

**LaGuardia Community College
The City University of New York**

ELECTRICAL DRAFTING AND BLUE PRINT READING

Department	Mathematics, Engineering, and Computer Science						
Subject Code and Title	MAE 102- Blueprint Reading						
Goals of the Course:	The objective of this course is to provide proper knowledge of blueprint reading as it relates to the architectural or building construction industry. This course covers the theory of orthographic projections, reading floor plans and elevations drawings, symbols and notations, scaling and dimensioning practices, reading blueprints for structural information, electrical & mechanical trade drawings.						
Course Outcomes:	<p>Upon completing this course the student should be able to:</p> <ul style="list-style-type: none"> ▪ Understand and be able to use architectural & engineering scales ▪ Convert engineering dimensions to architectural ▪ To dimension an area drawing ▪ Understand the different drawing types and their usage ▪ Know what a floor plan, section and elevation are ▪ Understand symbols, notation, abbreviations and material schedules ▪ To work with the drawings to obtain information on dimension, finishes, details, area calculations, etc. ▪ The instructor has the right to alter the course based on the construction industry and the student's needs. The changes will be noted on a revised class schedule. 						
Suggested Texts:	<ul style="list-style-type: none"> ▪ "Print reading for Construction" by Walter C. Brown and Daniel Dorfmueller 						
Prerequisite	None						
Class Hours	3						
Credits	1						
Computer Use:	<ul style="list-style-type: none"> ▪ Students will use basic word processing skills to generate technical narratives for project calculations and various homework assignments. ▪ Computer Aided Drafting to generate project drawings is strongly encouraged 						
Course Grading:	<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Home Work</td> <td style="text-align: right;">10%</td> </tr> <tr> <td>Quizzes</td> <td style="text-align: right;">15%</td> </tr> <tr> <td>Projects</td> <td style="text-align: right;">30%</td> </tr> </table>	Home Work	10%	Quizzes	15%	Projects	30%
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	Midterms	20%
	Final Exam	25%.

Week	Topic	Class Description	Home Work
1	Intro to Blueprint Reading	Basic introduction & explanation of Drawings, introduction to scales & usage and different systems of measurement	
2	Construction Math Items, Lines & Symbols and Drawing	Explore different math applications, identify items used in the drawings lines & symbols and some drawing	HW #1
3	Pictorial Drawings & Dimensions	Discuss how the different type of pictorial drawings are used, Discuss the elements of a dimension	HW #2 Project #1
4	Quiz #1 Drawing Types	Discusses the different types of drawings used in the complete drawing set	HW #3
5	Specifications	Explores specifications and how they are used, the use of the CSI format	HW #4
6	Materials	This class covers different types of materials used in construction and some of the requirements for each	HW #5 Project # 2
7	Midterm Plot, Civil & Site Drawings	Explores the different elements and items used on these drawings	HW #6
8	Foundation & Residential Structures	Looks at the start of the building and how the building is framed	HW #7
9	Quiz #2 Commercial Framing	Looks at commercial Structural Drawings and their impact on the construction	HW #8
10	Specialty Drawings & Secondary Drawings	Explores the architectural specialty drawings, the process and their coordination	Project # 3
11	Quiz #3 Plumbing & HVAC, Electrical & Welding	Discuss specific trade drawings	HW #9
12	Final Exam	Final Exam Review	HW #10