

NEW RIVER COMMUNITY COLLEGE

DUBLIN, VIRGINIA

COURSE PLAN

Course Number and Title: DRF 202 - Computer Aided Drafting and Design IIPrepared by: Jeff Levy Fall, 2009
(Instructor) (Date)Approved by: _____ Fall, 2009
(Dean) (Date)**NO LATE WORK WILL BE ACCEPTED****I. Course Description**

Drafting and Design II. Teaches working drawings and advanced operations in computer aided drafting. Prerequisite: DRF 201. Lecture 3 hours, lab 2 hours, total 5 hours per week. (4 credits)

II. Introduction

Uses AutoCAD to teach advanced applications of Computer Aided Drafting and Design. Explore components of a CAD PC workstation environment, intermediate and advance 2D and 3D commands, display, editing and rendering commands; printing and plotting techniques; blocks, symbols libraries and complex working and assembly drawings.

III. Specific Objectives

The student will give evidence that he/she has developed a basic understanding and skills in drawing using AutoCAD by demonstrating:

- A. Advanced CAD and drafting techniques.
- B. Draw a variety of 3D drawings.
- C. Maximize skills utilizing solid modeling commands.
- D. Skills in 3D drafting and design.
- E. Intermediate skills in 3D solid modeling and editing.
- F. Building presentation drawings.
- G. Developing a complete set of working drawings.
- H. Team project skills.

IV. Continued use / intro to Inventor 2010**3 Projects:**

- **Trailer Hitch**
- **Arbor Press**
- **Mechanical Pen**

V. DRAFTING / DESIGN SKILLS

1. Advanced orthographic Views
2. Advanced Notations
3. Advanced Sections
4. Exploded Views
5. Assembly Drawings
6. Material Lists
7. Callouts/Balloons
8. GDT Identification and placement
9. Identifying and utilizing multiple types of dimensioning methods
10. Thread(s) Identification, Callouts & Terminology
11. * *Introduction to Gears*
12. * *Introduction to Piping Design*
13. * *Introduction to Basic Topography and Civil Engineering Terminology and mapping Techniques*

*** Items 11, 12 and 13 are as time permits.**

Instructional Procedure

- A. Each new unit of material will be discussed in class. It will be aided by the use of demonstrations, text references, and instructor lead tutorial sessions.
- B. Chapter exercises, tests and assigned projects will be completed by the student.
- C. Assignments will be completed by the students using AutoCAD and or Inventor software programs and turned in at the assigned due dates.

VI. Instructional Materials

Book: Engineering Drawing and Design, by Madsen, 4th or 5th Edition
ISBN 978-1-4180-2987-6(4th Edition)

- B. Materials and equipment to be used by instructor: video tapes, overhead slides, PowerPoint presentations, and chapter exercises, CD's, on-line tutorials, computer and a variety of other multimedia devices.

- C. **Materials and equipment to be provided by the student:**
 - One USB flash drive - 2GB (non encrypted).

VII. Evaluation

The numerical range for grades will be:

A = 91 - 100	Drawings/Assignments	75%
B = 81 - 90	Tests/Quizzes	25%
C = 71 - 80		
D = 61 - 70		
F = 60 or below		

VIII. Attendance

Regular attendance at classes is **required**. When absences from a class becomes necessary, it is the **responsibility** of the student to both inform the instructor prior to the absence and schedule makeup time after the absence. Frequent unexplained absences may result in a dismissal from the course. The student is responsible for making up all work missed during an absence.

IX. Cheating Policy

NRCC policy on cheating (as found in Student Handbook and elsewhere) will be enforced.

X. Additional Resource Material for Instruction

XI. Withdrawal Policy

Student Initiated Withdrawal Policy

A student may drop or withdraw from a class without academic penalty during the first sixty percent (60%) of a session. For purposes of enrollment reporting, the following procedures apply:

- a. If a student withdraws from a class prior to the termination of the add/drop period for the session, the student will be removed from the class roll and no grade will be awarded.
- b. After the add/drop period, but prior to completion of sixty percent (60%) of a session, a student who withdraws or is withdrawn from a course will be assigned a grade of "W." A grade of "W" implies that the student was making satisfactory progress in the class at the time of withdrawal, that the withdrawal was officially made before the deadline published in the college calendar, or that the student was administratively transferred to a different program.

- c. After that time, if a student withdraws from a class, a grade of "F" will be assigned. Exceptions to this policy may be made under documented mitigating circumstances if the student was passing the course at the last date of attendance.

A retroactive grade of "W" may be awarded only if the student would have been eligible under the previously stated policy to receive a "W" on the last date of class attendance. The last date of attendance for a distance education course will be the last date that work was submitted.

Late withdrawal appeals will be revised and a decision made by the Coordinator of Student Services.

XI. Instructor Initiated Withdrawal Policy

A student who adds a class or registers after the first day of class is counted absent from all class meetings missed. Each instructor is responsible for keeping a record of student attendance in each class.

Students who have not attended class by the last day to drop class and receive refund must be deleted by the instructor during the following week. No refund will be applicable.

When a student's absences equal twice the number of weekly meetings of a class (equivalent amount of time for summer session), the student may be dropped for unsatisfactory attendance in the class by the instructor.

When an instructor determines that absences constitute unsatisfactory attendance, a Faculty Withdrawal Form should be completed and submitted to the Admissions and Records Office within five days of when the student met the withdrawal criteria. The last date of attendance must be documented. A grade of "W" will be recorded during the first sixty percent (60%) period of a course. Students withdrawn after the sixty percent (60%) period will receive a grade of "F" except under mitigating circumstances when a letter of appeal has been submitted by the student. A copy of this documentation must be placed in the student's academic file.

The student will be notified of the withdrawal by the Admissions and Records Office. An appeal for reinstatement into the class may be approved only by the instructor.

Since attendance is not a valid measurement for Independent and Distance Learning (IDL) courses, students may be withdrawn due to nonperformance. Students should refer to his/her IDL course plan for the instructor's policy.

AS TIME PERMITS**Chapters Covered in Engineering Drawing and Design**

Chapter 9	Multi Views (review)
Chapter 10	Auxiliary Views
Chapter 11	Dimensions and Tolérances
Chapter 12	Fasteners/Springs
Chapter 14	GDT – Geometric Dimensioning and Tolerancing
Chapter 21	Welding Process and Representations
Chapter 22	Piping
Chapter 23	Structural Design and Drafting
Chapter 24	Civil Design and Drafting
Chapter 26	Electrical Design and Drafting