



Architecture and Construction

Foundation

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACC01.01	Academic Foundations	#1: Introduction to the Built Environment Academic Courses	Perform math operations to complete jobsite/workplace tasks such as estimating and distributing materials and supplies.	Use geometric formulas to determine areas and volumes of various structures.	Calculate areas and volumes of structures.
					Estimate materials and supplies needed.
				Use appropriate formulas to determine percentages/decimals.	Calculate percentages/decimals.
					Use percentages/decimals to perform measurement tasks.
				Use appropriate formulas to determine ratios, fractions, and proportion measures.	Calculate ratios, fractions and proportion measures.
					Use ratios, fractions and proportion measures to perform measurement tasks.
				Use appropriate formulas to determine measurements of dimensions, spaces and structures.	Measure dimensions, spaces and structures using U.S. Standard unit.
	Measure dimensions, spaces and structures using Metric units.				
					Use dimensions, spaces and structures calculations to estimate materials and supplies needed.
ACC01.02	Academic Foundations	#1: Introduction to the Built Environment Academic Courses	Perform physics skills to work with materials and load applications.	Apply basic concepts of static and loads to planning.	Use the basic concepts of static and load calculations for rigging and moving loads.
				Identify the physical properties present when using common construction materials in order to use the materials safely, effectively and efficiently.	Use the basic concepts of physics when working with common construction materials.
ACC01.03	Academic Foundations	#1: Introduction to the Built Environment Academic Courses	Manage workplace and jobsite chemical materials safely.	Recognize the issues present when mixing compatible and incompatible substances to maintain workplace/jobsite safety.	Differentiate between incompatible and compatible substances.
					Prevent the mixing of incompatible substances.



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			(CONTINUED)	Describe the chemical process that occurs when using common construction materials to maintain workplace/jobsite safety.	Apply chemical processes in relation to environmental conditions. Apply chemical processes in relation to construction building materials.
ACC01.04	Academic Foundations	#2: The Language of Architecture and Construction	Read, understand and respond to English language technical and workplace documents to effectively function in the workplace/jobsite.	Read, interpret and use technical and workplace documents to accomplish workplace/jobsite assignments.	<p>Read and understand industry-specific terminology.</p> <p>Interpret workplace documents.</p> <p>Use verbal or written processes to report key information.</p> <p>Use technology to transmit reports.</p> <p>Read, understand and interpret blueprints, drawings and specifications.</p> <p>Use written communications such as written estimates, work orders and memos.</p> <p>Read and follow manufacturer's instructions and manuals.</p>
ACC01.05	Academic Foundations	#2: The Language of Architecture and Construction	Write clear and effective English to prepare workplace/jobsite information.	Complete reports and documents to comply with project requirements.	<p>Compose an accurate and organized diary/log of work.</p> <p>Write reports and documents such as estimates, permits, memos, technical reports and work orders that meet industry standards.</p>



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ACC02.01	Communications	#2: The Language of Architecture and Construction	Use industry-specific verbal and visual skills to accomplish workplace/jobsite communications.	Match verbal and visual communications to industry-specific situations.	Use correct terminology to convey verbal and visual communications.
				Listen attentively and speak clearly to convey information correctly.	Confirm understanding of verbal and visual instructions.
					Ask questions concerning details of instructions.
					Perform assignments as requested.
ACC02.02	Communications	#2: The Language of Architecture and Construction	Listen to and speak with a variety of individuals to enhance communication skills.	Speak succinctly and clearly to convey information.	Speak so that others can understand and carry out information presented.
				Listen attentively to spoken messages to respond to information.	Perform oral instructions.
ACC02.03	Communications	#2: The Language of Architecture and Construction	Exhibit public relation skills to address a variety of situations such as increasing internal and external customer/client satisfaction.	Communicate effectively to develop positive customer/client relationships.	Develop and maintain customer relations.
					Apply relationship skills in a variety of situations.
					Define customer/client satisfaction.
					Evaluate customer/client satisfaction.



