Career and Technical Education
Adapted CTE Course Blueprint
of
Essential Standards

Trade and Industrial Education

IC61 Drafting I

Public Schools of North Carolina
State Board of Education • Department of Public Instruction
Academic Services and Instructional Support
Division of Career and Technical Education
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Summer 2013

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Special thanks to the following educators who developed this Adapted CTE Course Blueprint.

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Kim Osborne – Weaver Center
Stephen Thacker – Northwest Cabarrus High School
Steve Walker – A.L. Brown High School
Wayne Lee – Pine Forest High School
Kris Dell – Applied Software
Mike Leary – SolidWorks Education

This Adapted CTE Course Blueprint has been reviewed by business and industry representatives for technical content and appropriateness for the industry.

Adapted CTE Course Blueprint of Essential Standards

Essential standards are big, powerful ideas that are necessary and essential for students to know to be successful in a course. Essential standards identify the appropriate verb and cognitive process intended for the student to accomplish. Essential standards provide value throughout a student's career, in other courses, and translate to the next level of education or world of work.

This document lays out the essential standards for successfully completing the Drafting I course. This is the first level course that leads to an industry certification in the field of CAD Drafting. The essential standards use Revised Bloom's Taxonomy (RBT) category verbs (remember, understand, apply, analyze, evaluate, create) that reflect the overall intended cognitive outcome of the indicators written by the certifying body. Each essential standard and indicator reflects the intended level of learning through two dimensions; The Knowledge Dimension is represented with letters A-C, and the Cognitive Process Dimension by numbers 1-6.

The Adapted CTE Course Blueprint includes units of instruction, essential standard(s) for each unit, and the specific indicators aligned with industry certification. Also included are the relative weights of the units and essential standards within the course.

This document will help teachers plan for curriculum delivery for the course, prepare daily lesson plans, and construct valid formative, benchmark, and summative assessments. Curriculum for this course is not provided by NCDPI. Industry curriculum providers reviewed and approved for this course collaborated with the North Carolina Department of Public Instruction (NCDPI) to develop a valid and reliable test item bank used to produce a secure postassessment administered by NCDPI. Assessment for this course is written at the level of the ***ESSENTIAL STANDARD*** and assesses the intended outcome of the sum of its indicators.

For additional information about this blueprint, contact the Division of Career and Technical Education, North Carolina Department of Public Instruction, 6361 Mail Service Center, Raleigh, North Carolina 27699-6361.

Reference: Anderson, Lorin W. (Ed.), Krathwohl, David R. (Ed.), et al., *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives,* Addison Wesley Longman, Inc., New York, 2001.

Interpretation of Columns on the NCDPI Adapted CTE Course Blueprint

No.	1	2	3	4
Heading	Essential Std #	Unit Titles, Essential Standards, and Indicators	Course Weight	RBT Designation
Column information	Unique course identifier and essential standard number.	Statements of unit titles, essential standards per unit, and specific indicators per essential standard. If applicable, includes % for each indicator.	Shows the relative importance of each unit and essential standard. Course weight is used to help determine the percentage of total class time to be spent on each essential standard.	Classification of outcome behavior in essential standards and indicators in Dimensions according to the Revised Bloom's Taxonomy. **Cognitive Process Dimension:** 1 Remember 2 Understand 3 Apply 4 Analyze 5 Evaluate 6 Create **Knowledge Dimension:** A Factual Knowledge B Conceptual Knowledge C Procedural Knowledge

Career and Technical Education conducts all activities and procedures without regard to race, color, creed, national origin, gender, or disability. The responsibility to adhere to safety standards and best professional practices is the duty of the practitioners, teachers, students, and/or others who apply the contents of this document.
Career and Technical Student Organizations (CTSO) are an integral part of this curriculum. CTSOs are strategies used to teach course content, develop leadership, citizenship, responsibility, and proficiencies related to workplace needs.

Adapted CTE Course Blueprint for
IC61 DRAFTING I
(Recommended hours of instruction: 135 to 150 hours)

Essential Std #	Units, Essential Standards, and Indicators (The Learner will be able to:)	Course Weight	RBT Designation
1	2	3	4
	Total Course Weight	**100%**	
1.00	**Understand Fundamental Concepts and Trends of Drafting**	**5%**	**B2**
	1.01 Understand BIM, and Rapid Prototyping. 1.02 Understand Industrial Design, Sustainable Design, and LEED. 1.03 Understand Career Options.		
2.00	**Understand the Ideation process (big 6 in academia) (SUPPLEMENTAL)**		
	Click here for link to curriculum		
3.00	**Apply sketching skills and techniques (Architectural & Engineering)**	**15%**	**C3**
	3.01 Apply Rough sketching (lettering for clarity, uppercase caps). 3.02 Apply 2D sketching – Single and Multi-view. 3.03 Apply 3D sketching – Pictorials (isometric, oblique).		
4.00	**Apply CAD User Skills (with use of the following CAD software)** **AutoCAD (Click here for link to curriculum)** **OR** **Solidworks**	**80%**	**C3**
	4.01 Apply procedures for working with the User interface (navigation tools). 4.02 Apply procedures for creating drawings (coordinates and draw tools). 4.03 Apply procedures for manipulating objects (grips, object selection, drawing aids). 4.04 Apply procedures for working with the drawing organization and inquiry commands (layers). 4.05 Apply procedures for altering objects (modifying). 4.06 Apply procedures for working with layouts (templates, viewports). 4.07 Apply procedures for annotating the drawing (adding Text). 4.08 Apply procedures for dimensioning. 4.09 Apply procedures for hatching objects (Drawing enhancements). 4.10 Apply procedures for working with reusable content (blocks). 4.11 Apply procedures for creating Additional drawing objects (polylines splines ellipse). 4.12 Apply procedures for plotting the drawing.		