



Science, Technology, Engineering, and Mathematics (STEM) Division  
1400 Tanyard Road, Sewell, NJ 08080  
856-468-5000

## **DFT 113: CADD II: ADVANCED AUTOCAD**

Syllabus

Lecture Hours/Lab Hours/Credits: 1/5/3

### **Catalog Description**

*Prerequisites: DFT 103*

This course is a continuation of the study of AutoCAD. Topics include block, attribute, importing and exporting, x-ref, the user coordinate system and the basics of three-dimensional construction. Extensive hands-on projects using AutoCAD are required.

### **Textbook and Course Materials**

It is the responsibility of the student to confirm with the bookstore and/or their instructor the textbook, handbook, and any other materials required for their specific course and section.

Click here to see current textbook prices at [rcgc.bncollege.com](http://rcgc.bncollege.com).

### **Evaluation Assessment**

#### **Online Proctoring**

All courses offered at RCSJ, whether they are web-enhanced, hybrid, or fully online, may include assessments that make use of Online Proctoring. To find out more about Online Proctoring, and to learn about the minimum technical requirements, visit [rcsj.edu/elearning/online-proctoring](http://rcsj.edu/elearning/online-proctoring).

### **Grading Distribution**

Grading to be determined by individual instructors.

Individual instructors may include the following assessment(s):

- Exams
- Quizzes
- Class Discussions
- Written Assignments
- Attendance and Participation

## Grading

The grading scale for each course and section will be determined by the instructor and distributed the first day of class.

## Rowan College of South Jersey Core Competencies

(Based on the NJCCC General Education Foundation - August 15, 2007; Revised 2011; Adopted 2014)

This comprehensive list reflects the core competencies that are essential for all RCGC graduates; however, each program varies regarding competencies required for a specific degree. Critical thinking is embedded in all courses, while teamwork and personal skills are embedded in many courses.

1. **Written and Oral Communication:** Students will communicate effectively in both speech and writing.
2. **Quantitative Knowledge and Skills:** Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems
3. **Scientific Knowledge and Reasoning:** Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.
4. **Technological Competency:** Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals
5. **Society and Human Behavior:** Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.
6. **Humanistic Perspective:** Students will analyze works in the fields of art, history, music, or theater; literature; philosophy and/or religious studies; and/or will gain competence in the use of a foreign language
7. **Historical Perspective:** Students will understand historical events and movements in World, Western, non-Western or American societies and assess their subsequent significance.
8. **Global and Cultural Awareness:** Students will understand the importance of a global perspective and culturally diverse peoples.
9. **Ethical Reasoning and Action:** Students will understand ethical issues and situations.
10. **Information Literacy:** Students will address an information need by locating, evaluating, and effectively using information.

## DFT 113 Core Competencies

This course focuses on four of RCSJ's Core Competencies:

- Quantitative Knowledge and Skills
- Scientific Knowledge and Reasoning
- Technological Competency
- Information Literacy

## Student Learning Outcomes: CADD II Advanced AutoCAD

<b>Successful completion of DFT 113 will help students:</b>	<b>RCSJ Core Competencies</b>	<b>Evaluation / Assessment</b> (Additional means of evaluation may be included by individual instructors)
Modify the position and size of drawing objects using AutoCAD commands STRETCH and SCALE.	<ul style="list-style-type: none"> <li>- Quantitative Knowledge and Skills</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Draw and edit objects of varying widths using POLYLINES.	<ul style="list-style-type: none"> <li>- Quantitative Knowledge and Skills</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Use the POINT, DIVIDE, MEASURE, RAY, SPLINE, MULTILINES, and REVISION CLOUDS commands.	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Placing hatches and patterns in drawing objects. Scaling, modifying, and edit hatches.	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Use AutoCAD INQUIRY and PROPERTIES commands to obtain information and edit a drawing's objects.	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Create and understand the concepts of model space and paper space using viewports.	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Creating reusable blocks, WBLOCKS and DYNAMIC blocks.	<ul style="list-style-type: none"> <li>- Quantitative Knowledge and Skills</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Add and edit attributes to enhance blocks.	<ul style="list-style-type: none"> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Adjust the parameters for a printer and produce hardcopies of drawings. Setup Pen Tab Tables and Pages Setups.	<ul style="list-style-type: none"> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams

