



# Career & Technology Architectural Graphics

Unit Name			First 6 Weeks		
Academic Alignment with TEKS	CTE TEKS	Content/Vocabulary	Guiding Questions	Activities	Resources and Web links
English: 1A.B.C. 2B. 3B. 5A. 6A.B.E. 7A.C.G.H.I. 8B.  Math: 111.32 A.1,2,3,4,5,6.  111.33A.1,4,5.  111.34 A.1,2,3,4,5. B.2A,B. B.6A,C. B.7A,B,C.  Science 112.33C 1B,8A,B,C 112.34C 3B,D 112.35B4 113.36B 5.B 112.36C B.5B  History: 111.33 B.3.4 C20A,B 22A,B 26B,D 27A,B	<b><u>§130.46. Architectural Design (One to Two Credits).</u></b> <u>(a) General requirements. This course is recommended for students in Grades 10-12. Recommended prerequisites: Algebra I, Geometry, and Principles of Architecture and Construction.</u> <u>(b) Introduction. Principles of Architecture and Construction provides an overview to the various fields of architecture, interior design, construction science, and construction technology. Achieving proficiency in decision making and problem solving is an essential skill for career planning and lifelong learning. Students use self-knowledge, educational, and career information to set and achieve realistic career and educational goals. Job-specific, skilled training can be provided through the use of training modules to identify career goals in trade and industry areas. Safety and career opportunities are included, in addition to work ethics and job-related study in the classroom such as communications; problem solving and critical thinking; Information Technology Applications; systems; safety, health, and environmental; leadership and teamwork; ethics and legal responsibilities; employability and career development; technical skills; introduction to hand tools; introduction to power tools; basic rigging; and reading technical drawings.</u> <u>(c) Knowledge and skills.</u> <u>(1) The student knows the employability characteristics of a successful professional in the modern workplace. The student is expected to:</u> <u>(A) identify employment opportunities.</u>	I. The World of Architecture A) Careers B) Office Practices C) Opportunities II. Basic House Designs A) People and Their Structures B) Contemporary Structures C) Trends in Architecture D) Multifamily Housing E) American Disabilities Act F) Designing for Health and Safety G) Internet Resources III. Primary Considerations A) Site B) Counting the Cost D) Zoning and Codes E) Basic Design Criteria F) Climate/Geographical Design G) Internet Resources	Chapter Reviews with assigned problems  Chapter Reviews with assigned problems  Chapter Reviews with assigned problems	Newspaper adds  Visit model homes  Locate residential construction building site  Video-Modern Marvels- The House  Lettering  Sketch personal residence with details  Draw site maps  Review planning and zoning city web sites  CD/ video- Building with Awareness, Contracting A Home  House Tracking with documentation- lot, block, address, addition.  Attend city counsel planning/zoning meeting  Notebook- Portfolio	Architectural Drafting and Design- 4 <sup>th</sup> Edition/Delmar  Architecture- Residential Drafting and Design/Goodheart-Willcox  Everyday Sketching and Drafting- 2nd Edition/ ATP Publication <a href="http://www.aia.org">www.aia.org</a> <a href="http://www.builderonline.com">www.builderonline.com</a> <a href="http://www.concrethomes.com">www.concrethomes.com</a> <a href="http://www.culturedstone.com">www.culturedstone.com</a> <a href="http://www.designbasics.com">www.designbasics.com</a> <a href="http://www.homesofelegance.com">www.homesofelegance.com</a> <a href="http://www.stardesign.com">www.stardesign.com</a> <a href="http://www.wvpa.org">www.wvpa.org</a> <a href="http://www.buildingsystems.org">www.buildingsystems.org</a> <a href="http://www.fema.org">www.fema.org</a> <a href="http://www.noaa.gov">www.noaa.gov</a> <a href="http://www.weather.com">www.weather.com</a> <hr/> <a href="http://www.boralbricks.com">www.boralbricks.com</a> <a href="http://www.designstudio.com">www.designstudio.com</a> <a href="http://www.gp.com/build/index">www.gp.com/build/index</a> <a href="http://www.masonite.com">www.masonite.com</a> <a href="http://www.owenscorning.com">www.owenscorning.com</a> <a href="http://www.reynoldsbp.com">www.reynoldsbp.com</a> <a href="http://www.softplan.com">www.softplan.com</a> <a href="http://www.studerdesigns.com">www.studerdesigns.com</a> <a href="http://www.ci.mansfield.tx.us">www.ci.mansfield.tx.us</a>



