

VoCATS

Course Blueprints

Technology Education

8126 Transportation Systems

*Public Schools of North Carolina
State Board of Education • Department of Public Instruction
Office of Instructional and Accountability Services
Division of Instructional Services*

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VoCATS Course Blueprint

A course blueprint is a document laying out the framework of the curriculum for a given course.

Shown on the blueprint are the units of instruction, the core competencies in each unit, and the specific objectives for each competency. The blueprint illustrates the recommended sequence of units and competencies and the cognitive and performance weight or relative importance of the objective within the course.

The blueprint is intended to be used by teachers in planning the course of work for the year preparing daily lesson plans, and constructing instructionally valid assessments.

For additional information about this blueprint, contact program area staff. For additional information about the VoCATS Competency Achievement Tracking System, contact program area staff or VoCATS, Workforce Development, Division of Instructional Services, North Carolina Department of Public Instruction, 301 North Wilmington Street, Raleigh, North Carolina 27601-2825, 919|715-1674, email: rwelfare@dpi.state.nc.us.

Interpretation of Columns on VoCATS Course Blueprints

No.	Heading	Column information
1	Comp# Obj.#	Comp=Competency number (three digits); Obj.=Objective number (competency number plus two-digit objective number).
2	Unit Titles Competency and Objective Statements	Statements of unit titles, competencies per unit, and specific objectives per competency. Each competency statement or specific objective begins with an action verb and makes a complete sentence when combined with the stem "The student will be able to. . ." (The stem appears once in Column 2.) Outcome behavior in each competency/objective statement is denoted by the verb plus its object.
3	Time Hrs	Space for teachers to calculate time to be spent on each objective based on their individual school schedule and the students' performance on preassessments.
4	COURSE % Cognitive	A percentage indicates the relative importance or weight of each unit within the total course or program, each competency within the total course or program, or each objective within the total course or program. Information in Column 5 is used to plan the yearly calendar of work and as a Test Blueprint for preassessments and postassessments.
5	COURSE % Perform	A percentage indicates the relative importance or weight of each competency within a specific unit or each objective within a specific unit. Information in Column 4 is used to plan the yearly calendar of work and as a Test Blueprint for interim assessments.
6	Type Behavior	Classification of outcome behavior in competency and objective statements. (C=Cognitive; P=Psychomotor; A=Affective)
7	Integrated Skill Area	Integrate Skills codes: A=Arts; C=Communications; H=Health Safety; M=Math; SC=Science; SS=Social Studies.
8	Core Supp	Designation of the competencies and objectives as Core or Supplemental. Competencies and objectives designated Core must be included in the yearly calendar of work.

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TECHNOLOGY EDUCATION
COURSE BLUEPRINT for 8126 TRANSPORTATION SYSTEMS
 [Recommended hours of instruction: 135-180]

Comp # Obj #	Unit Titles/Competency and Objective Statements (The Student will be able to:)	Time Hrs.	Cognitive Weight	Performance Weight	Type Behavior	Integrated Skill Area	Core Supp
1	2	3	4	5	6	7	8
			38%	62%			
A	INTRODUCTION		6%	4%			
001.	Assess the role and importance of transportation systems to society.	6	3%	2%	C3P	SC SS	Core
001.01	Define transportation systems and explain their importance to society.	1	1%		C1	SC	Core
001.02	Identify and define the four major modes of transportation and their intermodal relationship.	1	1%		C1	SC	Core
001.03	Identify and define the six major transportation vehicular sub-systems.	1	1%		C1	SC	Core
001.04	Conduct and present a technology assessment on the impact of a transportation system or sub-system.	3		2%	C3P	SC SS	Core
002.	Participate in a responsible and efficient manner as an individual or group member to plan, organize, and carry out activities and projects.	6	3%	2%	C3P	C H	Core
002.01	Identify and explain management skills and quality tools.	1	2%		C1	C	Core
002.02	Apply management skills and quality tools effectively.	2		1%	C3P	C	Core
002.03	Explain classroom and laboratory safety rules and procedures.	1	1%		C1	C H	Core
002.04	Apply classroom and laboratory safety rules and procedures appropriately.	2		1%	C3P	C H	Core
B	SCIENTIFIC AND TECHNICAL CONCEPTS AND PRINCIPLES						
003.	Define and apply scientific and technical concepts and principles used in the design of vehicular transportation systems.	23	12%	6%	C3P	SC	Core
003.01	Define and explain scientific and technical concepts and principles related to the design of vehicular transportation systems.	12	10%		C1	SC	Core
003.02	Explain essential transportation design concepts.	1	2%		C1	SC	Core
003.03	Using a design brief, conduct, and evaluate lab experiments relating to scientific principles found within transportation systems.	10		6%	C3P	SC	Core

1	2	3	4	5	6	7	8
C	HISTORICAL DEVELOPMENTS AND TRENDS						
004.	Analyze important historical developments and trends in transportation systems.	6	2%	4%	C3P	C SC SS	Core
004.01	<i>Organize and explain major developments in the evolution of transportation systems.</i>	1	2%		C1	SC SS	Core
004.02	<i>Analyze the foundational technical developments of transportation systems.</i>	4		2%	C3P	SC SS	Core
004.03	<i>Evaluate personal interests and attributes in relation to transportation occupations.</i>	1		2%	C3P	C	Core
D	VEHICULAR SYSTEMS AND SUB-SYSTEMS						
005.	Explain the fundamental concepts and principles of transportation vehicular sub-systems.	30	18%		C1	SC	Core
005.01	<i>Explain the fundamental concepts, principles and applications of transportation propulsion systems.</i>	5	3%		C1	SC	Core
005.02	<i>Explain the fundamental concepts, principles and applications of transportation guidance systems.</i>	5	3%		C1	SC	Core
005.03	<i>Explain the fundamental concepts, principles and applications of transportation control systems.</i>	5	3%		C1	SC	Core
005.04	<i>Explain the fundamental concepts, principles and applications of transportation suspension systems.</i>	5	3%		C1	SC	Core
005.05	<i>Explain the fundamental concepts, principles and applications of transportation structural systems.</i>	5	3%		C1	SC	Core
005.06	<i>Explain the fundamental concepts, principles and applications of transportation support systems.</i>	5	3%		C1	SC	Core
E	FABRICATION OF TRANSPORTATION VEHICLES						
006.	Design, produce and evaluate a transportation vehicle or system.	64		48%	C3P	SC	Core
006.01	<i>Design a transportation vehicle or system.</i>	15		16%	C3P	SC	Core
006.02	<i>Produce a transportation vehicle or system.</i>	39		16%	C3P	SC	Core
006.03	<i>Evaluate a transportation vehicle or system.</i>	10		16%	C3P	SC	Core