<b>Successful completion of DFT 113 will help students:</b>	<b>RCSJ Core Competencies</b>	<b>Evaluation / Assessment (Additional means of evaluation may be included by individual instructors)</b>
Understand and Use the X-REF command and its options. Import and export raster files with AutoCAD.	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Produce Isometric drawings of objects.	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Import and export raster files with AutoCAD. Understand Object Linking and Embedding (OLE).	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Create and understand the concepts of multi-view drawings. Draw the required views of an object which may include sectional and auxiliary views.	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Create 3D models of objects using SketchUp software. Render objects adding materials, shadows, styles and backgrounds.	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams
Complete projects in a timely manner. Make every effort to attend each class and arrive to class on time and demonstrate listening skills and work hard to produce quality work.	<ul style="list-style-type: none"> <li>- Scientific Knowledge and Reasoning</li> <li>- Technological Competency</li> <li>- Information Literacy</li> </ul>	Assignments, Class Participation and Exams

## Topical Outline

Orthographic Views, Annotative Dimensioning, Model – Paper Space, Viewpoints and Layouts, Basic Plotting

Placing and Editing Hatching

Sectional Drawings

Auxiliary Views

Isometric Pictorials and Projection, Isometric Axes, Plans, Grid, Snap and Ellipses

Template Drawings, Advanced Plotting, Page Setups, Drawing Sizes, and Pen Tables

Working with Blocks, Creating, Inserting, Editing, Purging and Dynamic blocks

Defining Block Attributes, Defining, Editing, Inserting and Managing Block Attributes

3D Drawing with SketchUp Software, Creation of 3D Models, Axes, Components, Materials and Rendering

External References, X-REF Attachment, Layer Control, and Clipping.

Multilines, Revision Clouds, Splines, Wipeouts, Properties, Palette, Groups, and Polylines

Data Exchange OLE Objects in AutoCAD, Working with Raster Images.

## Affirmative Action Statement

The Board of Trustees is committed to providing a work and academic environment that maintains and promotes affirmative action and equal opportunity for all employees and students without discrimination on the basis of certain enumerated and protected categories. These categories are race, creed (religion), color, national origin, nationality, ancestry, age, sex (including pregnancy and sexual harassment), marital status, domestic partnership or civil union status, affectional or sexual orientation, gender identity or expression, atypical hereditary cellular or blood trait, genetic information, liability for military service, or mental or physical disability, including AIDS and HIV related illnesses.

For questions concerning discrimination, contact Almarie J. Jones, Special Assistant to the President, Diversity and Equity/Title IX and Compliance, 856-415-2154 or [ajones@rcsj.edu](mailto:ajones@rcsj.edu) or (Cumberland) Nathaniel Alridge, Jr., JD, Director, Diversity and Equity/Title IX and Judicial Affairs, 856-691-8600, ext. 1414 or [nalridge@rcsj.edu](mailto:nalridge@rcsj.edu). For disability issues or any barriers in the learning or physical environment related to a document condition/disability please contact: Gloucester campus – Dennis M. Cook, Director, Department of Special Services, ADA/504 Officer at 856-415-2265 or [dcook@rcsj.edu](mailto:dcook@rcsj.edu); or Cumberland Campus – Meredith Vicente, Senior Director, Physical & Learning Disabilities, Center for Academic & Student Success (CASS) at 856-691-6900 ext. 1282 or [mvicent1@rcsj.edu](mailto:mvicent1@rcsj.edu)

