

SKILLED TRADES (SKT)

Course Descriptions

SKT 102. Aerospace Assembly - Sheet Metal I. 4 Credit Hours.

This course is designed to prepare students for entry into the fabrication of sheet metal assemblies for the aircraft production industry. The course provides entry-level skills in hole preparation and installation of fasteners, including rivets, lockbolts, nutplate installation and removal procedures, and safe practices related to manufacturing aircraft metal structures. Additional lab hours required. (Credit is only allowed for either SKT 102 or SKT 504.)

Prerequisites: ME 154 with a minimum grade of "C", SKT 101 with a minimum grade of "B", and Reading Proficiency

SKT 103. Aerospace Assembly - Sheet Metal II. 3 Credit Hours.

This is the second course in a series to prepare students for entry into the fabrication of sheet metal assemblies for the aircraft production industry. It covers topics in aerospace metal structures including gap, shim and sealing requirements and procedures. Additional lab hours required. (Credit is only allowed for either SKT 103 or SKT 505.)

Prerequisites: SKT 102 with a minimum grade of "B" and Reading Proficiency

SKT 106. Electrical Training Alliance: Introduction to Electrical Profession. 2 Credit Hours.

This is the introductory course to the Electrical Joint Apprenticeship and Training Committee. This course covers the International Brotherhood of Electrical Workers (IBEW) Constitution and local union by-laws, the structure and heritage of the IBEW and National Electrical Contractors Association. Topics include workplace safety and leadership factors. Students identify tools of the trade; proper safety techniques; proper uses of ladders; and proper measurement and alignment techniques.

SKT 107. Carpenter Joint Apprenticeship Program: Introduction to Carpentry. 2 Credit Hours.

Introduction to Carpentry presents an overview of the Carpenters Joint Apprenticeship Program (CJAP) as well as the role of the carpenter on construction sites and the safety measures that are critical to the job. Specific equipment studied includes power tools, lifts, and scaffolds. Additionally, students will learn basic blueprint reading skills including the ability to distinguish the difference between different styles of drawings. Additional lab hours may be required.

SKT 108. Carpenter Joint Apprenticeship Program: Workplace Learning I. 2 Credit Hours.

Carpenter Joint Apprenticeship Program: Workplace Learning I is the component of on-the-job training experience of the First Year Carpenter Joint Apprenticeship Training Program. Students in this course will gain important workplace learning experience based on concepts learned in the first semester curriculum.

SKT 109. Carpenter Joint Apprenticeship Program: Concrete Form Building. 3 Credit Hours.

This course, Carpenter Joint Apprenticeship Program: Concrete Form Building, is a continuation of the Carpenter's Joint Apprenticeship Training program, and will introduce students to basic concrete forming applications and systems, hardware identification, multiple anchoring procedures, concrete terminology, and provide the skills needed for competency in concrete construction. Students will learn to read detailed construction plans, basic building layout procedures, how to establish evaluations and install footings. Students will be given an opportunity to read forming diagrams and apply hands-on construction of concrete forms. Additional lab hours may be required.

SKT 110. Carpenter Joint Apprenticeship Program: Interior Trim. 3 Credit Hours.

Interior Trim is a continuation of the Joint Carpenter Training Council Apprenticeship curriculum. This course is designed with an emphasis on the commercial building aspects of construction. The class offers students extensive instruction in rough and finish commercial applications using metal studs, reading and understanding commercial blueprints, International Building Codes (IBC) and applying proper layout techniques. The course covers crown-molding trim, wall framing, and the use of construction lasers for plumbing, squaring, straightening, and leveling. Additional lab hours may be required.

SKT 111. Electrical Training Alliance: Electrical Conduit Fabrication. 2 Credit Hours.

Electrical Conduit Fabrication is part of the first year core Joint Electrical Training Council curriculum for new apprentices. This course introduces the basic concepts of conduit building. Students will identify and use proper tools, methods, and mathematical calculations to perform different types of bending for residential and commercial conduit assemblies. Additional lab hours may be required.

SKT 112. Electrical Training Alliance: Workplace Learning I. 6 Credit Hours.

Workplace Learning I is the component of "on-the-job training" experience of the First Semester Electrical Training Alliance Curriculum. Students will reinforce and apply concepts previously learned in coursework and in the workplace. Additional hours may be required.