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ACC03.01	Problem Solving and Critical Thinking	#5: Principles of Construction #5: Principles of Design and Pre-Construction #5: Principles of Maintenance and Operations	Identify the relationship between available resources and requirements of a project/problem to accomplish realistic planning.	Estimate resources/materials required for a specific project/problem including time management, labor management, job management and job site obligations in order to effectively plan.	Estimate correct amount of required resources/materials.
				Use available resources/materials effectively to complete project or resolve a problem.	Evaluate waste of resources/materials. Evaluate necessity for additional resources/materials.
				Determine alternative solutions for a specific project/problem in order to effectively plan.	Evaluate feasibility of alternative suggestions.
					Implement appropriate alternatives.
ACC03.02	Problem Solving and Critical Thinking	#5: Principles of Construction #5: Principles of Design and Pre-Construction #5: Principles of Maintenance and Operations	Evaluate and adjust plans/schedules to respond to unexpected events and conditions.	Incorporate potential job disruptions into planning timelines.	Identify potential events and conditions that disrupt the completion of a job.
					Solve situational problems involved with unexpected events and conditions.
				Adjust plans and schedules to meet project needs.	Modify existing plans to reflect an unexpected change. Modify existing schedules to reflect an unexpected change
				Identify and assess critical situations as they arise to resolve issues.	Evaluate potential solutions and determine best solution. Appraise critical situations and implement appropriate response.
				Provide a project update to track changes necessitated by unexpected events and conditions.	Present an oral and/or written status report on the project.
ACC03.03	Problem Solving and Critical Thinking	#5: Principles of Construction #5: Principles of Design and Pre-Construction #5: Principles of Maintenance and Operations	Synthesize and report conditions to keep the organization appraised of progress and problems.	Provide a project update to keep stakeholders up to date.	Present an oral and written status report on the project.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACC04.01	Information Technology Applications	#3: Information Technology Applications	Use information technology tools specific to Architecture and Construction to access, manage, integrate and create information.	Manage personal schedule and contact information.	Create tasks (to-do) list.
					Manage daily/weekly/monthly schedule using applications.
					Manage personal and professional contact information.
				Create memos and notes.	Create personal reminders.
					Create and send notes, informal memos, and reminders using applications.
				Use a CAD System to perform drafting duties.	Interpret CAD drawings.
					Retrieve and modify drawings using a CAD System.
					Create drawings using a CAD System.
ACC04.02	Information Technology Applications	#3: Information Technology Applications	Use electronic mail applications.	Use email to communicate within and across organizations.	Access email system using login and password functions.
					Access email messages received.
					Create email messages in accordance with established business standards (e.g., grammar, word usage, spelling, sentence structure, clarity, email etiquette).
					Practice email etiquette.
					Send email messages.
				Use email to share files and documents.	Access email attachments.
		Attach documents to messages.			
		Save email messages/attachments.			
		Practice contamination protection strategies for email.			



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ACC04.03	Information Technology Applications	#3: Information Technology Applications	Use Internet applications.	Search for information and resources.	Select search engine(s) to use.
					Select appropriate search procedures and approaches.
					Locate information using search engine(s) and Boolean logic.
				Access and evaluate Internet resources.	Navigate web sites using software functions.
					Access business and technical information using the Internet.
					Access commercial, government, and education resources.
Evaluate Internet resources (e.g., accuracy of information).					
ACC04.04	Information Technology Applications	#3: Information Technology Applications	Use writing/publishing applications.	Prepare simple documents and other business communications.	Retrieve existing documents.
					Create documents (e.g., letters, memos, reports) using existing forms and templates.
					Safeguard documents using name and save functions.
					Format text using basic formatting functions.
					Employ word processing utility tools (e.g., spell checker, grammar checker, thesaurus).
ACC04.06	Information Technology Applications	#3: Information Technology Applications	Use spreadsheet applications.	Create a spreadsheet.	Create spreadsheets.
					Retrieve existing spreadsheets.
					Edit spreadsheets.
					Save spreadsheets.
					Print spreadsheets.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Perform calculations and analysis on data.	Group worksheets. Create charts and graphs from spreadsheets. Perform calculations using simple formulas. Input/process data using spreadsheet functions.
ACC04.07	Information Technology Applications	#3: Information Technology Applications	Use database applications.	Manipulate data elements.	Enter data using a form. Locate/replace data using search and replace functions. Process data using database functions (e.g., structure, format, attributes, relationships,
ACC04.08	Information Technology Applications	#3: Information Technology Applications	Use collaborative/groupware applications.	Facilitate group work through management of shared schedule and contact information.	Manage daily/weekly/monthly schedule using applications. Maintain shared database of contact information.
ACC04.09	Information Technology Applications	#3: Information Technology Applications	Use computer operations applications.	Manage computer operations. Manage file storage.	Apply basic commands of operating system software. Employ desktop operating skills. Apply appropriate file and disk management techniques. Differentiate between files and directories. Determine file organization. Use system utilities for file management.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACC04.10	Information Technology Applications	#3: Information Technology Applications	Use computer-based equipment (containing embedded computers [or processors] used to control electromechanical devices).	Operate computer-driven equipment and machines.	Secure needed supplies and resources.
					Follow power-up and log-on procedures.
					Interact with/respond to system messages using console device.
					Run applications/jobs in accordance with processing procedures.
					Follow log-off and power-down procedure(s).
				Use installation and operation manuals.	Access needed information using appropriate reference materials.
				Troubleshoot computer-driven equipment and machines and access support as needed.	Test system using diagnostic tools/software.
					Repair/replace malfunctioning hardware.
					Reinstall software as needed.
					Recover data and/or files.
Restore system to normal operating standards.					