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	<p><u>including entrepreneurship, and preparation requirements in the field of architectural drafting;</u>  <u>(B) demonstrate the principles of group participation and leadership related to citizenship and career preparation;</u>  <u>(C) identify employers' expectations and appropriate work habits;</u>  <u>(D) apply the competencies related to resources, information, systems, and technology in appropriate settings and situations ; and</u>  <u>(E) demonstrate knowledge of the concepts and skills related to health and safety in the workplace, as specified by appropriate government regulations.</u>  <u>(2) The student applies key cognitive skills and academic behaviors to the requirements of architectural studies. The student is expected to:</u>  <u>(A) self-monitor learning needs and seek assistance when needed;</u>  <u>(B) use study habits necessary to manage academic pursuits and requirements;</u>  <u>(C) strive for accuracy and precision;</u>  <u>(D) complete and master tasks;</u>  <u>(E) demonstrate effective verbal and written communication skills with individuals from varied cultures, including fellow workers, management, and customers;</u>  <u>(G) estimate jobs, schedules, and practices related to legal restrictions</u>  <u>(I) use descriptive geometry related to auxiliary views, revolutions, intersections, and piping drawings.</u>  <u>(3) The student knows the concepts and skills that form the technical knowledge of architectural design. The student is expected to:</u>  <u>(A) demonstrate knowledge of architectural design principles;</u>  <u>(B) determine building code and zoning requirements for building types in a selected area; and</u></p>				
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	<p><u>(C) demonstrate knowledge of the various grades and types of construction materials.</u></p> <p><u>(4) The student knows the function and application of the tools, equipment, technologies, and materials used in architectural drawing. The student is expected to:</u></p> <p><u>(A) safely use the tools, materials, and equipment commonly employed in the field of architectural computer-aided drafting;</u></p> <p><u>(B) properly handle and dispose of environmentally hazardous materials; and</u></p> <p><u>(C) demonstrate knowledge of new and emerging technologies that may affect the field of architecture</u></p> <p><u>(5) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u></p> <p><u>(A) use problem-solving skills to analyze a situation to identify a problem to be solved;</u></p> <p><u>(B) break a complex problem into component parts that can be analyzed and solved separately;</u></p> <p><u>(C) strive for accuracy and precision;</u></p> <p><u>(D) work independently;</u></p> <p><u>(E) work collaboratively;</u></p> <p><u>(F) research an architectural project;</u></p> <p><u>(G) design and present an effective architectural product</u></p> <p><u>(I) use architectural lettering techniques;</u></p> <p><u>(J) develop preliminary sketches of a commercial or residential architectural design;</u></p> <p><u>(K) use traditional technical architectural drafting techniques to create drawings</u></p> <p><u>(M) develop a site plan using maximum orientation of the building relative to views, sun, and wind direction</u></p> <p><u>(O) draw schematic site plans, floor plans, building elevations, sections,</u></p>				
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	<p><u>perspectives, and character sketches from bubble diagrams</u></p> <p><u>(6) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u></p> <p><u>(B) construct points, lines, and other geometric forms using accepted computer-aided design methods;</u></p> <p><u>(C) create a freehand simple one-point perspective</u></p> <p><u>(E) use a computer system to create and modify architectural drawings; and</u></p> <p><u>(F) plot architectural drawings for presentation.</u></p> <p><u>(7) The student begins exploration, development, and organization of ideas from the surroundings. The student is expected to:</u></p> <p><u>(A) begin illustrating ideas for architectural projects from direct observation, experiences, and imagination; and</u></p> <p><u>(B) begin comparing and contrasting the use of architectural elements such as color, texture, form, line, space, value, and architectural principles such as emphasis, pattern, rhythm, vocabulary accurately.</u></p> <p><u>(9) The student demonstrates an understanding of architectural history and culture as records of human achievement from ancient Egypt to the present. The student is expected to:</u></p> <p><u>(A) compare and contrast historical and contemporary styles, identifying general themes and trends;</u></p> <p><u>(B) describe general characteristics in architectural projects from a variety of cultures; and</u></p> <p><u>(C) compare and contrast career and vocational opportunities in architecture.</u></p> <p><u>(11) The student makes informed career decisions that reflect career goals. The student is expected to:</u></p> <p><u>(D) maintain a project portfolio that</u></p>				
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	<p><u>documents experience by using graphic or written documentation of architectural-related projects and a professional resumé that should include select educational and work history; professional references; appropriate letters of recommendation, record of work experiences, licenses, and certifications; receipt of licenses, certifications, and credentialing; and completion of education and training.</u></p> <p><u>(12) The student applies communication, science, and mathematics knowledge and skills to architectural projects. The student is expected to:</u></p> <p><u>(B) use mathematical equations; and</u></p> <p><u>(C) apply scientific principles and concepts.</u></p> <p><u>(13) The student knows the concept of energy. The student is expected to:</u></p> <p><u>(A) identify the nature of energy;</u></p> <p><u>(B) relate potential energy, kinetic energy, and heat energy to conservation</u></p>				