SKT 113. Carpenter Joint Apprenticeship Program: Basic Blueprint Reading. 2 Credit Hours.

Basic Blueprint Reading is a continuation of the Carpenter's Joint Apprenticeship Training program and is designed to introduce students to the basic skills needed to read construction blueprints. Class time will be used to discuss different types of construction drawings, details and specifications used in the construction industry. The course provides hands-on opportunities for students to use basic residential and light commercial blueprints to layout exterior and interior wall plating.

SKT 114. Carpenter Joint Apprenticeship Program: Workplace Learning II. 4 Credit Hours.

Carpenter Joint Apprenticeship Program: Workplace Learning II is the component of "on-the-job training" experience of the First Year Carpenter Joint Apprenticeship Training Program. Students in this course will gain important workplace learning experience based on concepts learned in the first year curriculum.

Prerequisites: SKT 108 with a minimum grade of "C"

SKT 115. Carpenter Joint Apprenticeship Program: Health and Safety I. 3 Credit Hours.

Carpenter Joint Apprenticeship Program: Health and Safety I is a continuation of the Carpenter's Joint Apprenticeship Training Program and will introduce students to basic health and safety practices on the worksite. Particular focus in this course will be on crane signals, aerial lifts, STI Scaffolds and fall protection. Upon completion of this course students will be eligible to attempt the Crane Signal Person Qualification Exam, Aerial Lift Operator Qualification Exam, STI Scaffold User Qualification Exam, Fall Protection Residential Qualification Exam.

SKT 116. Carpenter Joint Apprenticeship Program: Residential Framing. 4 Credit Hours.

Carpenter Joint Apprenticeship Program: Residential Framing is a continuation of the Carpenter's Joint Apprenticeship Training program and will provide students a hands-on opportunity to construct a residential structure on foundation walls. Students will layout and frame a subfloor system, construct and erect exterior walls, build interior walls, frame bay windows, layout and build stairs, and prepare the building for subcontractors. The course covers layout procedures, the use of construction math, cutting list development, material estimating, work performance and safe job-site operations. Upon completion of this course the student will have a better understanding of how to build a subfloor, wall framing, roof framing and stair building.

SKT 117. Carpenter Joint Apprenticeship Program: Welding Basics. 3 Credit Hours.

Carpenter Joint Apprenticeship Program: Welding Basics is designed to introduce students to basic hands on cutting and welding processes. The course will cover welding qualification, certification, American Welder Society (AWS) testing procedures and standards. The course will introduce students to current welding and cutting practices performed in the construction industry developing skills to safely use Arc Welding, oxy-acetylene and plasma cutting equipment.

SKT 118. Carpenter Joint Apprenticeship Program: Millwright Basics. 3 Credit Hours.

Carpenter Joint Apprenticeship Program: Millwright Basics is a continuation of the Carpenter's Joint Apprenticeship Training program, and is designed to provide an overview of the industrial job site for Millwrights in construction.

SKT 119. Carpenter Joint Apprenticeship Program: Workplace Learning III. 4 Credit Hours.

Carpenter Joint Apprenticeship Program: Workplace Learning III is the component on-the-job training experience of the First Year Carpenter Joint Apprenticeship Training Program. Students in this course will gain important workplace learning experience based on concepts learned in the first year curriculum.

SKT 120. Carpenter Joint Apprenticeship Program: Health and Safety II. 2 Credit Hours.

Carpenter Joint Apprenticeship Program: Health and Safety II is a continuation of the Carpenter's Joint Apprenticeship Training Program, and will introduce students to basic health and safety practices on the worksite. Particular focus in this course will address Occupation Safety and Health Administration (OSHA) safety regulations for scaffolding, scaffolding introduction, and the specific procedures for the scaffold erector-user.

SKT 121. Carpenter Joint Apprenticeship Program: Health and Safety III. 2 Credit Hours.

Carpenter Joint Apprenticeship Program: Health and Safety III is a continuation of the Carpenter's Joint Apprenticeship Training Program for students who are interested in gaining rigging and hoisting skills necessary on all construction sites.

Prerequisites: SKT 120 with a minimum grade of "C"

SKT 122. Carpenter Joint Apprenticeship Training: Workplace Learning IV. 4 Credit Hours.

