BRIDGERLAND TECHNICAL COLLEGE
btech.edu

Cabinetmaking 2018
Course Descriptions

BLDG 1001 **Safety (OSHA)** **10 Clock Hours**

Course covers general awareness on recognizing and preventing hazards on a construction site. Once the student successfully completes the online OSHA 10-Hour course, they will receive an OSHA 10-Hour Card.
Objectives include knowledge in:
•General safety and health provisions
•Hazardous materials
•Electrical safety
•Fall protection
•Personal protective equipment
•Scaffolds

BLDG 1010 **Industry Intro/Wood Tech/Shop Safet** **35 Clock Hours**

This course address three subjects: Industry Introduction, Wood Technology, and Shop Safety. The first of the subjects will expose the student to Building Trades as it pertains to career opportunities, students will develop tape reading skills, and become acquainted with chemicals used in the shop and learn their responsibility to protect themselves through preventative measures. Wood Technology teaches the composition of woods, the species of woods used in the shop, and mill cut options. Students will also learn how to calculate board and square footage of lumber and sheet goods. Shop Safety will teach safe operation of hand tools, portable tools, stationary equipment, compressed air, and general safety. Videos will be offered online and will include in-shop assignments that coordinate with the videos that will give a “hands on” experience of each machine. The final exam will be administered with a required 100% passing score before other courses can be taken. These courses prepare the student to enter into the “meat” of the curriculum; the designing and manufacture of residential kitchen cabinetry.
Objectives:
•Expose the learner to Building Technology and the opportunities it provides as future employment or a career.
•Demonstrate a working proficiency in tape measurement reading at least to 1/16” with a working knowledge of thirty-seconds of an inch.
•Demonstrate a knowledge of what a Safety Data Sheet (SDS) is and the relevance of such data in regards to chemical exposure training and prevention in the woodshop environment. This information will be presented though the “Right to Know” training manual.
•Demonstrate knowledge the composition of wood.
•Identify the species of wood and the mill cut options (plane sawn, quarter sawn, and rifts sawn).
•Calculate board footage and square footage using both the hand and electronic methods.
•Identify the components of general safety in the woodshop and explain the “do’s and the don’ts” as well as the “why” these general safety rules are so important in the woodshop.
•Demonstrate correct usage of power tools.
•Demonstrate correct usage of hand tools.
•Demonstrate correct usage of portable and stationary woodworking tools.
•Explain the correct uses of compressed air as well as the dangers of its misuse.
•Demonstrate proper nailing techniques with hand and pneumatic fasteners.
•Explain causes and remedies for improper nailing
•Demonstrate correct lifting procedures.
•Demonstrate good housekeeping procedures for both the shop and job site.
•Pass an online final safety exam with a score of 100%.

BTEC 1106 **Computer for Trades** **60 Clock Hours**

This course provides a fundamental understanding of computers and computing. Topics include computer hardware, operating systems, and use of Internet, e-mail applications. The following varies by program: document processing, presentations, and spreadsheets.
Objectives:
•Identify computing fundamentals such as computer hardware, software and operating systems.
•Learn to navigate the Windows environment.
•Learn to use online computing, including Internet and electronic mail.
•Gain knowledge of primary applications such as document processing, presentation development (varies by program), and spreadsheet functions (varies by program).

CABM 1013 **Forklift/CPR & AED** **15 Clock Hours**

Certification in CPR, AED, and First Aid Certification, as well as Forklift Certification will be achieved in this course, to become more valuable in to the employer as well as his co-workers, especially in the event of an accident where quick response is required.
Objectives:
•Obtain CPR/AED/First Aid certifications.
•Obtain a Forklift certification.

CABM 1201 **Plastic Laminate Installation Basic** **30 Clock Hours**

This course will teach the basic techniques in regards to plastic laminate installation. Subjects may include on-site substrate preparation, flatwork plastic laminate installation, backsplash installation, seam fitting, edge filing, and joint caulking techniques. There will be edge treatment options such as exposed wood beveled edges, manufactured edges, and other such edges. Face and edge lamination of cabinet doors and drawer fronts may be covered as jobs require. Additional countertop applications such as solid surfacing may also be available to learn if such an application becomes available in the job.