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	<p><u>environmentally hazardous materials;</u>  <u>(4) The student knows the function and application of the tools, equipment, technologies, and materials used in architectural drawing. The student is expected to:</u>  <u>(A) safely use the tools, materials, and equipment commonly employed in the field of architectural computer-aided drafting;</u>  <u>(C) demonstrate knowledge of new and emerging technologies that may affect the field of architecture.</u>  <u>(5) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u>  <u>(A) use problem-solving skills to analyze a situation to identify a problem to be solved;</u>  <u>(B) break a complex problem into component parts that can be analyzed and solved separately;</u>  <u>(C) strive for accuracy and precision;</u>  <u>(D) work independently;</u>  <u>(E) work collaboratively;</u>  <u>(F) research an architectural project;</u>  <u>(G) design and present an effective architectural product;</u>  <u>(H) present a final architectural product for critique;</u>  <u>(I) use architectural lettering techniques;</u>  <u>(J) develop preliminary sketches of a commercial or residential architectural design;</u>  <u>(K) use traditional technical architectural drafting techniques to create drawings;</u>  <u>(L) demonstrate through drawings the development of maximum efficiency of circulation within areas or rooms</u>  <u>(O) draw schematic site plans, floor plans, building elevations, sections, perspectives, and character sketches from bubble diagrams;</u>  <u>(P) draw scaled wall thickness plans, elevations, and sections;</u></p>				
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	<p><u>(Q) develop details of floor and wall sections as required;</u></p> <p><u>(6) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u></p> <p><u>(B) construct points, lines, and other geometric forms using accepted computer-aided design methods;</u></p> <p><u>(C) create a freehand simple one-point perspective;</u></p> <p><u>(E) use a computer system to create and modify architectural drawings; and</u></p> <p><u>(F) plot architectural drawings for presentation.</u></p> <p><u>(7) The student begins exploration, development, and organization of ideas from the surroundings. The student is expected to:</u></p> <p><u>(A) begin illustrating ideas for architectural projects from direct observation, experiences, and imagination; and</u></p> <p><u>(B) begin comparing and contrasting the use of architectural elements such as color, texture, form, line, space, value, and architectural principles such as emphasis, pattern, rhythm.</u></p> <p><u>(8) The student begins expressing ideas through original architectural projects using a variety of media with appropriate skill. The student is expected to:</u></p> <p><u>(A) create beginning visual solutions by elaborating on direct observation, experiences, and imagination;</u></p> <p><u>(B) create beginning designs for practical applications</u></p> <p><u>(10) The student makes beginning informed judgments about personal architectural projects and the architectural projects of others. The student is expected to:</u></p> <p><u>(A) interpret, evaluate, and justify architectural artistic decisions in personal architectural projects</u></p> <p><u>(D) maintain a project portfolio that</u></p>				
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	<p><u>documents experience by using graphic or written documentation of architectural-related projects and a professional resumé that should include select educational and work history; professional references; appropriate letters of recommendation; record of work experiences, licenses, and certifications; receipt of licenses, certifications, and credentialing; and completion of education and training</u></p> <p><u>(12) The student applies communication, science, and mathematics knowledge and skills to architectural projects. The student is expected to:</u></p> <p><u>(A) prepare professional communications, technical reports, and presentations;</u></p> <p><u>(B) use mathematical equations; and</u></p> <p><u>(C) apply scientific principles and concepts.</u></p> <p><u>(E) recognize sustainable design as it relates to architectural design;</u></p>				



