

Building Maintenance & Repair 1/2

San Diego County Office of Education - Sweetwater Union High School District Pacing Guide/Course Description

Course Length: 2 Semesters	Classroom Instruction: 180 hours
SUHSD Course Number: 97151	Grade Level: 9, 10, 11, 12
SDCOE Course Number: 550208	SDCOE Total Hours: 142 hours
CBEDS Number/Title: 5549/Other Building Trades and Construction	Year of Implementation: 2012
Course Pre-requisites: None	Articulation (school/credits): None
CTE Industry Sector: Building Trades and Construction	CTE Pathway(s): Residential and Commercial Construction
Job Titles: General Construction Worker, Electrician, Plumber, Painter, Carpenter, Flooring installer, Dry Wall Installer, Commercial Maintenance Repairman	
Credential Information: Preliminary or Clear Full-Time Designated Subjects CTE Teaching Credential in Building Trades and Construction	
Required Textbooks: Residential Construction Academy Facilities Maintenance	
Course Description: This course provides entry-level training in renovating and repairing residential and commercial buildings. Instruction includes safety, use of hand and power tools, building materials and exposure to trades related to building construction and repair. Instruction covers the following areas: Dry wall and exterior wall repair, painting, floor tile, basic plumbing and repair, basic electrical, basic understanding of heating and air conditioning, door repair/carpentry, basic appliance installation and light trouble shooting, concrete repair, basic understanding of telephone installation and repair of phone jacks, single, double and triple line-inside-wiring. Students use equipment which includes various hand and power tools. Employment possibilities include general construction worker, building maintenance worker, residential and commercial maintenance.	

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Semester 1

Unit 1: Introduction
Unit 2: Safety
Unit 3: Flooring
Unit 4: Concrete
Unit 5: Carpentry
Unit 6: Plumbing

Semester 2

Unit 1: Electrical
Unit 2: Finish Carpentry
Unit 3: Drywall
Unit 4: Painting
Unit 5: Minor Repair
Unit 6: Career Skills