Objectives:

•Identify the tools required for countertop installation.
•Prepare a countertop for onsite plastic lamination installation.
•Demonstrate how to install plastic laminate on a flatwork scenario.
•Demonstrate how to install a backsplash.
•Demonstrate how to fit a seam joint.
•Demonstrate how to correctly file a plastic laminate edge.
•Demonstrate an exposed wood edge I plastic laminate countertop edge.
•Demonstrate proper sealing techniques for countertops.
•(Optional) Demonstrate the ability to make up and install a solid surface countertop.
•(Optional) Demonstrate how to laminate cabinet doors and/or drawer fronts, both squared and beveled edges.

CABM 1401 **Millwork Project I** **60 Clock Hours**

The purpose of this course will provide for the student a culminating experience to design, layout, and construct a project where all parts involve millwork processes. The student will learn about the differences between stock millwork and specialty millwork as it pertains to residential and commercial applications. The student will be able to use planers, shapers, molder / planers, and other machinery to create paneling, doors, window units, mantles, stair parts, moldings, and trim. A strong focus on jig and fixture development will be inculcated throughout the process. The course is designed to showcase the skills of the student. All projects are subject to instructor approval.

Objectives:

•Design a millwork project where all parts are milled.
•Develop a job plan that involves cut lists, layout, molding profiles, plans of procedure, machinery and cutter selection, jigs and fixtures, and finish sections and submit a formal bill of materials to instructor / client for approval.
•Develop and build all jigs and fixtures required for the project.
•Construct the approved millwork project following the job plan.

CABM 1511 **Design/Planning/Estimating I** **30 Clock Hours**

This course will teach the student the methods and practices of designing, planning, and estimating the FIRST of at least two kitchens in a shop environment. An emphasis on design, purpose, function, appearance, materials, and construction for quality cabinetmaking will be taught. Other items to be taught will include detailed drawing concepts, material specifications, and types, writing bills of materials, efficient timesaving methods, and material cost estimates.

Objectives:

•Demonstrate knowledge of design elements of purpose, function, appearance, materials, and construction as it applies to quality cabinetmaking.
•Differentiate materials and components as per their characteristics, specifications, type, selection, and installation.
•Demonstrate a working knowledge of drawing concepts and blueprint reading.
•Demonstrate a working knowledge of an architectural scale.
•Explain what the symbols and marks are on a given blueprint.
•Develop a “take off” list from a blueprint.
•Perform an “on-site” meeting with the client to discuss kitchen options and preferences.
•Demonstrate the capacity to layout a kitchen by creating a layout stick (story pole) and from that layout stick, develop a bill of materials.
•Demonstrate the ability to plan panel optimization for best sheet yield.
•Create a material cost estimate for the entire project that includes all cabinet components, hardware, installation, labor, and waste factor.

CABM 1521 **Carcass Construction I** **30 Clock Hours**

This course provides the experience of building cabinet carcasses in the first kitchen. Students will be taught the components of a cabinet carcass, as well as the adhesives, pneumatic fasteners, and screws associated with carcass construction. The student will cut out the kitchen carcasses from a cut list, layout and cut dadoes and rabbets, drill for adjustable shelving and assemble the cabinet carcasses. Nailing backs, thus squaring the carcass, and skin application will also be addressed. Upon completion of this course the student will then move on to the next; the face frame phase.

Objectives:

•Explain the purpose of a case.
•List the components of a typical case.
•Describe the 32mm system of case construction.
•Identify the types of woodworking adhesives and their uses.
•Identify the types of screws and pneumatic fasteners and identify the uses of each.
•Identify common woodworking joints and identify uses of each.
•Identify machinery used to cut joinery
•Cut woodworking joints safely and accurate and accurately.
•Correctly cut out a kitchen from a cut list.
•Organize carcasses as per cabinet piece and layout dadoes and rabbets and drawer guide locations with the layout stick (story pole).
•Demonstrate how to set up and cut dadoes on the correct equipment.
•Correctly set up and drill adjustable shelving holes using a line boring machine.
•Demonstrate the ability to correctly assemble the carcass including toe (plinth) block, nailing strip application and nailing on a back to square the carcass.
•Explain the need for a beveled edge on the front a skin and a scribe of the back of the skin.
•Demonstrate how to correctly place a finished end skin.
•Build a lazy susan or other angle base or wall carcass.