Carpenter Joint Apprenticeship Training: Workplace Learning IV is "on-the-job training" experience for the Carpenter Joint Apprenticeship Training Program. Students in this course will gain important workplace learning experience based on concepts learned in the second year curriculum.

Prerequisites: SKT 119 with a minimum grade of "C"

SKT 123. Carpenter Joint Apprenticeship Training: Workplace Learning V. 4 Credit Hours.

Carpenter Joint Apprenticeship Training: Workplace Learning V is "on-the-job training" experience for the Second Year Carpenter Joint Apprenticeship Training Program. Students in this course will gain important workplace learning experience based on concepts learned in the second year curriculum. Prerequisites: SKT 122 with a minimum grade of "C"

SKT 130. Electrical Training Alliance: Direct Current Theory. 3 Credit Hours.

Electrical Training Alliance: Direct Current Theory is a continuation of the First Year Core Curriculum of the Electrical Joint Apprenticeship and Training Committee. Students in this course will receive comprehensive training on the basics of electricity as it relates to direct current (DC) series circuits. Students will study Ohm's law and electrical circuits, current and voltage characteristics in DC series circuits. Students will be asked to create DC circuits through lab exercises by correctly applying National Electric Code (NEC) requirements.

SKT 131. Electrical Training Alliance: Workplace Learning II. 7 Credit Hours.

Electrical Training Alliance: Workplace Learning II is the "on-the-job training" experience of the First Year Electrical Training Alliance Curriculum. Students in this course will gain important workplace learning experience based on concepts learned in the first year curriculum. Student training in the following areas: wiring, circuits, switches, insulation, conductors, current and voltage. Prerequisites: SKT 112 with a minimum grade of "C"

SKT 132. Electrical Training Alliance: Workplace Learning III. 7 Credit Hours.

Electrical Training Alliance: Workplace Learning III is "on-the-job training" experience for the Electrical Training Alliance Curriculum. Students in this course will gain important workplace learning experience based on concepts learned in the first year curriculum. Students will receive "on the job training" in the following areas: AC Systems; Control System Installation, blueprint reading. Prerequisites: SKT 131 with a minimum grade of "C"

SKT 133. Electrical Training Alliance: Workplace Learning IV. 7 Credit Hours.

Electrical Training Alliance: Workplace Learning IV is "on-the-job training" experience for the Electrical Training Alliance Curriculum. Students in this course will gain important workplace learning experience based on concepts learned in the first year curriculum. Students will receive "on the job training" in the following areas: installing and terminating transformers, service and troubleshooting. Training also includes installing, splicing terminating wires and cables.

Prerequisites: SKT 132 with a minimum grade of "C"

SKT 134. Electrical Training Alliance: Transformers. 2 Credit Hours.

Electrical Training Alliance: Transformers is a continuation of the Electrical Training Alliance, Second Year Core Curriculum. Students in this course will be exposed to the fundamentals of transformers and the different types of transformers.

SKT 135. Electrical Training Alliance: Electrical Blueprint Reading. 2 Credit Hours.

Electrical Training Alliance: Electrical Blueprint Reading is a continuation of the Electrical Training Alliance, Second Year Core Curriculum. Students in this course will be exposed to various methods and processes for evaluating and implementing electrical blueprints on residential worksites. Students will be exposed to blueprint reading, math, electrical and mechanical symbols, and how to create architectural views.

SKT 136. Electrical Training Alliance: Electrical Training Code and Practices I. 2 Credit Hours.

Electrical Training Alliance: Electrical Training Code and Practices I is a continuation of the First Year Core Curriculum of the Electrical Joint Apprenticeship and Training Committee. Students will be introduced to the National Electric Code (NEC) and the basics for interpreting the language of the NEC in order to correctly apply its requirements. Students will learn proper installation requirements for devices and switches used in residential and industrial buildings.

SKT 137. Electrical Training Alliance: Electrical Code and Practices II. 2 Credit Hours.

Electrical Training Alliance: Electrical Code and Practices II is a continuation of the Electrical Training Alliance, Second Year Core Curriculum. Students in this course will be exposed to the principles involved in sizing building wire, calculate conductor ampacity, and demonstrate the National Electrical Code (NEC) requirements for cable assemblies.

SKT 138. Electrical Training Alliance: AC Systems and Theory. 3 Credit Hours.

