

# TIDEWATER COMMUNITY COLLEGE

## Official Course Outline

**Course Prefix/Number/Title:** DRF / 152 / Engineering Drawing Fundamentals II

**Credit Hours:** 3      **Lecture Hours:** 1      **Lab Hours:** 6      **Total Contact Hours:** 7

**Pre-requisite:** DRF 151 and DRF 201      **Co-requisite:** None

**Course Description:** Introduces technical drafting from the fundamentals through advanced drafting practices. Includes lettering, geometric construction, technical sketching, orthographic projection, sections, intersections, developments, fasteners, Teaches theory and application of dimensioning, and tolerances, pictorial drawing, and preparation of drawings.

**Course Objectives:** Upon the successful completion of this course, the student will be able to:

- Demonstrate appropriate knowledge of ANSI, ISO, and ASME drafting standards in producing working drawings.
- Students will develop basic design and engineering concepts from sketches and be able to develop those concepts into a complete production drawing with minimum supervision.
- Utilize drafting and design techniques to communicate ideas about the development and/or modification of parts and their relationship to each other in both detail and assembly drawings.
- Demonstrate their ability to show emphasis on properly executing the designer's intent while enhancing the designs manufacturability and resulting cost savings.

**Course Content:**

- Review of Multiview Projection, Sectional Views, and Dimensioning
- Auxiliary Views and Revolutions
- Design and Working Drawings
- Threads Fasteners and Springs
- Tolerances, Allowances and Fits
- Introduction to Geometric Dimensioning and Tolerancing (GD&T).
- Introduction To Manufacturing Design and Processes
- Pictorial Presentations
- Axonometric Projection
- Oblique Projection
- Reproduction and Control of Drawings

**Textbook:** Giesecke F. E., Mitchell A., et al., Technical Drawing 12<sup>th</sup> ed. Upper Saddle River, NJ: Prentice Hall, 2003.

**Additional Information:** Appropriate board drafting equipment, notebook, appropriate storage device for computer files, as defined by instructor