CABM 1531 **Face Frame Construction I** **30 Clock Hours**

The Face Frame Construction I Course teaches the facets of face frame cabinetry including the milling procedure; the cutting, laying out, and face frame assembly process; drum sanding; attaching the face frame to the carcass; and finish sanding. Pocket cutting the face frame members prior to face frame assembly will be taught. The layout stick (story pole) will become a powerful tool in fulfilling the requirements of this course while laying out the kitchen and will teach the finer points of cabinet layout.

Objectives:

•Explain the differences between face frame and frameless cabinets. List the pros and cons of each cabinet type.
•Calculate the required footage of cabinet face frame stiles for a project.
•Demonstrate how to mill out face frame stiles (S4S) following the principles of the milling procedure.
•Define the terms “stiles” and “rails” as it pertains to face frame cabinetry.
•Identify the parts of a face frame with doors and drawers within the cabinet front.
•Layout and cut stiles and rails to length utilizing the layout stick as a guide.
•Assemble the cabinet face frame using the pocket cutting method.
•Demonstrate the proper technique while drum sanding.
•Demonstrate how to correctly glue and fasten the face frame to the carcass.
•Demonstrate the proper procedure to finish sand the face and edges of a face frame and carcass skins.

CABM 1541 **Door Construction I** **60 Clock Hours**

Door Construction I is a course designed to provide the student with an exceptional introduction to the world of cabinet door construction. This segment of the cabinet process can be in and of itself a business opportunity where many doors shops act as subcontractors to cabinet shops. Students will be taught the importance of material selection and end and face grain orientation prior to glue, as well as the conditions that affect glue-ups. The instruction may include how to glue using spline, dowels, and biscuits. This course will teach the proper techniques and construction of slab doors, breadboard doors, raised and recessed panel doors, framed glass doors, and may include arched doors, tambour doors and glass doors with muntins. The processes to complete each door style will be addressed from start to finish in the delivered instruction while building the kitchen project. Extensive use of shapers, routers, table saws, jointers, planers, and drum sanders will be obvious in the production of these doors. Cut lists will be developed via spreadsheets.

Objectives:

•Identify the different door stiles used in the cabinet industry and describe the uses, pros, and cons of each.
•Explain the importance of material selection, end grain alternation when edge gluing solid wood panels.
•Explain the term “reading of face grains” as it pertains to doors.
•Pull rough openings, sizes from a layout stick and input the information into a spreadsheet program to create a cut list. Calculate quantities required to complete the project.
•Demonstrate proper panel glue up procedures for raised or breadboard construction using clamps.
•Demonstrate gluing up with dowels, spines, or biscuits and the preparation procedures before glue up.
•Explain the importance of keeping doors flat while gluing and the techniques required.
•Demonstrate the milling procedure for making doors stiles.
•Build slab doors.
•Build edgebanded doors.
•Build edgebanded doors with laminate face.
•Explain the importance of allowing raised or recessed panels to “float”.
•Build raised panel doors, including arches.
•Build recessed panel doors, including arches.
•Build bread board doors.
•Build a wood framed glass door.
•Build a tambour door, including carcass track cuts.
•(Optional) Build a glass door with muntins.
•Demonstrate the proper sanding techniques to ensure a quality door.

CABM 1551 **Drawer Construction I** **30 Clock Hours**

The Drawer Construction I course is designed to teach how to build quality, durable drawers in a kitchen setting. The principle drawer construction method will be the dovetailed drawer system, although other door construction methods will be demonstrated. Building drawers using rollers or without rollers will be demonstrated and practiced. Troubleshooting techniques will be taught to assist in assuring a perfect fit in the drawer construction process. Cut lists will be developed via spreadsheets.