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Semester 1 - Unit 1 – Introduction (5 hours)			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>1A - The student identifies standard shop procedures.</p> <p>1B - The student describes equipment care procedures</p> <p>1C - The student discusses organizational units of residential and commercial repair technicians.</p> <p>1D - The student discusses organizational units of residential and commercial repair technicians.</p> <p>1E – The student describes advertising and public relations.</p> <p>1F – The student describes advertising and public relations.</p>	<p><u>Career Technical Education:</u> *BTC/RCCP/ D4.6 Understand customer service/relations as applied to project management and wholesale and retail sales.</p> <p><u>Core Academic:</u> *BTC/A/1.1M/NS/G7/ (1.2) Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers. *BTC/C/2.1R/RC/G11-12/ (2.3) Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents *BTC/C/2.2W/WS/G9-10/ (1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources. *BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization. *BTC/C/2.4LS/LSSA/G8/ (1.5) Use precise language, action verbs, sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations. (1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations. (1.7) Use audience feedback (e.g., verbal and nonverbal cues): a. Reconsider and modify the organizational structure or plan.</p>	<p>A - 1 hour</p> <p>B - 1 hour</p> <p>C - 1 hour</p> <p>D - 1 hour</p> <p>E – 30 minutes</p> <p>F – 30 minutes</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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	<p>b. Rearrange words and sentences to clarify the meaning. *BTC/C/2.4LS/LSSA/G9-10/ (1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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<u>Semester 1 - Unit 2 – Safety (15 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>2A - The student uses hand tools properly and effectively.</p> <p>2B - The student describes safe practices in operating power hand tools.</p> <p>2C - The student demonstrates proper techniques in using electrical testing equipment.</p> <p>2D - The student discusses how to handle flammable liquids safely.</p> <p>2E – The student describes proper use of power machines and related equipment.</p> <p>2F – The student demonstrates safe use of ladders.</p> <p>2G - The student identifies asbestos found in residential and commercial buildings.</p> <p>2H –The student discusses procedures for removal of asbestos.</p> <p>2I – The student describes City of San Diego Building Safety and Health Administration Standards (OSHA).</p> <p>2J - The student has passed safety test with a score of 80% or higher.</p> <p>2K – The student recognizes safe handling of lead paint and hazards.</p> <p>2L – The student understands the importance</p>	<p><u>Career Technical Education:</u> *BTC/HS/ 6.1 Know the policies, procedures, and regulations regarding health and safety in the workplace, including employers’ and employees’ responsibilities. 6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies. 6.3 Know procedures for and regulations concerning the handling, storage, and disposal of hazardous materials. *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D2.1 Use the common hand tools of the trade, such as hammers, torches, pliers, wire cutters, pipe cutters, saws, chisels (wood and concrete), and wrenches, safely and properly D2.2 Maintain and care for hand tools used in residential and commercial construction. D3.1 Use portable power tools, such as circular saws, table saws, saber saws, drills, planers, and sanders, safely and properly. D3.2 Use portable pneumatic tools, such as rough framing nail guns, interior finishing and brad nail guns, hammers, impact wrenches, drills, and compressors, safely and appropriately. <u>Core Academic:</u> *BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization *BTC/C/2.4LS/LSSA/G8/</p>	<p>2A - 5 hours</p> <p>2B - 3 hours</p> <p>2C - 1 hour</p> <p>2D - 30 minutes</p> <p>2E –2 hours</p> <p>2F – 30 minutes</p> <p>2G - 30 minutes</p> <p>2H – 30 minutes</p> <p>2I – 30 minutes</p> <p>2J - 30 minutes</p> <p>2K – 30 minutes</p> <p>2L – 30 minutes</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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<p>of Material Safety Data Sheets (MSDS) and how to identify safety hazards related to specific materials.</p>	<p>(1.5) Use precise language, action verbs, sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations.</p> <p>(1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations.</p> <p>(1.7) Use audience feedback (e.g., verbal and nonverbal cues):</p> <ul style="list-style-type: none">a. Reconsider and modify the organizational structure or plan.b. Rearrange words and sentences to clarify the meaning. <p>*BTC/C/2.4LS/LSSA/G9-10/</p> <p>(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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<u>Semester 1 - Unit 3 – Flooring (10 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>3A - The student observes safety instruction.</p> <p>3B - The student repairs plywood or subfloors.</p> <p>3C - The student replaces or repairs damaged linoleum floors.</p> <p>3D - The student repairs or replaces worn or damaged carpet.</p> <p>3E - The student repairs or replaces broken floor tile.</p> <p>3F - The student identifies various types of adhesives and cements used in flooring.</p> <p>3G - The student explains uses of metal or wooden trim.</p>	<p><u>Career Technical Education:</u> *BTC/PSCT/ 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks. *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D6.2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction <u>Core Academic:</u> *BTC/A/1.1M/GM/G8-12/ (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface. (11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids. (12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems. (15.0) Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles. *BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization *BTC/C/2.4LS/LSSA/G8/ (1.5) Use precise language, action verbs,</p>	<p>3A - 1 hour</p> <p>3B - 2 hours</p> <p>3C - 2 hours</p> <p>3D - 2 hours</p> <p>3E - 2 hours</p> <p>3F - 30 minutes</p> <p>3G - 30 minutes</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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	<p>sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations.</p> <p>(1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations.</p> <p>(1.7) Use audience feedback (e.g., verbal and nonverbal cues):</p> <ul style="list-style-type: none">a. Reconsider and modify the organizational structure or plan.b. Rearrange words and sentences to clarify the meaning. <p>*BTC/C/2.4LS/LSSA/G9-10/</p> <p>(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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<u>Semester 1 - Unit 4 – Concrete (10 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>4A - The student observes safety instruction.</p> <p>4B – The student demonstrates the use of various digging tools.</p> <p>4C - The student demonstrates ability to do form work.</p> <p>4D - The student lists correct proportions of sand, cement, gravel, and water for various applications.</p> <p>4E - The student describes various types of trowels used in concrete work.</p> <p>4F - The student pours a flat concrete slab.</p> <p>4G - The student pours cement for postholes.</p>	<p><u>Career Technical Education:</u> *BTC/PSCT/ 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks. *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D6.2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction <u>Core Academic:</u> *BTC/A/1.1M/MR/G7/ (2.1) Use estimation to verify the reasonableness of calculated results. *BTC/A/1.1M/GM/G8-12/ (15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems. *BTC/A/1.1M/GM/G8-12/ (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface. (11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids. (12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems. (15.0) Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles.</p>	<p>4A - 1 hour</p> <p>4B - 1 hour</p> <p>4C - 2 hours</p> <p>4D - 1 hour</p> <p>4E - 1 hour</p> <p>4F - 3 hours</p> <p>4G - 1 hour</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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	<p>*BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization</p> <p>*BTC/C/2.4LS/LSSA/G8/ (1.5) Use precise language, action verbs, sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations.</p> <p>(1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations.</p> <p>(1.7) Use audience feedback (e.g., verbal and nonverbal cues):</p> <ul style="list-style-type: none">a. Reconsider and modify the organizational structure or plan.b. Rearrange words and sentences to clarify the meaning. <p>*BTC/C/2.4LS/LSSA/G9-10/ (1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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<u>Semester 1 - Unit 5 – Carpentry (20 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>5A - The student observes safety instruction.</p> <p>5B - The student describes various types of nails common to carpentry</p> <p>5C - The student uses a framing hammer properly and effectively.</p> <p>5D - The student uses a power circular saw safely and properly.</p> <p>5E - The student uses a combination square.</p> <p>5F - The student identifies various types and sizes of lumber.</p> <p>5G - The student describes various applications for different types of lumber.</p> <p>5H - The student frames a wall.</p> <p>5I - The student describes the process of framing a wall that includes a window or door.</p> <p>5J - The student explains the procedures of layout.</p> <p>5K - The student differentiates between hip and gable roofs.</p>	<p><u>Career Technical Education:</u> *BTC/PSCT/ 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks. *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D6.2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction <u>Core Academic:</u> *BTC/A/1.1M/MR/G7/ (2.1) Use estimation to verify the reasonableness of calculated results. *BTC/A/1.1M/GM/G8-12/ (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface. (11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids. (12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems. (15.0) Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles. *BTC/A/1.4VAPA/VA/PR/G9-2/ (1.4) Analyze and describe how the</p>	<p>5A - 2 hours</p> <p>5B - 1 hour</p> <p>5C - 1 hour</p> <p>5D - 1 hour</p> <p>5E – 30 minutes</p> <p>5F - 30 minutes</p> <p>5G - 30 minutes</p> <p>5H - 10 hours</p> <p>5I - 2 hours</p> <p>5J - 1 hour</p> <p>5K - 30 minutes</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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	<p>composition of a work of art is affected by the use of a particular principle of design.</p> <p>(1.5) Analyze the material used by a given artist and describe how its use influences the meaning of the work.</p> <p>*BTC/A/1.4VAPA/VA/ADV/G9-12/</p> <p>(2.1) Create original works of art of increasing complexity and skill in a variety of media that reflect their feelings and points of view.</p> <p>(2.2) Plan and create works of art that reflect complex ideas, such as distortion, color theory, arbitrary color, scale, expressive content, and real versus virtual</p> <p>*BTC/C/2.3WO/ELC/G9-10/</p> <p>(1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization</p> <p>*BTC/C/2.4LS/LSSA/G8/</p> <p>(1.5) Use precise language, action verbs, sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations.</p> <p>(1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations.</p> <p>(1.7) Use audience feedback (e.g., verbal and nonverbal cues):</p> <p>a. Reconsider and modify the organizational structure or plan.</p> <p>b. Rearrange words and sentences to clarify the meaning.</p> <p>*BTC/C/2.4LS/LSSA/G9-10/</p> <p>(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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<u>Semester 1 - Unit 6 – Plumbing (30 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>6A - The student observes safety instruction.</p> <p>6B - The student describes various types of wrenches used in plumbing repair.</p> <p>6C - The student uses cutting and threading tools.</p> <p>6D - The student identifies various types of pipe, such as iron, galvanized, copper and plastic.</p> <p>6E - The student describes applications for various types and sizes of pipe.</p> <p>6F - The student describes operation of various types of plumbing fixtures, such as sinks, toilets, bathtub/showers, sprinklers, and appliance hook-ups.</p> <p>6G - The student describes various types of valves.</p> <p>6H - The student describes repair and/or replacement procedures for various types of valves.</p> <p>6I - The student repairs various plumbing problems, such as leaking faucets, blocked sewer lines, blocked toilets, leaking pipes and drains.</p> <p>6J - The student replaces faucets, shower heads, toilets, sprinkler heads.</p> <p>6K - The student replaces faucets, shower heads, toilets, sprinkler heads.</p>	<p><u>Career Technical Education:</u> *BTC/PSCT/ 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks. *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D6.2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction <u>Core Academic:</u> *BTC/A/1.1M/GM/G8-12/ (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface. (11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids. (12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems. (15.0) Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles. *BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization *BTC/C/2.4LS/LSSA/G8/ (1.5) Use precise language, action verbs,</p>	<p>6A - 2 hours</p> <p>6B - 1 hour</p> <p>6C - 1 hour</p> <p>6D - 2 hours</p> <p>6E - 1 hour</p> <p>6F - 2 hours</p> <p>6G - 2 hours</p> <p>6H - 3 hours</p> <p>6I - 4 hours</p> <p>6J - 6 hours</p> <p>6K - 5 hours</p> <p>6L - 1 hour</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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<p>6L - The student installs commercial high pressure fixtures.</p>	<p>sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations.</p> <p>(1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations.</p> <p>(1.7) Use audience feedback (e.g., verbal and nonverbal cues):</p> <p>a. Reconsider and modify the organizational structure or plan.</p> <p>b. Rearrange words and sentences to clarify the meaning.</p> <p>*BTC/C/2.4LS/LSSA/G9-10/</p> <p>(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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<u>Semester 2- Unit 1 – Electrical (20 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>7A - The student observes safety instruction.</p> <p>7B - The student uses various types of pliers used in electrical repair properly.</p> <p>7C - The student uses various types of cutting and splicing tools properly.</p> <p>7D - The student describes various types of electrical connectors.</p> <p>7E - The student describes uses for various types of electrical receptacles.</p> <p>7F - The student differentiates between metallic and non-metallic sheathed cables.</p> <p>7G - The student describes the installation of various types of light fixtures.</p> <p>7H - The student describes the function of main switches, circuit breaker, and fuses.</p> <p>7I - The student explains national electrical code specifications.</p> <p>7J - The student discusses electrical troubleshooting techniques.</p> <p>7K - The student replaces wall receptacles and wall switches.</p> <p>7L - The student installs light fixtures.</p> <p>7M - The student describes procedures used in hard wiring appliances.</p>	<p><u>Career Technical Education:</u> *BTC/PSCT/ 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks. *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D5.1 Understand the safe use of electrical connection methods and electrical wiring procedures. D6.2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction <u>Core Academic:</u> *BTC/A/1.1M/GM/G8-12/ (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface. (11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids. (12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems. (15.0) Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles. *BTC/A/1.2S/PH/G9-12/ (5.b) Students know how to solve problems involving Ohm’s law.</p>	<p>7A - 2 hours</p> <p>7B - 1 hour</p> <p>7C - 1 hour</p> <p>7D – 30 minutes</p> <p>7E - 1 hour</p> <p>7F - 30 minutes</p> <p>7G - 1 hour</p> <p>7H - 1 hour</p> <p>7I - 1 hour</p> <p>7J - 1 hour</p> <p>7K - 4 hours</p> <p>7L - 4 hours</p> <p>7M - 1 hour</p> <p>7N - 1 hour</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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<p>7N – The student describes basic electrical symbols.</p>	<p>*BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization *BTC/C/2.4LS/LSSA/G8/ (1.5) Use precise language, action verbs, sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations. (1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations. (1.7) Use audience feedback (e.g., verbal and nonverbal cues): a. Reconsider and modify the organizational structure or plan. b. Rearrange words and sentences to clarify the meaning. *BTC/C/2.4LS/LSSA/G9-10/ (1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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<u>Semester 2 - Unit 2 – Finish Carpentry (15 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>9A - The student observes safety instruction.</p> <p>9B - The student uses various types of pliers used in electrical repair properly.</p> <p>9C - The student uses various types of cutting and splicing tools properly.</p> <p>9D - The student describes various types of electrical connectors.</p> <p>9E - The student describes uses for various types of electrical receptacles.</p> <p>9F - The student differentiates between metallic and non-metallic sheathed cables.</p> <p>9G - The student describes the installation of various types of light fixtures.</p> <p>9H - The student describes the function of main switches, circuit breaker, and fuses.</p> <p>9I - The student explains national electrical code specifications.</p>	<p><u>Career Technical Education:</u> *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D6.2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction *BTC/PSCT/ 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks. <u>Core Academic:</u> *BTC/A/1.1M/GM/G8-12/ (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface. (11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids. (12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems. (15.0) Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles. *BTC/A/1.4VAPA/VA/PR/G9-2/ (1.4) Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design. (1.5) Analyze the material used by a given artist and describe how its use influences the meaning of the work.</p>	<p>9A - 1 hour</p> <p>9B - 1 hour</p> <p>9C - 30 minutes</p> <p>9D - 30 minutes</p> <p>9E - 1 hour</p> <p>9F - 1 hour</p> <p>9G - 6 hours</p> <p>9H – 3 hours</p> <p>9I - 1 hour</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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	<p>*BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization</p> <p>*BTC/C/2.4LS/LSSA/G8/ (1.5) Use precise language, action verbs, sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations.</p> <p>(1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations.</p> <p>(1.7) Use audience feedback (e.g., verbal and nonverbal cues):</p> <ul style="list-style-type: none">a. Reconsider and modify the organizational structure or plan.b. Rearrange words and sentences to clarify the meaning. <p>*BTC/C/2.4LS/LSSA/G9-10/ (1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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Building Maintenance & Repair 1/2

