**NDT 250: Ultrasonics Level II – CRN 43336 – 5.0 Credits**

**Instructor:** Zak Milligan

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**Office Hours:** when available or by appointment M-F

**Class Hours** ~~Tuesday and Thursday from 1:00 – 5:20p~~ **ONLINE**

**Course Description:**

NDT 250 is designed to provide students with a course that meets or exceeds the minimum requirements for Ultrasonic Testing (UT) as defined by ASNT SNT TC 1A. Furthermore, industrial processes, material processing, and pertinent terminology and concepts will be presented. Completion of this course will complete the 80 total Hours of minimum class room instruction required (Level I and II).

**Course Outcome:**

Upon completion of NDT 250, students will be instructed in and demonstrate:

* SAFETY: Students will have a firm understanding of NDT equipment safety standards in regards to PPE, NDT equipment use, and NDT lab safety procedures
* NDT Vocabulary: Students will demonstrate understanding of NDT terminology via quizzes, tests, and more importantly application of the concepts and ideas during NDT lab exercises
* Ultrasonic Principles – In accordance with ASNT, CP-105 (Course Outlines for Qualification of NDT Personnel) will be presented and understood.
* **Students who successfully complete this course will still satisfy the minimum requirements for classroom training for Ultrasonic Level II i.e. 40 hours of structured classroom training.**
* **Certificates of Completion of the ASNT Required Classroom instruction time will be given for successful completion of this course, however, the proctoring of these final written exams is TBD.**

**Required Text/Supplies:**

* Safety glasses will be provided:
	+ - …and if you wear prescription glasses, you will need prescription safety glasses as 20/20 vision is critical for NDT inspection processes
* Scientific Calculator (**recommend the TI-30Xa or the TI-30XS** (if a different calculator is preferred time will not be spent providing instruction on calculators other than the two listed).
* 3 –ring binder or similar folder for organizing course material
* UT – Ultrasonic Classroom Training Book – Available in the Book Store (ISBN 978-1-57117-345-4) **Students should already have this.**

**Class Structure:**

* Lectures – we will have some lectures as the course progresses, initially new information will be provided weekly through Power Point presentations, assignments, zoom meetings and videos.
* Labs – we will not have labs this term but Labs will be demonstrated via existing videos and or videos created by Faculty. Students will be expected to watch the videos and answer questions about the content.
* Homework – homework will consist of studying for tests and quizzes, take-home tests, and professional magazine article reviews.
* Quizzes – we will have vocabulary, conceptual and practical quizzes weekly
* Tests – each unit of study will conclude with a written and/or practical exam. There will be a mid-term and comprehensive final exam which will include a General Knowledge written, and a Specific Examination.
* Make up assignment, quiz and examination policy; assignments and quizzes shall be turned in by the date indicated in the email that accompanies the quiz.

**Attendance:**

The number 1 reason employees are fired in the manufacturing industry is attendance and tardiness, consequently, our industry partners request that we hold our students accountable for attendance and punctuality. This term, due to the current situation, we will not be counting attendance, but there will be occasional mandatory zoom meetings and I encourage you to get familiar with Zoom prior to start of the term. This course will be scored based on assignments, quizzes and examinations.

**Course Evaluation:**

* Assignments, notes, quizzes, activities approx. **70%**
* Tests approx. **30%**

Students who may need accommodations due to documented disabilities, who have medical information that 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.

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LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, 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)