Objectives:

•Identify the different types of drawers and explain the strengths and weaknesses of each.
•Develop an input list from the layout stick.
•Create a cut list using a spreadsheet program.
•Explain the differences between drawers with and without rollers.
•Build a dovetail drawer including drawer guide or roller, and drawer front.
•Build a dado rabbet drawer including drawer guide or roller, and drawer front.
•Demonstrate how to adjust a drawer with or without a roller to ensure smooth operation.
•Build a roll out shelf.
•Build a pull out spice rack drawer

CABM 1561 **Finishing Applications/Techniques I** **30 Clock Hours**

The finishing phase of the cabinetmaking process is the greatest challenge for the student and will require practice to learn the techniques involving sanding and finish application. Thus, this course will teach the techniques such as proper sanding, staining, filler application, and glazing; various decorative effects on wood; how to apply various types of topcoats; and correction of surface defects such as dents, cracks, and voids.

Objectives:

•Inspection of surface to determine finishing needs.
•Learn to select and properly use the correct sanding medium.
•Recognize the adhesives and backings for various coated abrasives.
•Operate portable and stationary sanding equipment.
•Correctly apply wiping stains, fillers, and glazing.
•Create aged effects on wood (distressing or scorching).
•Correctly use wood putty and fillers.
•Develop a proficiency in top coat application.

CABM 1571 **Hardware Installation I** **30 Clock Hours**

This course is designed to allow the student to learn how to install a vast selection of cabinet hardware in the first kitchen. Discussion of proper use, specifications, types, and selection of hardware will be addressed. Instruction in hardware installation will be a central focus. Items taught in this area will include: cabinet door hinges and drawer slide options, pulls and knobs, and adjustable shelf accessories. Specialty hardware will also be emphasized such as: lazy susans; tip out trays; pull out accessories; wire pullouts; pantry, computer, and entertainment center hardware; and other applicable hardware.

Objectives:

•Identify the different types of cabinet hardware.
•Demonstrate knowledge of proper use, specifications, types, and selection of hardware.
•Identify cabinet door hinge options and define the function of each.
•Identify drawer slide options and define the function of each.
•Identify cabinet shelf support options and define the function of each.
•Demonstrate knowledge of the wide variety of cabinet pulls and knobs.
•Demonstrate knowledge of the uses of the specialty hardware used in the cabinet.
•Install face frame and concealed hinges following manufacturer's recommendations.
•Install both three-quarter and full extension drawer slides. Define the benefits of each.
•Layout, drill, and install cabinet pulls and knobs.
•Install or drill adjustable shelf hardware.
•Install a lazy susan set in an angle base or wall cabinet according to specifications.
•Install a tip out tray assembly.
•Properly install pullout hardware (pantry, breadboard, etc.).
•Install computer and entertainment center hardware as per specifications.

CABM 1581 **On-site Kitchen Installation I** **60 Clock Hours**

This course will teach techniques to install cabinets of the first kitchen in a residential or commercial setting. Installing box cabinet, semi-custom, and custom cabinets will be addressed. Concepts, such as required tools, fasteners, fastening techniques, plumbing and electrical location, scribing, leveling, finish and crown mold installation and cabinet hardware adjustment, will be covered. Countertop preparation may be addressed depending on the countertop type. Licensing and liability will also be discussed.

Objectives:

•Demonstrate knowledge of the differences between box, semi-custom, and custom cabinets.
•Identify the tools required for cabinet installation.
•Specify the fasteners required for cabinet and countertop installation.
•Identify fastening techniques and fastener location and spacing.
•Demonstrate how to locate and cut plumbing and electrical fixtures in the cabinet back / floor.
•Scribe a cabinet to fit a wall.
•Demonstrate how to level a cabinet.
•Set the base cabinets in a kitchen and / or vanity on site setting.
•Set the wall cabinets in a kitchen and / or vanity on site setting.
•Prepare, if available, a countertop for onsite plastic lamination installation.
•Demonstrate final hardware adjustment and pull / knob installation.
•Demonstrate finish trim installation.
•Properly install crown molding.
•Demonstrate knowledge about licensing and liability requirements to be cabinet installers.