## Department of Special Services

The Department of Special Services is located in the Instructional Center, room 425A. The Special Services Department is committed to providing support services and ensuring equal access to eligible students with documented disabilities as outlined by the Americans with Disabilities Act (ADA) and the Americans with Disabilities Act with Amendments. If you are an eligible student with a documented disability please visit our website at [RCSJ.edu/SpecialServices](http://RCSJ.edu/SpecialServices) or call the office at 856-415-2265 or 856-415-2247 to speak to the Assistant Director Carol Weinhardt, [cweinhar@rcsj.edu](mailto:cweinhar@rcsj.edu)

## Reporting Allegations of Sexual Assault and Resource Referrals (8/2020) Gloucester Campus

There are multiple safe places for students to report allegations of sexual assault, both on and off campus. Reports of sexual assault can be made to any of the following offices listed in the chart below.

All students are encouraged to report alleged crimes on campus. Crimes that pose a threat to the campus community must be reported to 9-1-1, Security, the Sheriff's Office or the Deptford Township Police Department. All employees, including Security staff, must report incidents of discrimination, harassment or sexual misconduct to the Title IX Officer.

Service	Resource	Phone Number/Location/Website
<b>Non-Confidential Reporting</b>  Local Law Enforcement	Gloucester County Sheriff's Office Deptford Township Police Dept. Gloucester Co. Prosecutor's Office Sexual Assault Response Team	856-681-2200 856-845-2220 856-384-5500 856-384-5555
<b>Non-Confidential Reporting</b> 9-1-1 and Campus Security	9-1-1 Gloucester County Emergency Management Dispatch  Campus Security <b>Blue Light Emergency Phones OR ext. 4444 from any campus desk phone</b>	9-1-1 or push <b>RED</b> button on Campus <b>Blue Light</b> Emergency Phones  856-681-6287
<b>Non-Confidential</b> On-Campus Reporting Support Services	Almarie J. Jones Special Assistant to the President <b>Diversity and Equity/Title IX and Compliance</b>  John F. Ryder Director <b>Student and Veteran Affairs</b>	856-415-2154 College Center, Room 116 <a href="mailto:ajones@rcsj.edu">ajones@rcsj.edu</a>  856-468-5000, ext. 6456 College Center, room 202 <a href="mailto:jryder@rcsj.edu">jryder@rcsj.edu</a>
<b>Confidential</b> On-Campus Counseling and Support Services	Lois Y. Lawson-Bridgell, Ph.D. MSW, LSW, Director <b>Counseling &amp; Wellness Services Center</b>  William Leonard, Ph.D. <b>Intervention Teams Consultant</b>  Crystal Noboa, LSW, MSW Director, The Center for <b>People in Transition (PIT)</b>  Diane Mussoline, EdS, LMFT <b>Director of Behavioral Services</b>	856-464-5236 <a href="mailto:llawsonb@rcsj.edu">llawsonb@rcsj.edu</a> College Center, Room 206  <a href="tel:856-415-2119">856-415-2119</a> <a href="mailto:wleonard@rcsj.edu">wleonard@rcsj.edu</a> <a href="#">College Center, STEM Office C-168</a>  856-415-2264 <a href="mailto:cnoboa@rcsj.edu">cnoboa@rcsj.edu</a> Workforce Development Bldg., room 809  856-494-5665 <a href="mailto:dmussoli@rcsj.edu">dmussoli@rcsj.edu</a> College Center, Room 200A
<b>Confidential</b> Off-Campus Full-Service Support	<b>Center for Family Services/ Services Empowering Rights of Victims (SERV)</b>	1-866-295-7378 Camden and Gloucester counties <a href="http://centerffs.org/serv">centerffs.org/serv</a>
<b>Hospitals with Sexual Assault Nurse Examiners</b>	<b>Inspira Medical Center</b>  <b>Jefferson Washington Township Hospital</b>	700 Mullica Hill Rd. Mullica Hill, NJ · 856-508-1000  435 Hurffville-Crosskeys Rd., Turnersville, NJ · 856-582-2500