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACC05.01	Systems	#4: Safety, Health and the Workplace Environment	Comply with governmental regulations and applicable codes to establish a legal and safe workplace/jobsite.	Identify occupation-specific governmental regulations and national, state and/or local building codes to establish workplace/jobsite regulations and codes.	Follow governmental regulations and building codes.
					Use information given in regulations and codes correctly.
					Pass job inspections and comply with regulations at all times.
				Monitor workplace/jobsite activities to comply with governmental and other applicable safety regulations such as EPA and OSHA.	Read and discuss information on OSHA, EPA and other safety regulations.
				Use MSDS information to manage, use and dispose of hazardous materials.	Pass safety inspections and comply with regulations at all times.
				Identify workplace/jobsite environmental hazards to promote workplace/jobsite safety.	Obtain, understand and follow MSDS information.
	Use hazardous materials safely.				
					Follow safe practices relating to environmental hazards.
ACC05.02	Systems	#4: Safety, Health and the Workplace Environment	Examine relationship of roles and responsibilities between trades/professions to complete a project/job.	Plan, organize, schedule and manage a project/job to optimize workflow sequence.	Report results of the project/job.
				Use time management skills to schedule a project/job.	Identify timeline required to complete a project/job.
					Evaluate efficiency and effectiveness of a project/job.
			Recognize relationships between trades/professions to facilitate smooth workflow.	Coordinate work between trades.	



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Recognize the hierarchy of the jobsite to facilitate smooth workflow.	Incorporate job functions in the reporting chain of supervision. Evaluate the safety issues and responsibilities managed by each level of supervision.
ACC05.03	Systems	#4: Safety, Health and the Workplace Environment	Examine all aspects of the built environment and its' systems to complete project planning.	Align and incorporate the built environment and its systems to the project to complete project.	Label all systems on a set of construction documents. Discuss the interrelationship of the systems in the built environment. Use the concept of "Critical Path Method (CPM)" and/or similar sequential methods so that work progresses efficiently.
ACC05.04	Systems	#4: Safety, Health and the Workplace Environment	Apply industry standards and practices for quality to ensure quality work.	Identify industry standards and practices in order to incorporate quality into projects. Use industry standards and practices to enhance appreciation for quality workmanship.	Document how quality improves profitability. Report on issues that affect quality. Perform work meeting or exceeding the quality standards of the industry. Exhibit pride in personal work.



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ACC06.01	Safety, Health, and Environmental	#4: Safety, Health and the Workplace Environment	Observe rules and regulations to comply with personal and jobsite safety standards.	Align safety issues with appropriate safety standards to ensure a safe workplace/jobsite.	Practice safety rules and regulations.
				Identify safety precautions and hazards to ensure a safe workplace/jobsite.	Use appropriate safety practices and equipment.
				Select, inspect and use personal protective equipment (PPE) such as respiratory protection and fall protection equipment to ensure a safe workplace/jobsite.	Inspect personal protective equipment to ensure safety.
					Report defects found in personal protective equipment.
					Use appropriate personal protective equipment.
Employ hierarchy and workflow of the workplace/jobsite to ensure safety.	Wear appropriate personal protective equipment to protect yourself and set an example for co-workers.				
	Perform job site safety procedures at all times.				
				Use, interpret and respond to barricades, barriers, and other visual warnings.	