CABM 1591 **Work Habits Evaluation I** **Clock Hours**

This course will assess a student's workplace readiness. Throughout the program, students will develop essential human-relation skills needed to gain and maintain satisfying employment. Through realistic lab experiences, students will gain familiarization with problematic areas found in the workforce including: critical thinking, problem solving, teamwork, interpersonal skills, communication, others. Students will be assessed on their performance throughout each kitchen construction / installation project by the instructor.

Objectives:

•Uses time productively
•Follows verbal and written directions
•Exhibits initiative and self-motivation
•Demonstrates ability to solve problems
•Works cooperatively with co-workers
•Displays a mature, positive attitude
•Is dependable, attentive, and punctual

CABM 2012 **Design/Planning/Estimating II** **30 Clock Hours**

This course will teach the student the methods and practices of designing, planning, and estimating the SECOND of at least two kitchens in a shop environment. An emphasis on design, purpose, function, appearance, materials, and construction for quality cabinetmaking will be taught. Other items to be taught will include detailed drawing concepts, material specifications, and types, writing bills of materials, efficient timesaving methods, and material cost estimates.

Objectives:

•Demonstrate knowledge of design elements of purpose, function, appearance, materials, and construction as it applies to quality cabinetmaking.
•Differentiate materials and components as per their characteristics, specifications, type, selection, and installation.
•Demonstrate a working knowledge of drawing concepts and blueprint reading.
•Demonstrate a working knowledge of an architectural scale.
•Explain what the symbols and marks are on a given blueprint.
•Develop a “take off” list from a blueprint.
•Perform an “on-site” meeting with the client to discuss kitchen options and preferences.
•Demonstrate the capacity to layout a kitchen by creating a layout stick (story pole) and from that layout stick, develop a bill of materials.
•Demonstrate the ability to plan panel optimization for best sheet yield.
•Create a material cost estimate for the entire project that includes all cabinet components, hardware, installation, labor, and waste factor.

CABM 2022 **Carcass Construction II** **30 Clock Hours**

This course provides the experience of building cabinet carcasses in the first kitchen. The Student will be taught the components of a cabinet carcass as well as the adhesives, pneumatic fasteners, and screws associated with carcass construction. The student will cut out the kitchen carcasses from a cut list, layout and cut dadoes and rabbets, drill for adjustable shelving and assemble the cabinet carcasses. Nailing backs, thus squaring the carcass, and skin application will also be addressed. Upon completion of this course the student will then move on to the next; the face frame phase.

Objectives:

•Explain the purpose of a case.
•List the components of a typical case.
•Describe the 32mm system of case construction.
•Identify the types of woodworking adhesives and their uses.
•Identify the types of screws and pneumatic fasteners and identify the uses of each.
•Identify common woodworking joints and identify uses of each.
•Identify machinery used to cut joinery
•Cut woodworking joints safely and accurate and accurately.
•Correctly cut out a kitchen from a cut list.
•Organize carcasses as per cabinet piece and layout dadoes and rabbets and drawer guide locations with the layout stick (story pole).
•Demonstrate how to set up and cut dadoes on the correct equipment.
•Correctly set up and drill adjustable shelving holes using a line boring machine.
•Demonstrate the ability to correctly assemble the carcass including toe (plinth) block, nailing strip application and nailing on a back to square the carcass.
•Explain the need for a beveled edge on the front a skin and a scribe of the back of the skin.
•Demonstrate how to correctly place a finished end skin.
•Build a lazy susan or other angle base or wall carcass.

CABM 2032 **Face Frame Construction II** **30 Clock Hours**

The Face Frame Construction II Course teaches the facets of face frame cabinetry including the milling procedure; the cutting, laying out, and face frame assembly process; drum sanding; attaching the face frame to the carcass; and finish sanding. Pocket cutting face frame members prior to face frame assembly will be taught. The layout stick (story pole) will become a powerful tool in fulfilling the requirements of this course while laying out the kitchen and will teach the finer points of cabinet layout.