<u>Semester 2 - Unit 3 – Drywall (15 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>8A - The student observes safety instruction.</p> <p>8B - The student effectively uses drywall saws and utility knives.</p> <p>8C - The student identifies various type and sizes of drywall nails and screws.</p> <p>8D - The student types and spackles drywall.</p> <p>8E - The student types and spackles drywall.</p> <p>8F - The student hangs drywall, using nail patterns according to local codes.</p> <p>8G - The student repairs drywall holes.</p>	<p><u>Career Technical Education:</u> *BTC/PSCT/ 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks. *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D6.2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction <u>Core Academic:</u> *BTC/A/1.1M/GM/G8-12/ (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface. (11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids. (12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems. (15.0) Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles. *BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization *BTC/C/2.4LS/LSSA/G8/ (1.5) Use precise language, action verbs, sensory details, appropriate and colorful</p>	<p>8A - 1 hour</p> <p>8B - 30 minutes</p> <p>8C - 30 minutes</p> <p>8D – 2 hours</p> <p>8E - 5 hours</p> <p>8F - 5 hours</p> <p>8G - 1 hour</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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	<p>modifiers, and the active rather than the passive voice in ways that enliven oral presentations.</p> <p>(1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations.</p> <p>(1.7) Use audience feedback (e.g., verbal and nonverbal cues):</p> <ul style="list-style-type: none">a. Reconsider and modify the organizational structure or plan.b. Rearrange words and sentences to clarify the meaning.		
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Building Maintenance & Repair 1/2