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	<p><u>(5) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u>  <u>(D) work independently;</u>  <u>(E) research an architectural project;</u>  <u>(G) design and present an effective architectural product;</u>  <u>(H) present a final architectural product for critique;</u>  <u>(I) use architectural lettering techniques;</u>  <u>(J) develop preliminary sketches of a commercial or residential architectural design;</u>  <u>(K) use traditional technical architectural drafting techniques to create drawings;</u>  <u>(N) develop building designs to ensure compatibility between interior and exterior to enhance overall appearance;</u>  <u>(P) draw scaled wall thickness plans, elevations, and sections;</u>  <u>(Q) develop details of floor and wall sections as required;</u></p> <p><u>(6) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u>  <u>(A) customize screen menus to fit specific problems or needs;</u>  <u>(B) construct points, lines, and other geometric forms using accepted computer-aided design methods;</u>  <u>(E) use a computer system to create and modify architectural drawings; and</u>  <u>(F) plot architectural drawings for presentation.</u></p> <p><u>(7) The student begins exploration, development, and organization of ideas from the surroundings. The student is expected to:</u>  <u>(A) begin illustrating ideas for architectural projects from direct observation, experiences, and imagination; and</u>  <u>(B) begin comparing and contrasting the use of architectural elements such as color, texture, form, line, space, value, and</u></p>				
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	<p><u>architectural principles such as emphasis, pattern, rhythm, vocabulary accurately.</u></p> <p><u>(8) The student begins expressing ideas through original architectural projects using a variety of media with appropriate skill.</u></p> <p><u>The student is expected to:</u></p> <p><u>(B) create beginning designs for practical applications</u></p> <p><u>(10) The student makes beginning informed judgments about personal architectural projects and the architectural projects of others. The student is expected to:</u></p> <p><u>(A) interpret, evaluate, and justify architectural artistic decisions in personal architectural projects; and</u></p> <p><u>(D) maintain a project portfolio that documents experience by using graphic or written documentation of architectural-related projects and a professional resumé that should include select educational and work history; professional references; appropriate letters of recommendation, record of work experiences, licenses, and certifications; receipt of licenses, certifications, and credentialing; and completion of education and training.</u></p> <p><u>(12) The student applies communication, science, and mathematics knowledge and skills to architectural projects. The student is expected to:</u></p> <p><u>(B) use mathematical equations; and</u></p> <p><u>(C) apply scientific principles and concepts.</u></p>				



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	<p><u>(B) determine building code and zoning requirements for building types in a selected area; and</u></p> <p><u>(C) demonstrate knowledge of the various grades and types of construction materials.</u></p> <p><u>(4) The student knows the function and application of the tools, equipment, technologies, and materials used in architectural drawing. The student is expected to:</u></p> <p><u>(A) safely use the tools, materials, and equipment commonly employed in the field of architectural computer-aided drafting;</u></p> <p><u>(C) demonstrate knowledge of new and emerging technologies that may affect the field of architecture.</u></p> <p><u>(5) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u></p> <p><u>(A) use problem-solving skills to analyze a situation to identify a problem to be solved;</u></p> <p><u>(F) research an architectural project;</u></p> <p><u>(G) design and present an effective architectural product;</u></p> <p><u>(H) present a final architectural product for critique;</u></p> <p><u>(K) use traditional technical architectural drafting techniques to create drawings;</u></p> <p><u>(N) develop building designs to ensure compatibility between interior and exterior to enhance overall appearance;</u></p> <p><u>(O) draw schematic site plans, floor plans, building elevations, sections, perspectives, and character sketches from bubble diagrams;</u></p> <p><u>(P) draw scaled wall thickness plans, elevations, and sections;</u></p> <p><u>(Q) develop details of floor and wall sections as required;</u></p> <p><u>(6) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is</u></p>				