Objectives:

•Explain the differences between face frame and frameless cabinets. List the pros and cons of each cabinet type.
•Calculate the required footage of cabinet face frame stiles for a project.
•Demonstrate how to mill out face frame stiles (S4S) following the principles of the milling procedure.
•Define the terms “stiles” and “rails” as it pertains to face frame cabinetry.
•Identify the parts of a face frame with doors and drawers within the cabinet front.
•Layout and cut stiles and rails to length utilizing the layout stick as a guide.
•Assemble the cabinet face frame using the pocket cutting method.
•Demonstrate the proper technique while drum sanding.
•Demonstrate how to correctly glue and fasten the face frame to the carcass.
•Demonstrate the proper procedure to finish sand the face and edges of a face frame and carcass skins.

CABM 2042 **Door Construction II** **60 Clock Hours**

Door Construction I is a course designed to provide the student with an exceptional introduction to the world of cabinet door construction. This segment of the cabinet process can be in and of itself a business opportunity where many doors shops act as subcontractors to cabinet shops. Students will be taught the importance of material selection and end and face grain orientation prior to glue as well as the conditions that affect glue-ups. The instruction may include how to glue up using spline, dowels, and biscuits. This course will teach the proper techniques and construction of slab doors, breadboard doors, raised and recessed panel doors, framed glass doors, and may include arched doors, tambour doors and glass doors with muntins. The processes to complete each door style will be addressed from start to finish in the delivered instruction while building the kitchen project. Extensive use of shapers, routers, table saws, jointers, planers, and drum sanders will be obvious in the production of these doors. Cut lists will be developed via spreadsheets.

Objectives:

•Identify the different door stiles used in the cabinet industry and describe the uses, pros, and cons of each.
•Explain the importance of material selection, end grain alternation when edge gluing solid wood panels.
•Explain the term “reading of face grains” as it pertains to doors.
•Pull rough openings, sizes from a layout stick and input the information into a spreadsheet program to create a cut list. Calculate quantities required to complete the project.
•Demonstrate proper panel glue up procedures for raised or breadboard construction using clamps.
•Demonstrate gluing up with dowels, spines, or biscuits and the preparation procedures before glue up.
•Explain the importance of keeping doors flat while gluing and the techniques required.
•Demonstrate the milling procedure for making doors stiles.
•Build slab doors.
•Build edgebanded doors.
•Build edgebanded doors with laminate face.
•Explain the importance of allowing raised or recessed panels to “float”.
•Build raised panel doors, including arches.
•Build recessed panel doors, including arches.
•Build bread board doors.
•Build a wood framed glass door.
•Build a tambour door, including carcass track cuts.
•(Optional) Build a glass door with muntins.
•Demonstrate the proper sanding techniques to ensure a quality door.

CABM 2052 **Drawer Construction II** **30 Clock Hours**

The Drawer Construction II course is designed to teach how to build quality, durable drawers in a kitchen setting. The principle drawer construction method will be the dovetailed drawer system, although other door construction methods will be demonstrated. Building drawers using rollers or without rollers will be demonstrated and practiced. Troubleshooting techniques will be taught to assist in assuring a perfect fit in the drawer construction process. Cut lists will be developed via spreadsheets.

Objectives:

•Identify the different types of drawers and explain the strengths and weaknesses of each.
•Develop an input list from the layout stick.
•Create a cut list using a spreadsheet program.
•Explain the differences between drawers with and without rollers.
•Build a dovetail drawer including drawer guide or roller, and drawer front.
•Build a dado rabbet drawer including drawer guide or roller, and drawer front.
•Demonstrate how to adjust a drawer with or without a roller to ensure smooth operation.
•Build a roll out shelf.
•Build a pull out spice rack drawer

CABM 2062 **Finishing Applications/Technique II** **30 Clock Hours**

The finishing phase of the cabinetmaking process is the greatest challenge for the student and will require practice to learn the techniques involving sanding and finish application. Thus, this course will teach the techniques such as proper sanding, staining, filler application, and glazing; various decorative effects on wood; how to apply various types of topcoats; and correction of surface defects such as dents, cracks, and voids in the second kitchen.

