

Arkansas State University-Newport's mission is to provide an accessible, affordable, quality education that transforms the lives of our students, enriches our communities, and strengthens the regional economy.

ADVM1242: Surface Grinding

Catalog Description: This course is designed to introduce the student to the basics that are needed to develop the skills to operate surface grinding equipment. Students will explore wheel selection, work-holding, surface grinder operations, precision measurements, and equipment maintenance.

Prerequisites: ADVM1123 Materials, Measurement, and Safety, ADVM1134 Job Planning, Benchwork, and Layout, ADVM1144 CNC Turning, ADVM1154 CNC Milling

Corequisites: ADVM1233 Manual Lathe, ADVM 1242 Surface Grinding, ADVM1253 Geometric Dimensioning and Tolerancing, ADVM1264 CAD/CAM

Course Type: Course Type: Lecture/Lab

Instructor Name:

Office:

Office Phone:

Email:

Office Hours:

Department Information

Course Department:

Academic Department:

Academic Coordinator:

Email:

Associate Dean/Assistant to the Dean:

Associate Dean/Assistant to the Dean contact number:

Associate Dean/Assistant to the Dean Email:

Materials: Required and Optional

Required Text:

Optional Texts:

Required Material:

Optional Materials:

Institutional Learning Outcomes

Upon graduating from ASU-Newport with any Associate Degree, a student will be proficient in the following:

ILO1: Communication

Goal: Students will express ideas, knowledge, and concepts in a clear and concise manner.

- a) Written
- b) Verbal
- c) Interpersonal

ILO2: Reasoning

Goal: Students will apply reasoning skills in a variety of environments, which demonstrate problem-solving and applied knowledge.

- a) Explore
- b) Locate
- c) Interpret
- d) Evaluate
- e) Apply

ILO3: Responsibility

Goal: Students will participate in service activities that instill in them a sense of social responsibility.

- a) Civic
- b) Academic
- c) Financial

Institutional Grading Scale

Grading Scale:

- A: 90-100
- B: 80-89
- C: 70-79
- D: 60-69
- F: 0-59
- S: Satisfactory
- U: Unsatisfactory

Americans with Disabilities Act Compliance

In order to obtain appropriate disability related accommodations and services to which they are entitled, students with documented disabilities should voluntarily and confidentially provide the Office of Disability Services (870-512-7838 or disabilityservices@asun.edu) with appropriate medical documentation regarding the nature and extent of their disability, make their needs known to this Office and follow established procedures for acquiring needed services and accommodations in the classroom or online.

Information Technology Services

If you experience any problems or issues with Canvas, MyCampus, or other equipment, please contact ITS at 870-512-7783 or <http://its.asun.edu>. Canvas also has a 24/7 live chat. This is a valuable resource for those late-night tests or assignments that just do not seem to work properly.

ASU-Newport provides a number of different services to assist students in areas that directly impact their academic success. The following direct websites will help you get in touch with those services that may be needed during your time as an ASUN student:

Academic Support Center: <http://academicsupport.asun.edu>

Financial Aid: <http://financialaid.asun.edu>

Career Pathways: <http://pathways.asun.edu>

University Police: <http://cpd.asun.edu>

Information Technology Services: 512-7783 or its@asun.edu

Disability Services: http://www.asun.edu/disability_services

Admissions: <http://admissions.asun.edu>

Academic Dishonesty (as stated in the Student Handbook)

ASU-Newport enthusiastically promotes academic integrity and professional ethics among all members of the ASU-Newport academic community. Violations of this policy are considered serious misconduct and may result in disciplinary action and severe penalties. Cheating in any form-including plagiarism, turning in assignments prepared by others, unauthorized possession of exams - may result in the student being dropped from the class with an "F" and/or being suspended from the College. Students who feel they have been unfairly accused of cheating may appeal to the Associate Dean of General Education.

Campus Safety Information

What to know and do to be prepared for emergencies at ASUN:

- Opt-in to receive ASUN’s School Messenger notifications regarding weather closings, emergencies, and other important notifications. All currently enrolled students will receive an email within the first two weeks of the semester prompting them to Opt-in to the messaging system.
- Know the safe evacuation route from each of your classrooms. Emergency evacuation routes are posted in on-campus classrooms.
- Listen for and follow instructions from your instructor or other designated authorities.
- For additional emergency information see the ASUN Emergency Response Guide in the Portal under “More” then select “Department of Safety”.
- Know the emergency phone number for ASUN Campus Police or dial 911.
- Report suspicious activities and objects found on campus.
- Keep your permanent address and emergency contact information current in My Campus.

Inclement Weather

In the event of inclement weather, class cancelation is left to the discretion of the Chancellor. You will be notified of class cancelation on the university website, through news media, and through our school messaging system.

Children in the Classroom:

ASUN classroom policy requires that the learning environment should be free of distraction in order to provide the highest learning opportunity for all students. In this light, students should not bring children to the classroom. If you must bring a child on campus, please have your child properly supervised in the public gathering areas.

Course Learning Outcomes:

Upon successful completion of this course, students will be able to:

Course Learning Outcomes	Assessment
Safety	<ol style="list-style-type: none"> 1. Students will be able to identify and apply safe surface grinding procedures 2. Students will understand the dangers of improper use of surface grinding machines 3. Students will identify the risks of using the wrong tool for a function.
Grinding wheel selection	<ol style="list-style-type: none"> 1. Students will be able to choose the best wheel for a given task 2. Students will identify different types of grinding wheels. 3. Students will understand and demonstrate their ability to make the proper selection of grinding wheels.
Work-holding for surface grinders	<ol style="list-style-type: none"> 1. Students will be able Square a Vise 2. Students will identify the different methods of work holding systems for Surface Grinders.
Surface Grinding Operations	<ol style="list-style-type: none"> 1. Students will grind a block to print specifications 2. Students will learn to make machine adjustments to optimize machining 3. Students will demonstrate proficiency in surface grinding operations 4. Students will demonstrate proficiency in precision grinding to close tolerances.
Precision Measurements	<ol style="list-style-type: none"> 1. Students will be able to take accurate measurements with various measuring equipment
Equipment maintenance	<ol style="list-style-type: none"> 1. Students will be able to perform needed maintenance for surface grinders 2. Students will understand the need for proper maintenance of equipment 3. Students will identify errors caused by lack of maintenance.

Course Policies and Procedures

Academic Calendar

Disclaimer

This syllabus and all documents associated with the syllabus are considered a contract between the student and the instructor. Students are expected to carefully read and review the syllabus and all associated documents in order to be familiar with course expectations and policies. This syllabus is subject to change at the discretion of the instructor, who will inform students of any changes. Students are responsible for keeping up with any changes. This course is designed to provide the student with in-depth skills to operate CNC controlled turning centers. Students will explore: CNC lathe setup, Has Lathe intuitive programming system, SNC lathe programming, modern cutting tools for lathes, machining theory for lathes, published resources, and introduction to CAD/CAM process.