

This syllabus is provided as a general informational guide. Some of the information may vary depending on the specific course section and instructor. Different sections of the same course may require different textbooks. Verify the section specific textbook information in the CUNY's Academic Course Schedule Web Page. Modifications of the grading system presented here will be communicated by the instructors of the sections when they meet the class.

BOROUGH OF MANHATTAN COMMUNITY COLLEGE

City University of New York

Department of Science

Title of Course ENGINEERING GRAPHICS

ESC 130 Section _____

FALL 2017

Credits 2

Class hours 1

Lab hours 3

Instructor Information

Name:

Office:

Room:

Email:

Course Description

This is a course in fundamental of engineering Graphics and Computer Aided Drawing. Topics covered include: Visualization, Sketching, Solid Modeling, Constraint-based Modeling, Geometry, Dimensioning, Multiviews & Pictorial projections, Manufacturing processes, Working drawings, Sectional views, Auxiliary view, Assemblies.

Prerequisites/Co-requisites

Student Learning Outcomes

Course Student Learning Outcomes (Students will have...)	Measurements (means of assessment for student learning outcomes listed in first column)
Knowledge of using graphics as a tool for communicating ideas.	1. In class exam.
Ability to perform freehand sketching and lettering.	2. In class exam.
Knowledge of geometric construction and modeling using professional drafting software.	3. In class exam.
Knowledge of multiview representations, oblique drawing and solid modeling.	4. In class exam.
Knowledge of scaling and dimensioning, placement of dimensions and standard practices.	5. In class exam.

Textbook

A. Reyes, *Beginner's Guide to SolidWorks 2017: Level 1*, Schroff Development Corp., 2017
ISBN: 978-1-63057-063-7

Other Resources

Reference

1. J. Craig and O. Craig, *Engineering Graphics Text and Workbook, Series 1.2*, Schroff Development Corp., ISBN 978-1-58503-1337
2. Giesecke, G., Mitchell, A., Spence, H., Hill, I., Dygdon, J, Novak, J. Lochhart, S., *Modern Graphics Communication, 3rd Edition*, Pearson/Prentice Hall, isbn0-13-141516-6

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Below are the college's general education learning outcomes, the outcomes that are checked in the left-hand column indicate goals that will be covered and assessed in this course. (Check at least one.)

	General Education Learning Outcomes	Measurements (means of assessment for general education goals listed in first column)
<input type="checkbox"/>	Communication Skills- Students will be able to write, read, listen and speak critically and effectively.	Project report and presentation
<input checked="" type="checkbox"/>	Quantitative Reasoning- Students will be able to use quantitative skills and the concepts and methods of mathematics to solve problems.	
<input type="checkbox"/>	Scientific Reasoning- Students will be able to apply the concepts and methods of the natural sciences.	
<input type="checkbox"/>	Social and Behavioral Sciences- Students will be able to apply the concepts and methods of the social sciences.	
<input type="checkbox"/>	Arts & Humanities- Students will be able to develop knowledge and understanding of the arts and literature through critiques of works of art, music, theatre or literature.	
<input checked="" type="checkbox"/>	Information & Technology Literacy- Students will be able to collect, evaluate and interpret information and effectively use information technologies.	Mastery in using graphics software as demonstrated by in class exams and projects
<input type="checkbox"/>	Values- Students will be able to make informed choices based on an understanding of personal values, human diversity, multicultural awareness and social responsibility.	

Evaluation & Requirements of Students

- 30% Quizzes
- 30% Weekly projects & Homework
- 20% Final Examination
- 20% Term Projects

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Outline of Topics LECTURE SYLLABUS

TOPIC(S)

- Sketching
- Solid modeling
- Geometry
- Multiviews and pictorial
- Visualization
- Sectional views
- Auxiliary views
- Constraint-based modeling
- Dimensioning and Tolerances
- Manufacturing processes and Assemblies

COMPUTER USAGE

SolidWorks 2017 software is integrated as main teaching tool.

PROJECTS

Final projects consists of modeling all parts in an assembly, putting the parts together in an assembly, and creating detail drawing of parts. Students have to consider modeling strategies for all the parts and how specific parts interact with other parts.

College Attendance Policy

At BMCC, the maximum number of absences is limited to one more hour than the number of hours a class meets in one week. For example, you may be enrolled in a three-hour class. In that class, you would be allowed 4 hours of absence (not 4 days). In the case of excessive absences, the instructor has the option to lower the grade or assign an F or WU grade.

Academic Adjustments for Students with Disabilities

Students with disabilities who require reasonable accommodations or academic adjustments for this course must contact the Office of Services for Students with Disabilities. BMCC is committed to providing equal access to all programs and curricula to all students.

BMCC Policy on Plagiarism and Academic Integrity Statement

Plagiarism is the presentation of someone else's ideas, words or artistic, scientific, or technical work as one's own creation. Using the idea or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations, require citations to the original source. Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism.

Students who are unsure how and when to provide documentation are advised to consult with their instructors. The library has guides designed to help students to appropriately identify a cited work. The full policy can be found on BMCC's web side, www.bmcc.cuny.edu. For further information on integrity and behavior, please consult the college bulletin (also available online).