Electrical Training Alliance: AC Systems and Theory is a continuation of the Electrical Training Alliance, Second Year Core Curriculum. Students in this course will be exposed to a complete overview of Direct Current (DC) Theory, the use of trigonometry and vector math in circuit analysis, the concepts of resistive, inductive, and capacitive effects as they interact in series, parallel and combination AC circuits, polyphase power, AC and DC power generation, filters, resonance, and power factor.

SKT 139. Electrical Training Alliance: Network Technologies. 2 Credit Hours.

Electrical Training Alliance: Network Technologies is a part of the Second Year Core Curriculum of the Electrical Joint Apprenticeship and Training Committee. Students will be introduced to the fundamentals of networking including network topologies, the OSI model, network protocols, wireless technologies, and basic wiring principles.

SKT 140. Laborer Joint Apprenticeship Program: Cutting Torch. 2 Credit Hours.

Cutting Torch is the introductory course in the Laborer's AGC Training Council Apprenticeship program. This course will focus on the safe and effective uses of cutting systems, with a particular focus on different types of oxygen/gas cutting techniques. Students will also learn safety procedures related to cutting including Occupational Health and Safety procedures.

SKT 141. Laborer Joint Apprenticeship Program: Laborer Workplace Learning I. 6 Credit Hours.

Laborer Workplace Learning I is the on-the-job training experience of the First Year Laborer's AGC Training Council Apprenticeship program. Students in this course will gain important workplace learning experience based on concepts learned in the first year curriculum.

SKT 142. Laborer Joint Apprenticeship Program: Hoisting, Rigging, Signaling. 3 Credit Hours.

Hoisting, Rigging, Signaling is a course in the First Year Laborer's AGC Training Council Apprenticeship program. This course will focus on the safe and effective uses of hoisting, rigging and signaling. Students will demonstrate the proper use of hand signals, calculated weights of loads, learn the proper use of knots and hitches, and the proper use of straps, slings and wire rope rigging.

SKT 143. Laborer Joint Apprenticeship Program: Power Tools I. 3 Credit Hours.

Laborer Joint Apprenticeship Program: Power Tools I is the introductory course for using these tools in the Laborer's AGC Training Council Apprenticeship program. This course will focus on the proper use of air and electrical tools.

SKT 144. Laborer Joint Apprenticeship Program: Concrete Placement. 3 Credit Hours.

Laborer Joint Apprenticeship Program: Concrete Placement will allow students to learn all facets of concrete placement including but not limited to personal protective equipment usage; properties of concrete mix; impacts of add-mixtures to concrete; proper tool usage; different forms of a concrete slab; proper mathematical calculations to concrete placement.

SKT 145. Laborer Joint Apprenticeship Program: Concrete Formwork. 3 Credit Hours.

Laborer Joint Apprenticeship Program: Concrete Formwork will allow students to know and understand all facets of concrete formwork including but not limited to: the proper equipment use for formwork, proper methods for leveling and plumbing a wall, proper mathematical concepts to find top wall grade for foundation walls, installation of curbs and gutters, identification of power tools, and proper use of measurements to estimate concrete quantities.

SKT 146. Laborer Joint Apprenticeship Program: Laborer Workplace Learning II. 6 Credit Hours.

Laborer Joint Apprenticeship Program: Laborer Workplace Learning II is the on-the-job training experience of the First Year Laborers AGC Training Curriculum. Students in this course will gain important workplace learning experience based on concepts learned in the first year curriculum.

SKT 147. Laborer Joint Apprenticeship Program: Laborer Workplace Learning III. 6 Credit Hours.

Laborer Joint Apprenticeship Program: Laborer Workplace Learning III is the on-the-job training experience of the Second Year Laborers AGC Training Curriculum. Students in this course will gain important workplace learning experience based on concepts learned in the first year curriculum.

SKT 148. Laborer Joint Apprenticeship Program: Laborer Workplace Learning IV. 6 Credit Hours.

Laborer Joint Apprenticeship Program: Laborer Workplace Learning IV is the on-the-job training experience of the Second Year Laborers AGC Training Curriculum. Students in this course will gain important workplace learning experience based on concepts learned in the first year curriculum.

SKT 149. Laborer Joint Apprenticeship Program: Scaffold Building/Aerial Lift. 3 Credit Hours.