Objectives:

•Inspection of surface to determine finishing needs.
•Learn to select and properly use the correct sanding medium.
•Recognize the adhesives and backings for various coated abrasives.
•Operate portable and stationary sanding equipment.
•Correctly apply wiping stains, fillers, and glazing.
•Create aged effects on wood (distressing or scorching).
•Correctly use wood putty and fillers.
•Develop a proficiency in top coat application.

CABM 2072 **Hardware Installation II** **30 Clock Hours**

This course is designed to allow the student to learn how to install a vast selection of cabinet hardware in the first kitchen. Discussion of proper use, specifications, types, and selection of hardware will be addressed. Instruction in hardware installation will be a central focus. Items taught in this area will include: cabinet door hinges and drawer slide options, pulls and knobs, and adjustable shelf accessories. Specialty hardware will also be emphasized such as: lazy susans; tip out trays; pull out accessories; wire pullouts; pantry, computer, and entertainment center hardware; and other applicable hardware.

Objectives:

•Identify the different types of cabinet hardware.
•Demonstrate knowledge of proper use, specifications, types, and selection of hardware.
•Identify cabinet door hinge options and define the function of each.
•Identify drawer slide options and define the function of each.
•Identify cabinet shelf support options and define the function of each.
•Demonstrate knowledge of the wide variety of cabinet pulls and knobs.
•Demonstrate knowledge of the uses of the specialty hardware used in the cabinet.
•Install face frame and concealed hinges following manufacturer's recommendations.
•Install both three-quarter and full extension drawer slides. Define the benefits of each.
•Layout, drill, and install cabinet pulls and knobs.
•Install or drill adjustable shelf hardware.
•Install a lazy susan set in an angle base or wall cabinet according to specifications.
•Install a tip out tray assembly.
•Properly install pullout hardware (pantry, breadboard, etc.).
•Install computer and entertainment center hardware as per specifications.

CABM 2082 **On-site Kitchen Installation II** **60 Clock Hours**

This course will teach techniques to install cabinets of the second kitchen in a residential or commercial setting. Installing box cabinet, semi-custom, and custom cabinets will be addressed. Concepts, such as required tools, fasteners, fastening techniques, plumbing and electrical location, scribing, leveling, finish and crown mold installation and cabinet hardware adjustment, will be covered. Countertop preparation may be addressed depending on the countertop type. Licensing and liability will also be discussed.

Objectives:

•Demonstrate knowledge of the differences between box, semi-custom, and custom cabinets.
•Identify the tools required for cabinet installation.
•Specify the fasteners required for cabinet and countertop installation.
•Identify fastening techniques and fastener location and spacing.
•Demonstrate how to locate and cut plumbing and electrical fixtures in the cabinet back / floor.
•Scribe a cabinet to fit a wall.
•Demonstrate how to level a cabinet.
•Set the base cabinets in a kitchen and / or vanity on site setting.
•Set the wall cabinets in a kitchen and / or vanity on site setting.
•Prepare, if available, a countertop for onsite plastic lamination installation.
•Demonstrate final hardware adjustment and pull / knob installation.
•Demonstrate finish trim installation.
•Properly install crown molding.
•Demonstrate knowledge about licensing and liability requirements to be cabinet installers.

CABM 2092 **Work Habits Evaluation II** **Clock Hours**

This course will assess a student's workplace readiness. Throughout the program, students will develop essential human-relation skills needed to gain and maintain satisfying employment. Through realistic lab experiences, students will gain familiarization with problematic areas found in the workforce including: critical thinking, problem solving, teamwork, interpersonal skills, communication, others. Students will be assessed on their performance throughout each kitchen construction / installation project by the instructor.

Objectives:

•Uses time productively
•Follows verbal and written directions
•Exhibits initiative and self-motivation
•Demonstrates ability to solve problems
•Works cooperatively with co-workers
•Displays a mature, positive attitude
•Is dependable, attentive, and punctual