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ACC07.01	Leadership and Teamwork	#6: Applications in Construction #6: Applications in Design and Pre-Construction #6: Applications in Maintenance and Operations	Establish specific goals to manage project assignments in a timely manner.	Establish project goals in order to meet project specifications and deadlines.	Define and describe project goals.
					Identify and list key project activities.
					Identify and report activity deadlines.
				Organize work teams to effectively manage assignments.	Determine and list assignments by activity and personnel.
					Complete assignments.
					Monitor and write a report on progress of the project.
Evaluate completed project according to customer requirements.					
ACC07.02	Leadership and Teamwork	#6: Applications in Construction #6: Applications in Design and Pre-Construction #6: Applications in Maintenance and Operations	Effectively resolve conflicts with co-workers to maintain a smooth workflow.	Use conflict resolution skills to maintain a smooth workflow.	Work collaboratively and cooperatively.
					Give and receive criticism in a diplomatic and constructive manner.
					Use diplomatic and constructive statements and responses.



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ACC07.03	Leadership and Teamwork	#6: Applications in Construction #6: Applications in Design and Pre-Construction #6: Applications in Maintenance and Operations	Work as an individual and as a team member to accomplish assignments.	Use human relations skills to work cooperatively with co-workers representing different cultures, genders and backgrounds.	Work effectively with a variety of co-workers.
				Track team goals to contribute constructively and positively to the team.	Work effectively within the organization of a team. Perform work as a team member on a project.
				Match team members to appropriate activities.	Identify team goals. Identify team member strengths and weaknesses.
				Manage personal skills to accomplish assignments.	Plan, organize, and manage individual work.
ACC07.04	Leadership and Teamwork	#6: Applications in Construction #6: Applications in Design and Pre-Construction #6: Applications in Maintenance and Operations	Use mentoring skills to inspire others to achieve.	Use motivational techniques to enhance performance in others.	Practice motivational techniques.
					Develop and use reward and incentive systems.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACC08.01	Ethics and Legal Responsibilities	#1: Introduction to the Built Environment #8: Construction Ethics and Legal Issues	Exhibit personal accountability, integrity and responsibility to enhance confidence among co-workers.	Apply the professional and ethical standards of the industry to workplace/jobsite conduct.	Practice professional and ethical standards.
					Maintain personal integrity.
					Promote personal and professional integrity in coworkers.
					Recognize integrity in others.
ACC08.02	Ethics and Legal Responsibilities	#1: Introduction to the Built Environment #8: Construction Ethics and Legal Issues	Read regulations and contracts to ensure ethical and safety elements are observed.	Study regulations and codes to identify those applicable to the local area.	Locate and implement regulations and codes applicable to tasks and projects.
					Comply with local, state and Federal agencies and model code-setting organizations.
				Read and explain the various aspects of service contracts to ensure compliance.	Evaluate and follow service contracts.
				Recognize the relationship between the various parties to a contract in order to interpret responsibilities.	Fulfill your contractual role and responsibilities.
				Recognize the definition of specialized words or phrases to fully understand documents and contracts.	Use industry jargon or terminology appropriately.
					Use industry acronyms correctly. Use words with multiple meanings correctly in context.
ACC08.03	Ethics and Legal Responsibilities	#1: Introduction to the Built Environment #8: Construction Ethics and Legal Issues	Use ethical and legal standards to avoid conflicts of interest.	Identify conflicts of interest relating to a job or project to prevent ethical or legal problems.	Resolve issues relating to any potential conflicts of interest.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACC08.04	Ethics and Legal Responsibilities	#1: Introduction to the Built Environment #8: Construction Ethics and Legal Issues	Recognize legal and ethical relationships between employees and employers to establish workplace/jobsite rules, regulations and guidelines.	Access appropriate resources to identify the roles, rights and responsibilities of an employee and an employer.	Practice workplace/jobsite conduct incorporating employee and employer roles, rights and responsibilities.
				Examine insurance documentation to determine liability issues associated with a job.	Describe liability issues as needed.
				Comply with employer policies and procedures such as sexual harassment avoidance and substance abuse control to prevent ethical and legal problems.	Practice policies and protocol.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACC09.01	Employability and Career Development	#6: Applications in Construction #6: Applications in Design and Pre-Construction #6: Applications in Maintenance and Operations #9: Technical Applications in the Construction Industry #9: Technical Applications of Design and Pre-Construction #9: Technical Applications of Maintenance and Operations	Exhibit a positive work ethic to comply with employment requirements.	Exhibit behaviors showing you are reliable and dependable.	Arrive at work fit and on time each day.
					Behave dependably.
					Behave honestly and fairly.
				Maintain appropriate dress and behavior for the job to contribute to a safe and effective workplace/jobsite.	Observe company and workplace/jobsite rules.
		Complete required employment forms and documentation such as I-9 form, work visa, W-4 and licensures to meet employment requirements.	Provide verification that requirements have been met.		