<u>Semester 2 - Unit 4 – Painting (15 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>10A - The student observes safety instruction.</p> <p>10B - The student performs proper methods of finish sanding.</p> <p>10C - The student describes uses for oil based paint.</p> <p>10D - The student describes various types of electrical connectors.</p> <p>10E - The student describes uses for water based paint.</p> <p>10F - The student performs various methods of applying paint.</p> <p>10G - The student describes staining techniques.</p> <p>10H - The student accesses situations where degreaser is necessary before refinishing and/or re-painting.</p> <p>10I - The student uses brushes and rollers properly.</p> <p>10J - The student explains the importance of safe storage of flammable materials.</p> <p>10K - The student uses an airless type spray gun properly.</p> <p>10L - The student estimates amount of paint needed for a job.</p>	<p><u>Career Technical Education:</u> *BTC/PSCT/ 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks. *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D6.2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction <u>Core Academic:</u> *BTC/A/1.1M/GM/G8-12/ (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface. (11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids. (12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems. (15.0) Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles. *BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization *BTC/C/2.4LS/LSSA/G8/ (1.5) Use precise language, action verbs, sensory details, appropriate and colorful</p>	<p>10A - 1 hour</p> <p>10B - 1 hour</p> <p>10C - 30 minutes</p> <p>10D – 30 minutes</p> <p>10E - 30 minutes</p> <p>10F - 2 hours</p> <p>10G - 1 hour</p> <p>10H - 30 minutes</p> <p>10I - 5 hours</p> <p>10J - 30 minutes</p> <p>10K - 2 hours</p> <p>10L - 30 minutes</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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	<p>modifiers, and the active rather than the passive voice in ways that enliven oral presentations.</p> <p>(1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations.</p> <p>(1.7) Use audience feedback (e.g., verbal and nonverbal cues):</p> <ul style="list-style-type: none">a. Reconsider and modify the organizational structure or plan.b. Rearrange words and sentences to clarify the meaning. <p>*BTC/C/2.4LS/LSSA/G9-10/</p> <p>(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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Building Maintenance & Repair 1/2

