

Glencoe/McGraw-Hill

Mechanical Drawing: Board & CAD Techniques ©2003
Trade and Industrial Education, 9–12; A. 9–12

10. Drafting I
ISBN# 0–07–825100–1

correlated to

North Carolina
Trade and Industrial Education
Course Blueprint for 7921 Drafting I

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MECHANICAL DRAWING: BOARD & CAD TECHNIQUES ©2003**

CORRELATED TO

**NORTH CAROLINA
TRADE AND INDUSTRIAL EDUCATION
COURSE BLUEPRINT FOR 7921 DRAFTING I**

OBJECTIVES	PAGE REFERENCES
A LEADERSHIP DEVELOPMENT	
001. Demonstrate speaking, career development, and business meeting skills.	
001.01 Demonstrate basic techniques of parliamentary procedure.	The opportunity to address this objective is available. See the following: IRG: 66
001.02 Demonstrate steps for processing a motion and the methods of voting.	The opportunity to address this objective is available. See the following: IRG: 66
001.03 Establish short and long term goals.	SE: 40–41, 606, 670 IRG: 103–104
001.04 Identify career goals and opportunities and review career development plan.	SE: 18–24, 25–27, 40–41, 46–47, 606, 670 IRG: 103–104
B BASIC DRAFTING SKILLS	
002. Explain and demonstrate basic drafting skills and techniques.	
002.01 Identify and demonstrate the correct use of manual drafting equipment and supplies.	SE: 87–91, 92, 93–94, 95–96, 97–101, 112, 113–117, 118–124, 125–129, 141–149 IRG: 107–108, 109–110
002.02 Explain correct lettering techniques.	SE: 71–73, 83, 96, 646 IRG: 105–106
002.03 Explain and demonstrate accepted sketching techniques.	SE: 53–60, 61, 62, 63–65, 66–70, 79–83 IRG: 105–106

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OBJECTIVES		PAGE REFERENCES	
002.04	Analyze and demonstrate correct drawing procedures.	SE:	113–117, 118, 119–124, 125–127, 128–129, 141–149
		IRG:	109–110
002.05	Construct a single-view drawing.	SE:	55, 79, 80, 141–149
		IRG:	105–106, 109–110
C BASIC GEOMETRIC TERMS AND CONSTRUCTIONS			
003. Identify geometric terms and apply geometric construction techniques.			
003.01	Define selected geometric terms.	SE:	150, 151–152, 154–155, 158, 161, 162–163, 169–170, 172, 176–177, 180–182, 185, 186, 187, 189, 346, 347–348, 349–353, 354–355, 356–364
		IRG:	111–112, 121–122
003.02	Describe the procedures for drawing standard geometric constructions.	SE:	151–153, 154–159, 160, 161–162, 163, 164–167, 168–173, 174–175, 176–188, 189–194
		IRG:	111–112
003.03	Construct drawings that require geometric constructions.	SE:	190, 191, 192, 193, 194
		IRG:	111–112

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OBJECTIVES		PAGE REFERENCES	
D ORTHOGRAPHIC DRAWING			
004. Identify and apply orthographic drawing techniques and principles.			
004.01	Identify and explain the concepts and principles underlying the creation of orthographic drawings.	SE:	54, 134, 198–201, 450, 575, 577, 579
		IRG:	105–106, 109–110, 113–114, 125–126, 133–134
004.02	Demonstrate the ability to visualize objects and views.	SE:	196, 197–201, 208–210, 211–215, 216–228, 277–279, 280–284, 285–291, 292–295, 317–325, 338–345
		IRG:	113–114, 117–118, 119–120
004.03	Construct orthographic drawings.	SE:	54, 134, 217–228, 450, 575, 577, 579
		IRG:	105–106, 109–110, 113–114, 125–126, 133–134
E BASIC DIMENSIONAL SKILLS			
005. Identify and demonstrate basic dimensioning techniques.			
005.01	Identify and explain the concepts and principles underlying accepted mechanical dimensioning practices.	SE:	230, 231–232, 233–234, 235–240, 241–242, 243, 244, 245, 246–247, 248–249, 250–259, 260–263, 264, 265–268
		IRG:	115–116
005.02	Apply simple dimensioning to an engineering drawing.	SE:	269, 270, 271, 272, 273, 274, 275
		IRG:	115–116

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OBJECTIVES		PAGE REFERENCES	
F PICTORIAL DRAWINGS			
006.00 Explain basic concepts and prepare selected pictorial drawings.			
006.01	Identify and explain the concepts and principles underlying isometric, oblique, and perspective drawings.	SE:	419–421, 422, 423–425, 433–440, 441–442, 443–448, 449–453
		IRG:	125–126
006.02	Construct an isometric drawing.	SE:	455, 456, 457, 458, 459, 460, 461, 466
		IRG:	125–126
006.03	Construct an oblique drawing.	SE:	461, 462, 463, 464, 465, 466
		IRG:	125–126
G BASIC COMPUTER AIDED DRAFTING (CAD)			
007. Explain and demonstrate basic CAD commands and techniques.			
007.01	Identify and explain basic computer and CAD terms/concepts.	SE:	43–45, 74–77, 101–107, 130–139, 176–188, 211–215, 265–268, 296–301, 333–336, 364–370, 530–534, 609–616, 704–708, 755–759, 775–778
		IRG:	103–104, 105–106, 107–108, 109–110, 111–112, 113–114, 115–116, 117–118, 119–120, 121–122, 129–130, 135–136, 141–142, 145–146, 147–148
007.02	Identify and explain basic CAD commands.	SE:	43–45, 74–77, 101–107, 130–139, 176–188, 211–215, 265–268, 296–301, 333–336, 364–370, 530–534, 609–616, 704–708, 755–759, 775–778
		IRG:	103–104, 105–106, 107–108, 109–110, 111–112, 113–114, 115–116, 117–118, 119–120, 121–122, 129–130, 135–136, 141–142, 145–146, 147–148

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OBJECTIVES		PAGE REFERENCES	
007.03	Produce a CAD drawing.	SE:	83, 141–149, 190–194, 217–228, 270–275, 303–315, 338–345, 372–378, 536–542, 618–621, 710–712, 780–781
		IRG:	105–106, 109–110, 11–112, 113–114, 115–116, 117–118, 119–120, 121–122, 129–130, 135–136, 141–142, 147–148

GLENCOE/McGraw-Hill
Atlantic Southeast Region
6510 Jimmy Carter Boulevard
Norcross, GA 30071
770/613-0281
800/731-2365