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ACC09.03	Employability and Career Development	#6: Applications in Construction #6: Applications in Design and Pre-Construction #6: Applications in Maintenance and Operations #9: Technical Applications in the Construction Industry #9: Technical Applications of Design and Pre-Construction #9: Technical Applications of Maintenance and Operations	Recognize requirements for career advancement to plan for continuing education and training.	Identify opportunities for career advancement to formulate career goals.	Identify career ladder.
					Develop career advancement plan.
					Implement career advancement plan.
					Review progress of career advancement plan.
				Maintain positive interpersonal skills to enhance advancement potential.	Perform quality work as measured by a performance evaluation.
				Pursue education and training opportunities to acquire skills necessary for career advancement.	Document successful completion of education and training opportunities.
					Participate in professional development opportunities such as professional organizations and associations, trade shows and seminars.
				Read trade magazines and journals, manufacturers' catalogues, industry publications and internet sites to keep current on industry trends.	Identify and prepare for new and emerging occupations, practices and procedures as well as declining occupations and practices.
				Examine the organization and structure of various segments of the industry to prepare for career advancement.	Recognize segments of the construction industry and show the relationships to specialty areas.
					Obtain necessary knowledge and skills to enhance employability.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Research local and regional labor (workforce) market and job growth information to project potential for advancement.	Identify sources of career information. Identify job opportunities for the trade. Identify organizations that offer career and job placement. Analyze potential growth of identified careers. Apply labor market and job growth information to career goals.
ACC09.04	Employability and Career Development	#6: Applications in Construction #6: Applications in Design and Pre-Construction #6: Applications in Maintenance and Operations #9: Technical Applications in the Construction Industry #9: Technical Applications of Design and Pre-Construction #9: Technical Applications of Maintenance and Operations	Examine licensing, certification and credentialing requirements at the national, state and local levels to achieve compliance.	Align licensing, certification and credentialing requirements to career goals in order to plan for career advancement.	Use technologies and resources to research licensing certification and credentialing. Evaluate and select suitable sources of licensing, certification and credentialing. Identify licenses, certifications and credentials applicable to career goals. Document sources and agencies for licensing and certification and credentialing information including contact information.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACC09.05	Employability and Career Development	#6: Applications in Construction #6: Applications in Design and Pre-Construction #6: Applications in Maintenance and Operations #9: Technical Applications in the Construction Industry #9: Technical Applications of Design and Pre-Construction #9: Technical Applications of Maintenance and Operations	Recognize the responsibilities and personal characteristics of a professional craftsman to develop personal goals for professionalism.	Research workplace/jobsite information to identify appropriate craft responsibilities and personal characteristics.	Practice the responsibilities and characteristics of a professional craftsman.
					Identify all critical/important functions.
					Document customer satisfaction.
				Present a professional image in the workplace/jobsite to enhance career advancement.	Maintain appropriate professional memberships.
					Follow rules, regulations and guidelines.
ACC09.06	Employability and Career Development	#6: Applications in Construction #6: Applications in Design and Pre-Construction #6: Applications in Maintenance and Operations #9: Technical Applications in the Construction Industry #9: Technical Applications of Design and Pre-Construction #9: Technical Applications of Maintenance and Operations	Maintain a career portfolio to document knowledge, skills and abilities.	Select educational and work history highlights to create a personal resume.	Develop a resume utilizing word processing technology.
				Contact professional references to acquire recommendations.	Obtain appropriate letters of recommendation.
				Maintain a record of work experiences, licenses, certifications and education to build a portfolio.	Document work experience.
					Document receipt of licenses, certifications and credentialing.
	Document completion of education and training.				



