**Instructor:** Mr. Stephen G ONeil

**Email:** stephen.oneil@nhcs.net

**Room:** 207 **Grades**: 9,10, 11 & 12

**Prerequisite**: Geometry or Math II

**Websites:**

<https://stephenoneil.wixsite.com/stephen-oneil>

**Course Description:** Prerequisite: Geometry or Math II:

This course introduces students to the use of simple and complex graphic tools used to communicate and understand ideas and concepts found in the areas of architecture, manufacturing, engineering, science, and mathematics. Topics include problem-solving strategies, classical representation methods such as sketching, geometric construction techniques, as well as computer assisted design (CAD), orthographic projection, and 3-D modeling. English language arts, mathematics, and science aligned with the Common Core Standards are reinforced.

Honors students will advance through material at a more rigorous pace and complete a Digital Portfolio of work.  They will also create a tutorial presentation that features a website design from which they’re to present from.

This class requires the discipline and attention to detail required to complete a large volume of work over the course of the semester.  Students that fulfill this requirement are well prepared for the end of semester *Autodesk AutoCAD****User****certification as their Final Exam.*

***NOTE: The AutoCAD Certification Exam will allow for a pass on having to take the Final Exam)***

The major topics to be covered are:

* Problem-Solving Strategies
* Fundamental Concepts and Trends of Drafting
* Careers in Drafting
* Sketching Skills & Techniques
* Pictorial and 3D Drawing
* Basic Manual Drafting
* Dimensioning
* Computer Aided Design (CAD)- AutoCAD
* Additional topics to be introduced include, but are not limited to: Parametric Modeling and Design, Basic 3D Modeling and Animation, Design Process, Manufacturing Processes, i.e., 3D Printing & CNC Vertical Machining

Drafting I integrates National Common Core Essential Standards reinforcing rigorous mathematics and literacy content. The honors level course and project will serve as an extension of the National Common Core English Language Arts and Mathematics, provide an outlet for creativity, and demonstrate complexity of acquired knowledge.

**Course Materials:**

* USB Drive (specifically for this class, AutoCAD files are very large and will need to be saved on their own jump drive)
* Earbuds/headphones (students will need these daily) ***(Optional as this is provided)***
* 1 two pocket folder (not a 3 ring binder) ***(Optional as this is provided)***
* 1 pack Plain white 8-1/2” x 11” paper ***(Optional as this is provided)***
* 1 pack 8-1/2” x 11” Grid Paper ***(Optional as this is provided)***
* Mechanical Pencils
* White hand held erasers *(“Magic Rub” is a good brand)* ***(Optional as this is provided)***
* 3-Ring Binder or Composition Book
* *NOTE: All other manual drafting tools will be kept in unlocked drawer for use between classes. Those items will be inventoried by Instructor once that section begins.*

**Course Assessment:**   All classroom & project based assignments will be given a point value and all carry the same weight.  Tests & Quizzes will carry more weight than that of the work described above. Each 9-week grade will be determined by a total points earned scale.

* ***Mastering the Curriculum in terms of Practice – 40%***
	+ Homework
	+ Classwork
* ***Mastering the Curriculum in terms of Performance – 60%***
	+ Quiz scores
	+ Test scores
	+ Project scores
* ***State Final - 20%***
	+ Autodesk Certification Exam
	+ Alternative Teacher Made Exam

Grading Scale: A 90-100 B 80-89 C 70-79 D 60-69 F Below 60

**Participation:** Students are required to participate in the day to day record keeping in their Notebooks, as well as their preparation for the eventual AutoCAD Exam.

**Listening:** Students are also expected to listen to music while working independently. However, during instruction there will be a focus on what I’m presenting.

**Computer Usage:** A large percentage of this course will involve the use of computers, internet, and email. Students are expected to follow the New Hanover County Acceptable Usage Policy. Failure to do so may result in access being suspended and/or denied. Such actions may also result in grade repercussions due to nature of course.

**Classroom Rules:**

* There will be no food, drinks, gum, or candy around the computers at any time. All drinks and food must remain in in student’s backpack, on the floor, or in a designated location, (back of the room).
* No one will leave classroom without permission. You must sign the in/out sheet in order to leave the classroom. You must also have the bathroom pass and your ID.
* Cell phones are not for use during class instruction. Please leave them in your caddy other than during the first and last 10 minutes of class. IF needed you must ask for permission & take the exchange outside of the classroom.
* Class Computers are for our class work only. You must get permission before using the computers for any outside work including internet work. Violation of this rule will result in temporary loss of computer use, and if violated again will result in a long term computers use loss.
* Any student caught vandalizing the equipment or furniture will be prosecuted for destruction of property and referred to the administration.
* The above rules are required in order to maintain a respectful environment for all. **Please remember our 3R’s in being Respectful, Resourceful and Responsible.** Failure to comply will yield the following:

First offense: Warning

Second offense: One on One meeting

Third offense: Call home

Fourth offense: Administration

**Ashley High School Attendance/Make Up Policy**

* **Make Up Work**: It is YOUR responsibility as the STUDENT to obtain all information resulting from ANY absence.
* If you are absent for any reason, you will have 5 SCHOOL days from your return to make up any missing work that was assigned on the days that you were absent.  After those 5 days, any work not made up will be entered as a ZERO.
* If you are taking a lab based course, labs missed will not be exempted, they must be made up.
* Students who are in jeopardy of failing due to absences and the failure to make up missed work will require a referral to the Student Support Team. The Student Support Team will work with students and their teachers on a plan for grade recovery.

**I have read and comply with the above Syllabus:**

Student Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**For Parent or Guardian, please make sure you have read through the sections above, complete the form below for the best contact information available, then return this last sheet only.**

Guardian Name/Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

E-Mail Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_