Laborer Joint Apprenticeship Program: Scaffold Building/Aerial Lift will allow students to learn all facets of scaffold building/aerial lifts. Proper analysis, set up, and use of scaffolding will be covered.

SKT 150. Insulator Joint Apprenticeship Program: Insulator Safety I - OSHA. 1 Credit Hour.

Insulator Safety I will focus on nomenclature of OSHA standards, OSHA's 10 hour safety course and the SMART MARK certification.

SKT 151. Insulator Joint Apprenticeship Program: Insulator Safety II. 2 Credit Hours.

Insulator Joint Apprenticeship Program: Health and Safety II will introduce students to basic health and safety practices on the worksite. Particular focus in this course will address Occupation Safety and Health Administration (OSHA) safety regulations for scaffolding, scaffolding introduction, and the specific procedures for the scaffold erector-user.

SKT 152. Insulator Joint Apprenticeship Program: Insulator Safety III. 1 Credit Hour.

Insulator Joint Apprenticeship Program: Health and Safety III i will introduce students to basic health and safety practices on the worksite. Particular focus in this course will address the application of Firestop and Smoke Seal materials used in the insulator industry.

SKT 153. Insulator Joint Apprenticeship Program: Fundamental Insulation I - Piping. 3 Credit Hours.

Insulator Joint Apprenticeship Program: Fundamental Insulation I - Piping will focus on reducing heat transfer by applying proper insulation, finishes and covering to pipes, fittings and valves.

SKT 154. Insulator Joint Apprenticeship Program: Fundamental Insulation II - Equipment. 3 Credit Hours.

Insulator Joint Apprenticeship Program: Fundamental Insulation II - Equipment will focus on reducing heat transfer by applying proper insulation, finishes and covering to HVAC systems and Mechanical Equipment.
Prerequisites: SKT 153 with a minimum grade of "C"

SKT 155. Insulator Joint Apprenticeship Program: Removable Insulation Design. 2 Credit Hours.

Insulator Joint Apprenticeship Program: Removable Insulation Design introduces students to designing and installing removable and reusable insulation devices.

SKT 156. Insulator Joint Apprenticeship Program: Advanced Metal Jacketing II - Equipment. 3 Credit Hours.

Insulator Joint Apprenticeship Program: Advanced Metal Jacketing II - Equipment introduces students to layout, fabrication and installation techniques for protective metal finishes on equipment.

SKT 157. Insulator Joint Apprenticeship Program: Blueprints, Codes and Specifications. 3 Credit Hours.

Insulator Joint Apprenticeship Program: Blueprints, Codes and Specifications allows students to develop the skills necessary to interpret a set of plans, blueprints or drawings.

SKT 158. Insulator Joint Apprenticeship Program: Advanced Metal Jacketing I - Piping. 3 Credit Hours.

Insulator Joint Apprenticeship Program: Advanced Metal Jacketing I - Piping introduces students to layout, fabrication and installation techniques for protective metal finishes on piping.

SKT 159. Insulator Joint Apprenticeship Program: Vapor Barriers. 1 Credit Hour.

Insulator Joint Apprenticeship Program: Vapor Barriers will allow students to understand how condensation affects mechanical insulation and the application of various types and methods of vapor barrier to reduce water vapor transmission through insulation.

SKT 160. Insulator Joint Apprenticeship Program: Workplace Learning I. 5 Credit Hours.

Insulator Joint Apprenticeship Program: Workplace Learning I will allow students to have the apprentice experience on actual worksites, to understand and extend the learned concepts from the classroom and to continue education in the insulation industry through mentoring with journey persons.

SKT 161. Floor Layers Joint Apprenticeship: Hardwood I-Adhesives, Measuring, Herringbone and Parquet Patterns. 2 Credit Hours.

Floor Layers Joint Apprenticeship: Hardwood I – Adhesives, Measuring, Herringbone and Parquet Patterns is part of the Floor Layers Joint Apprenticeship Program Curriculum. This course is designed to instruct the apprentice on the proper procedures and techniques associated with the installation of hardwood pattern flooring.

SKT 162. Floor Layers Joint Apprenticeship: Resilient I. 2 Credit Hours.