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	<p><u>expected to:</u></p> <p><u>(A) customize screen menus to fit specific problems or needs;</u></p> <p><u>(B) construct points, lines, and other geometric forms using accepted computer-aided design methods;</u></p> <p><u>(E) use a computer system to create and modify architectural drawings; and</u></p> <p><u>(F) plot architectural drawings for presentation.</u></p> <p><u>(8) The student begins expressing ideas through original architectural projects using a variety of media with appropriate skill. The student is expected to:</u></p> <p><u>(A) create beginning visual solutions by elaborating on direct observation, experiences, and imagination;</u></p> <p><u>(B) create beginning designs for practical applications;</u></p> <p><u>(A) interpret, evaluate, and justify architectural artistic decisions in personal architectural projects</u></p> <p><u>(11) The student makes informed career decisions that reflect career goals. The student is expected to:</u></p> <p><u>(D) maintain a project portfolio that documents experience by using graphic or written documentation of architectural-related projects and a professional resumé that should include select educational and work history; professional references; appropriate letters of recommendation, record of work experiences, licenses, and certifications; receipt of licenses, certifications, and credentialing; and completion of education and training.</u></p> <p><u>(12) The student applies communication, science, and mathematics knowledge and skills to architectural projects. The student is expected to:</u></p> <p><u>(A) prepare professional communications, technical reports, and presentations;</u></p> <p><u>(B) use mathematical equations</u></p>				
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Unit Name §		Fifth 6 Weeks			
Academic Alignment with TEKS	CTE TEKS	Content/Vocabulary	Guiding Questions	Activities	Resources and Web links
English: 1A.B.C. 2B. 3B. 5A. 6A.B.E. 7A.C.G.H.I. 8B.  Math: 111.32 A.1,2,3,4,5,6.  111.33A.1,4,5.  111.34 A.1,2,3,4,5. B.2A,B. B.6A,C. B.7A,B,C.  Science: 112.34 3B  History: 113.33 B3,4 26B,D 27A,B	<b><u>130.46. Architectural Design (One to Two Credits).</u></b> <u>(c) Knowledge and skills.</u> <u>(1) The student knows the employability characteristics of a successful professional in the modern workplace. The student is expected to:</u> <u>(A) identify employment opportunities, including entrepreneurship, and preparation requirements in the field of architectural drafting;</u> <u>(D) apply the competencies related to resources, information, systems, and technology in appropriate settings and situations; and</u> <u>(2) The student applies key cognitive skills and academic behaviors to the requirements of architectural studies. The student is expected to:</u> <u>(A) self-monitor learning needs and seek assistance when needed;</u> <u>(B) use study habits necessary to manage academic pursuits and requirements;</u> <u>(C) strive for accuracy and precision;</u> <u>(D) complete and master tasks;</u> <u>(G) estimate jobs, schedules, and practices related to legal restrictions;</u> <u>(H) read and interpret appropriate architectural symbols, schematics, blueprints, work drawings, manuals, and bulletins; and</u> <u>(I) use descriptive geometry related to auxiliary views, revolutions, intersections.</u> <u>(3) The student knows the concepts and skills that form the technical knowledge of architectural design. The student is expected to:</u> <u>(A) demonstrate knowledge of architectural design principles;</u> <u>(B) determine building code and zoning requirements for building types in a selected area</u>	VIII. CADD Electrical Plan added to floor plan and Board Drawings Instrumentation and Techniques A) Internet Resources IX. CADD Plumbing Plan added to floor plan and Board Drawings Instrumentation and Techniques X. CADD Framing Plan and Board Drawings Instrumentation and Techniques A) Internet Resources XI. CADD Roof Plan and Board Drawings Instrumentation and Techniques A) Internet Resources	Chapter Review with assigned problems  Chapter Review with assigned problems Chapter Review with assigned problems Chapter Review with assigned problems	City of Mansfield Permit packet  CD: Careers: Architecture  CADD drawing  Produce window and door schedules  Build exterior walls to scale- balsa wood- Complete exterior walls: 3-D Home Kit  Notebook- Portfolio	Architectural Drafting and Design- 4 <sup>th</sup> Edition/Delmar  Architecture- Residential Drafting and Design/Goodheart-Willcox  <a href="http://www.astm.org">www.astm.org</a> <a href="http://www.architectural-ornament.com">www.architectural-ornament.com</a> <a href="http://www.gp.com/build/index">www.gp.com/build/index</a> <a href="http://www.iza.com">www.iza.com</a> <a href="http://www.jameshardie.com">www.jameshardie.com</a> <a href="http://www.knauffiberglass.com">www.knauffiberglass.com</a> <a href="http://www.modplas.com">www.modplas.com</a> <a href="http://www.reynoldsbp.com">www.reynoldsbp.com</a>