Semester 2 - Unit 5 – Minor Repair (15 hours)			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>11A - The student observes safety instruction.</p> <p>11B - The student repairs broken window and door screens.</p> <p>11C - The student replaces broken window panes.</p> <p>11D - The student installs door locksets.</p> <p>11E - The student discusses various procedures used in refinishing furniture.</p> <p>11F - The student chooses proper wall fasteners for various materials.</p> <p>11G - The student explains how to hang a garage door.</p>	<p><u>Career Technical Education:</u> *BTC/PSCT/ 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks. *BTC/TKS/ 10.2 Maintain and troubleshoot equipment used in the construction industry. 10.3 Use, store, and allocate materials efficiently, and use space efficiently *BTC/RCCP/ D1.1 Identify design solutions for residential construction problems. D1.2 Calculate required materials for residential construction applications. D6.2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction <u>Core Academic:</u> *BTC/A/1.1M/GM/G8-12/ (8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface. (11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids. (12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems. (15.0) Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles. *BTC/C/2.3WO/ELC/G9-10/ (1.4) Produce legible work that shows</p>	<p>11A - 1 hour</p> <p>11B - 3 hours</p> <p>11C - 3 hours</p> <p>11D – 2 hours</p> <p>11E - 5 hours</p> <p>11F – 30 minutes</p> <p>11G – 30 minutes</p>	<p><u>Teacher Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p><u>Student Resources:</u> Textbook – “Residential Construction Academy Facilities Maintenance”</p> <p>Handouts</p>