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACC10.01	Technical Skills	#7: Advanced Plan Reading #7: Introduction to Architectural Technology #7: Basic Troubleshooting Procedures	Read technical drawings and documents to plan a project.	Interpret blueprints and drawings to assist with project planning.	Recognize elements and symbols of blueprints and drawings.
				Study written standards and specifications to apply them.	Interpret and explain standards and specifications.
				Recognize how specifications and standards are arranged to properly access and use them.	Describe and use specifications and standards appropriately.
				Use architect's plan, manufacturer's illustrations and other materials to visualize proposed work and to transfer specific data.	Sketch/draw/illustrate concepts and ideas.
					Draw or sketch plan/layout to be completed.
				Conceptualize a three-dimensional form from a two-dimensional drawing to visualize proposed work.	Use proper measurements to determine layout. Build three-dimensional form.
ACC10.02	Technical Skills	#7: Advanced Plan Reading #7: Introduction to Architectural Technology #7: Basic Troubleshooting Procedures	Use and maintain appropriate tools, machines and equipment to accomplish project goals.	Select tools, machinery and equipment to match requirements of the job.	Operate tools, machinery and equipment.
					Properly maintain and care for tools, machines and equipment.
					Use tools, machine and equipment productively and efficiently in alignment with industry standards.
				Identify sources of information concerning state-of-the-art tools, equipment, materials, technologies and methodologies.	Read current periodicals, industry publications and manufacturer's catalogs.
Use state-of-the-art tools, equipment, materials, technologies and methodologies.					



Architecture and Construction

Pathway: Design/Pre-Construction

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACPA01.01	Academics	#5: Principles of Design and Pre-Construction	Employ basic methods of data collection and analysis to provide information for projects.	Access research methods available to formulate project planning and problem-solving.	Select and employ proper method for a given project.
				Provide appropriate precedents for development of a project.	Articulate logical rationale for use of chosen precedents.
ACPA02.01	Communications	#5: Principles of Design and Pre-Construction	Work with potential clients.	Give a speech to explain a concept.	Show project plans for visual impact.
				Facilitate a variety of clients and agencies.	Evaluate customer comprehension.
					Identify types of client/agency needs.
Mediate diversity to meet needs.					
ACPA03.01	Systems	#7: Introduction to Architectural Technology	Integrate structural systems, environmental systems, safety systems, building envelope systems and building service systems to design modern buildings.	Assess building systems and their interrelationships to develop design criteria.	Select and integrate building systems.
ACPA03.02	Systems	#7: Introduction to Architectural Technology	Review traditional project phases and various roles within them to plan for and implement phases within a project.	Relate traditional project phases and the various roles within them to a current project.	Work through project phases.
ACPA04.01	Safety, Health, and Environmental	#9: Technical Applications of Design and Pre-Construction	Apply the basic principles of environmental impact to enhance project acceptance and quality.	Evaluate and align sustainable design elements to add value to the project.	Integrate sustainable elements into project designs.
ACPA04.02	Safety, Health, and Environmental	#9: Technical Applications of Design and Pre-Construction	Apply design requirements to accommodate people with varying physical abilities.	Study the Americans with Disabilities Act in order to build compliance into project designs.	Integrate Americans with Disabilities Act compliance into project designs.



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ACPA05.01	Leadership and Teamwork	#9: Technical Applications of Design and Pre-Construction	Appreciate the diversity of needs, values and social patterns in project design.	Identify Western, non-Western, national and regional traditions and heritage to express diversity in project design as required.	Apply cultural traditions and diversity to project design.
ACPA06.01	Technical	#7: Introduction to Architectural Technology #8: Design and Pre-Construction Internship #9: Technical Applications of Design and Pre-Construction	Use drawings and computer-generated plans to develop a technical set of drawings.	Identify client's needs and wants to develop criteria for a set of technical drawings.	Develop a set of technical drawings meeting the client's specifications.
ACPA06.02	Technical	#7: Introduction to Architectural Technology #8: Design and Pre-Construction Internship #9: Technical Applications of Design and Pre-Construction	Employ appropriate representational media to convey essential formal elements.	Use two- and three-dimensional drawings to convey graphic information.	Employ basic drawing skills.
					Show three-dimensions in a two-dimensional drawing.
				Reference drawings and sketches to build models.	Employ basic model building techniques.
					Verify accuracy of model based on drawings and sketches used.
				Use appropriate computer technology to convey graphic information.	Employ basic computer modeling techniques.