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	<p><u>(4) The student knows the function and application of the tools, equipment, technologies, and materials used in architectural drawing. The student is expected to:</u></p> <p><u>(A) safely use the tools, materials, and equipment commonly employed in the field of architectural computer-aided drafting</u></p> <p><u>(5) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u></p> <p><u>(F) research an architectural project;</u></p> <p><u>(G) design and present an effective architectural product;</u></p> <p><u>(H) present a final architectural product for critique;</u></p> <p><u>(I) use architectural lettering techniques;</u></p> <p><u>(J) develop preliminary sketches of a commercial or residential architectural design;</u></p> <p><u>(K) use traditional technical architectural drafting techniques to create drawings;</u></p> <p><u>(S) assemble an architectural design in three dimensions.</u></p> <p><u>(6) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u></p> <p><u>(A) customize screen menus to fit specific problems or needs;</u></p> <p><u>(B) construct points, lines, and other geometric forms using accepted computer-aided design methods;</u></p> <p><u>(E) use a computer system to create and modify architectural drawings; and</u></p> <p><u>(F) plot architectural drawings for presentation.</u></p> <p><u>(7) The student begins exploration, development, and organization of ideas from the surroundings. The student is expected to:</u></p> <p><u>(A) begin illustrating ideas for architectural projects from direct observation, experiences, and imagination;</u></p> <p><u>(8) The student begins expressing ideas</u></p>				
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## Career & Technology Architectural Graphics

	<p><u>through original architectural projects using a variety of media with appropriate skill. The student is expected to:</u></p> <p><u>(B) create beginning designs for practical applications; and</u></p> <p><u>(C) demonstrate beginning effective use of architectural media and tools in design, drawing, painting, printmaking, and sculpture such as model building.</u></p> <p><u>(9) The student demonstrates an understanding of architectural history and culture as records of human achievement from ancient Egypt to the present. The student is expected to:</u></p> <p><u>(C) compare and contrast career and vocational opportunities in architecture.</u></p> <p><u>(10) The student makes beginning informed judgments about personal architectural projects and the architectural projects of others. The student is expected to:</u></p> <p><u>(11) The student makes informed career decisions that reflect career goals. The student is expected to:</u></p> <p><u>(A) determine employment and entrepreneurial opportunities and preparation requirements in architectural design and related fields;</u></p> <p><u>(B) propose short-term and long-term career goals;</u></p> <p><u>(C) describe technology used in architectural careers; and</u></p> <p><u>(D) maintain a project portfolio that documents experience by using graphic or written documentation of architectural-related projects and a professional resumé that should include select educational and work history; professional references; appropriate letters of recommendation, record of work experiences, licenses, and certifications; receipt of licenses, certifications, and credentialing; and completion of education and training.</u></p> <p><u>(12) The student applies communication, science, and mathematics knowledge and skills to architectural projects. The student</u></p>				
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	<u>is expected to:</u> <u>(A) prepare professional communications,</u> <u>technical reports, and presentations</u>				



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	<p><u>(4) The student knows the function and application of the tools, equipment, technologies, and materials used in architectural drawing. The student is expected to:</u></p> <p><u>(A) safely use the tools, materials, and equipment commonly employed in the field of architectural computer-aided drafting</u></p> <p><u>(5) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u></p> <p><u>(F) research an architectural project;</u></p> <p><u>(G) design and present an effective architectural product;</u></p> <p><u>(H) present a final architectural product for critique;</u></p> <p><u>(I) use architectural lettering techniques;</u></p> <p><u>(J) develop preliminary sketches of a commercial or residential architectural design;</u></p> <p><u>(K) use traditional technical architectural drafting techniques to create drawings;</u></p> <p><u>(S) assemble an architectural design in three dimensions.</u></p> <p><u>(6) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:</u></p> <p><u>(A) customize screen menus to fit specific problems or needs;</u></p> <p><u>(B) construct points, lines, and other geometric forms using accepted computer-aided design methods;</u></p> <p><u>(E) use a computer system to create and modify architectural drawings; and</u></p> <p><u>(F) plot architectural drawings for presentation.</u></p> <p><u>(7) The student begins exploration, development, and organization of ideas from the surroundings. The student is expected to:</u></p> <p><u>(A) begin illustrating ideas for architectural projects from direct observation, experiences, and imagination;</u></p> <p><u>(8) The student begins expressing ideas</u></p>				
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