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	<p>accurate spelling and correct use of the conventions of punctuation and capitalization *BTC/C/2.4LS/LSSA/G8/ (1.5) Use precise language, action verbs, sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations. (1.6) Use appropriate grammar, word choice, enunciation, and pace during formal presentations. (1.7) Use audience feedback (e.g., verbal and nonverbal cues): a. Reconsider and modify the organizational structure or plan. b. Rearrange words and sentences to clarify the meaning. *BTC/C/2.4LS/LSSA/G9-10/ (1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.</p>		
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Building Maintenance & Repair 1/2

<u>Semester 2 - Unit 6 – Career Skills (10 hours)</u>			
Competencies	Standards	Suggested Pacing	Resources/Materials
<p>1A - Accesses and utilizes technology and information.</p> <p>1B - Practices occupational safety standards.</p> <p>1C - Thinks critically and solving problems effectively.</p> <p>1D - Uses basic skills in reading, writing, mathematics, listening and speaking as they relate to occupation specific skills.</p> <p>1E - Attains a comprehensive understanding of all aspects of industry the individual is preparing to enter.</p> <p>1F - Applies knowledge to real world problems and situations.</p> <p>student:</p> <p>2A - Works independently and collaboratively.</p> <p>2B - Communicates effectively and appropriately.</p> <p>2C - Performs reliably and responsibly.</p> <p>2D - Works with diverse populations effectively and respectfully.</p> <p>2E - Is punctual.</p> <p>2F - Follows directions.</p> <p>2G - Works well with minimum supervision.</p> <p>2H Is cooperative.</p> <p>2I -Takes initiative by working beyond minimum requirements.</p> <p>2J - Meets job standards of neatness and grooming.</p>	<p><u>Career Technical Education:</u> *BTC/CPM/ 3.1 Know the personal qualifications, interests, aptitudes, knowledge, and skills necessary to succeed in careers. 3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society. 3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio. *BTC/TKS/ 10.1 Understand construction processes and systems and their importance in construction technology. <u>Core Academic:</u> *BTC/C/2.2W/WSA/G11-12/ (2.5) Write job applications and résumés: a. Provide clear and purposeful information and address the intended audience appropriately. b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension. c. Modify the tone to fit the purpose and audience. d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document. *BTC/C/2.2W/WS/G9-10/ (1.3) Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and</p>	<p>1A-2K - ongoing</p> <p>3A – 4 hours</p> <p>3B – 2 hours</p> <p>3C – 2 hours</p>	<p><u>Teacher Resources:</u> Job Finder’s Guide</p> <p><u>Student Resources:</u> Job Finder’s Guide</p>

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<p>2K- Responds appropriately to constructive criticism.</p> <p>3A- Completes an appropriate resume and job application.</p> <p>3B - Attaining awareness of advanced career and educational opportunities.</p> <p>3C - Acquires job interview techniques.</p>	secondary sources.		
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