lab Project
		3. An interpretive song or dance
		4. PowerPoint Slides
		5. Videos
		6. Assistants
	4. Presentations will include 3-5 students, an NDT instructor, and….
		1. CTE instructors, department Dean and industry partners will be invited to attend as well.
6. **30 points** Participation:
	1. We need each other for ideas, constructive criticism, and project support. You are expected to “attend” three of the five scheduled class meeting times.

**Required Text/Supplies/Software:**

* N/A

**Course Evaluation**: There is a total 255 points possible with up to an additional 15 points extra credit, so, some hard working, overachieving NDT ROCKSTAR could earn 270 out of 255!

Students who may need accommodations due to documented disabilities, who have medical information which the instructor should know, or who need special arrangements in an emergency should speak with their instructor during the first week of class. If you believe you may need accommodations but are not yet registered with the Center for Accessibility Resources (CFAR), please visit the [CFAR Website](http://www.linnbenton.edu/cfar) for steps on how to apply for services or call 541-917-4789.

**LBCC Comprehensive Statement of Nondiscrimination**
LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, and use of native language, national origin, sex, sexual orientation, gender, gender identity, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information, see Board Policy P1015 in our [Board Policies and Administrative Rules](http://www.linnbenton.edu/board-policies-and-administrative-rules). Title II, IX, & Section 504: Scott Rolen, CC-108, 541-917-4425; Lynne Cox, T-107B, 541-917-4806, LBCC, Albany, Oregon. To report: [linnbenton-advocate.symplicity.com/public\_report](http://linnbenton-advocate.symplicity.com/public_report)