Floor Layers Joint Apprenticeship: Resilient I is part of the Floor Layers Joint Apprenticeship Program Curriculum. This course is designed to provide students with the basic skills necessary to install vinyl composition tile (VCT) and standard wall base. Class time will be dedicated to discussion and presentations involving identification of different types of resilient flooring and their characteristics, floor preparation, safe use and maintenance of tools, as well as installation procedures.

SKT 163. Insulator Joint Apprenticeship Program: Workplace Learning II. 5 Credit Hours.

Insulator Joint Apprenticeship Program: Workplace Learning II will allow students to have the apprentice experience on actual work sites, understand and extend the learned concepts from the classroom and to continue education in the insulation industry through mentoring with journey persons.
Prerequisites: SKT 160 with a minimum grade of "C"

SKT 164. Insulator Joint Apprenticeship Program: Workplace Learning III. 6 Credit Hours.

Insulator Joint Apprenticeship Program: Workplace Learning III allows students to expand on the apprentice experience on actual work sites and to extend the learned concepts from the classroom. Students work side by side in the field with journeymen.
Prerequisites: SKT 163 with a minimum grade of "C"

SKT 165. Floor Layers Joint Apprenticeship: Stretching and Sewing. 3 Credit Hours.

Floor Layers Joint Apprenticeship: Stretching and Sewing is part of the Floor Layers Joint Apprenticeship Program Curriculum. This course is designed to introduce students to the basic skills required to estimate the amount of materials needed to supply a job, determine efficient layout of the materials to minimize waste and power stretch carpet in a small room to multiple room application. Students will demonstrate skills in specialized carpet installations including "waterfall" style hand sewn bull-nosed step upholstery, incorporation of designs into carpet rugs and hand binding of area rugs.

SKT 166. Floor Layers Joint Apprenticeship: Apprenticeship Orientation. 2 Credit Hours.

Floor Layers Joint Apprenticeship: Apprenticeship Orientation is part of the Floor Layers Joint Apprenticeship Program Curriculum. This class is designed as an orientation to the Floor Layers' Joint Apprenticeship Program (FLJAP), the Carpenters' Regional Council, as well as the role of the floorlayer on construction sites. Students will receive an Occupational Safety and Health Administration (OSHA) 10 hour construction safety certification card. Basic safety and operation of hand and power tools as well as basic construction site safety will be covered.

SKT 167. Floor Layers Joint Apprenticeship: Hardwood II. 3 Credit Hours.

Floor Layers Joint Apprenticeship: Hardwood II provides instruction, class exercises, and assessment by testing participants in the removal of existing floor coverings and debris from the job site, and diagonal installation of a prefinished hardwood floor with a specified border surrounding this area. Layout procedures in accordance with industry standards and installation techniques and processes associated with the NWFA (National Wood Flooring Association) are taught.

SKT 168. Floor Layers Joint Apprenticeship: Carpet I – Basic Installation and Seaming Methods. 2 Credit Hours.

Floor Layers Joint Apprenticeship: Carpet I – Basic Installation and Seaming Methods is part of the Floor Layers Joint Apprenticeship Program Curriculum. This course is designed to introduce students to the materials and basic skills needed to install track strip, metal transitions, carpet cushion, and the carpet seam making processes for carpet constructions.

SKT 169. Floor Layers Joint Apprenticeship: Ceramic Tile I – Wall Tile Layout and Application. 2 Credit Hours.

Floor Layers Joint Apprenticeship: Ceramic Tile I – Wall Tile Layout and Application is part of the Floor Layers Joint Apprenticeship Program Curriculum. This course is designed to introduce students to basic wall tile and CBU vertical layout, installation techniques including vapor barriers, tile identification, adhesive identification, and safe hand tool and power tool use.

SKT 170. Laborer Joint Apprenticeship Program: Power Tools II. 3 Credit Hours.

Laborer Joint Apprenticeship Program: Power Tools II is the introductory course in the Laborer's AGC Training Council Apprenticeship program. This course will focus on the continued proper use of gas powered tools.

SKT 174. Insulator Joint Apprenticeship Program: Workplace Learning IV. 6 Credit Hours.

Insulator Joint Apprenticeship Program: Workplace Learning IV allows students to demonstrate the skills they have learned through the apprenticeship program. Students will work alongside journeymen on actual work sites in real projects.

Prerequisites: SKT 164 with a minimum grade of "C"