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ACPA06.03	Technical	#7: Introduction to Architectural Technology #8: Design and Pre-Construction Internship #9: Technical Applications of Design and Pre-Construction	Study principles, conventions, standards, applications and restrictions pertaining to the manufacture and use of construction materials, components and assemblies to incorporate into project design.	Evaluate and select building materials and assemblies to meet project specifications.	Develop and communicate an assigned building assembly.
				Use appropriate combinations of building materials and components to satisfy the requirements of building programs.	Select the more appropriate building assembly.
ACPA06.04	Technical	#7: Introduction to Architectural Technology #8: Design and Pre-Construction Internship #9: Technical Applications of Design and Pre-Construction	Apply basic organizational, spatial, structural and constructional principles to the design of interior and exterior space.	Develop design alternatives to address a given problem.	Evaluate and select the most appropriate solution.



Architecture and Construction

Pathway: Maintenance/Operations

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACPC01.01	Communications	#2: The Language of Architecture and Construction	Recognize universal signs and symbols such as colors, flags, stakes and hand signals to function safely in the workplace.	Identify universal signs and symbols to apply to given workplace situations.	Explain functions of signs and symbols.
					Work safely using signs and symbols.
					Inspect all signs and symbols for safe and proper use.
					Use proper signs and signals for the work area.
ACPC02.01	Problem-Solving and Critical Thinking	#7: Basic Troubleshooting Procedures	Use troubleshooting procedures to solve a maintenance problem.	Troubleshoot to isolate a maintenance problem. Select a solution to address the maintenance problem. Use strategies, tools and equipment to implement the solution.	Identify the problem using at least one appropriate troubleshooting method.
					Identify strategies for implementing the solution.
					Identify tools and equipment needed.
					Use tools and equipment safely, effectively and efficiently. Test and verify that the problem is solved.
ACPC03.01	Technical	#8: Restoration and Repair of Existing Structures	Apply construction skills to restoration of existing structures.	Evaluate restoration problems to plan solutions. Determine materials required to complete restoration. Implement restoration strategies to produce restored structure.	Identify strategies for implementing solutions.
					Match materials selected to the restoration specifications.
					Restore structure to match original structure within specifications.
ACPC03.02	Technical	#8: Restoration and Repair of Existing Structures #9: Technical Applications of Maintenance and Operations	Evaluate the work required to repair existing structures.	Use evaluation strategies to assess the extent and condition of any problems.	Identify potential sources of problems.
					Select the most probable cause of each problem.



Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
			(CONTINUED)	Identify tools, materials and human resources needed to complete the repair work.	Select tools and materials that will repair the problem effectively and efficiently. Employ individuals with the appropriate expertise to complete the repair work.
				Complete the repair work to restore project to the original condition.	Use tools and materials safely, effectively and efficiently. Test and verify that the repair is complete.
ACPC03.03	Technical	#9: Technical Applications of Maintenance and Operations	Practice preventative maintenance to service existing structures.	Develop a checklist to track preventative maintenance.	Read and interpret technical manuals. Identify preventative maintenance needs for a variety of conditions. List maintenance needs for a variety of equipment, systems and structures.
				Identify tools and materials needed to perform preventative maintenance.	Select and use tools and materials safely, effectively and efficiently.
				Establish time-based schedules to perform preventative maintenance.	Follow a maintenance schedule. Complete and maintain preventative maintenance records.
ACPC03.04	Technical	#9: Technical Applications of Maintenance and Operations	Maintain and use operational systems to achieve smooth operation of facilities.	Maintain operations systems such as fire prevention, HVAC, security/alarm, environmental and process systems to meet safety and customer requirements.	Read and interpret technical manuals. Apply information from technical manuals.



Architecture and Construction

Pathway: Construction

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ACPB01.01	Communications	#2: The Language of Architecture and Construction	Recognize universal signs and symbols such as colors, flags, stakes and hand signals to function safely in the workplace.	Identify universal signs and symbols to apply to given workplace situations.	Explain functions of signs and symbols.
					Work safely using signs and symbols.
					Inspect all signs and symbols for safe and proper use.
					Use proper signs and signals for the work area.
					Respond appropriately to signs and signals.
ACPB02.01	Technical Skills	#9: Technical Applications in the Construction Industry	Examine building systems and components to evaluate their usefulness to a project.	Identify building systems needed to complete a construction project.	List all building systems involved in a project.
					Describe the purpose of each system.
				Identify components of building systems needed to complete a construction project.	List all components of the involved building system.
					Describe the function of each component.
Incorporate appropriate building systems into a construction project.	Use appropriate components for the building systems required.				