

**American Council on Education  
College Credit Recommendation Service**

---

**New Jersey Regional Council of Carpenters  
Joint Apprenticeship Training Committee  
221 South 31<sup>st</sup> Street  
Kenilworth, New Jersey 07033**

**NOVEMBER 3-4, 2005**

**Review Conducted By  
Thomas Edison State College  
Trenton, New Jersey**

---

**New Jersey Regional Council of Carpenters  
Joint Apprenticeship Training Committee**

The New Jersey Carpenters Apprentice Training and Educational Fund was instituted in 1969. It is a non-profit fund chartered under a trust agreement. Its purpose is to develop and deliver training for approximately 1500 apprentices and 16,000 journeymen members of the New Jersey Regional Council of the United Brotherhood of Carpenters. The Fund owns and maintains 3 training centers in 3 locations: Kenilworth, New Jersey, Trenton, New Jersey and Hammonton, New Jersey. The fund currently leases an additional facility in Kenilworth, New Jersey to run a specialized carpenter program. These facilities combined incorporate 120,000 plus square feet to provide the training for the apprentice and journey level carpenters, millwrights, mill cabinet, floor layer and specialty trades within the Council's jurisdiction. The Fund is funded by negotiated contributions. The members of the local unions of the United Brotherhood of Carpenters and the New Jersey Regional Council of Carpenters receive the training at no cost.

**Source of Official Student Records:** Registry of Credit Recommendations, American Council on Education, One Dupont Circle, Washington, DC 20036-1193.

**Additional information about the courses:** Office of Corporate Higher-Education Programs, Thomas Edison State College, 101 West State Street; Trenton, New Jersey 08608-1176, (609) 633-6271; [corpinfo@tesc.edu](mailto:corpinfo@tesc.edu) .

ACE/College Credit Recommendation Service Evaluation  
Conducted By  
Thomas Edison State College

For

**New Jersey Regional Council of Carpenters  
Joint Apprenticeship Training Committee**

on

**November 3-4, 2005**

**Review Team Members:**

Prof. John Gribbin, PE  
Chair, Division of Engineering  
Technologies & Computer Sciences  
Essex County College  
Newark, New Jersey

Dr. Timothy R. Jacobsen  
Director of Aquaculture Technology  
Program  
Cumberland County College  
Vineland, New Jersey

Dr. Dilip Trikamji Shah  
Associate Professor  
Department of Construction Management &  
Safety, School of Technology  
North Carolina A&T State University  
Greensboro, North Carolina

---

**ACE Coordinator:**

Mr. Dan Negrón  
Director  
Corporate-Higher Education Programs  
Thomas Edison State College  
Trenton, New Jersey

**Co-Coordinator:**

Dr. Alvin Williams  
Associate Professor  
Division of Engineering  
Technologies & Computer Science  
Essex County College  
Newark, New Jersey

New Jersey Regional Council of Carpenters  
Joint Apprenticeship Training Committee

November 3-4, 2005

Index of Course Exhibits

Page #	Title/Course Number	Credit Recommendation	Dates
7.	Advanced Welding WE 102	2 LL*	January 1999-Present
8.	Aerial Lift-Use and Safety AL101	*	January 1999-Present
9.	Basic Skills/Basic Hand and Power Tool Use and Safety CBS 100	*	January 1999-Present
10.	Blueprint Reading PR 101 Part II	3 LL*	January 1999-Present
11.	Cardiopulmonary Resuscitation (CPR)	3 LL*	January 1999-Present
12.	Concrete Formwork TTI 102	2 LL	January 1999-Present
13.	Construction Materials and Methods CMM101	3 LL	January 1999-Present
14.	Drywall Finishing DWF101 Part I Basic	*	January 1999-Present
15.	Drywall Finishing DWF101 Part II Advanced	*	January 1999-Present
16.	Exterior Finish TTI 105	3 LL*	January 1999-Present
17.	First Five Minutes SA 101	*	January 1999-Present
18.	General Knowledge Ergonomics	*	January 1999-Present
19.	Interior Finish TTI 106	*	January 1999-Present
20.	Introduction to Blueprint Reading PR101 Part I	*	January 1999-Present
21.	Introduction to Computers Part I COM 100	*	January 1999-Present

\*Course must be combined with other course(s) for award of credit recommendation. See the credit recommendation on the individual course exhibit for details.

New Jersey Regional Council of Carpenters  
Joint Apprenticeship Training Committee

November 3-4, 2005

Index of Course Exhibits  
(Continued)

Page #	Title/Course Number	Credit Recommendation	Dates
22.	Introduction to Computers Part II COM 102	3 LL*	January 1999-Present
23.	Introduction to Construction Supervision STP101 Part I	*	January 1999-Present
24.	Introduction to Construction Supervision Part II	3 LL*	January 1999-Present
25.	Introduction to Rigging Hardware and Procedures BAR101	1 LL*	January 1999-Present
26.	Introduction to Welding WE 101	*	January 1999-Present
27.	Knots and Splicing Technology KST101	*	January 1999-Present
28.	Labor History (Part I-IV) LAH101	3 LL	January 1999-Present
29.	Level and Transit GE101 Part I	1 LL*	January 1999-Present
30.	Mathematics for Construction	1 LL	January 1999-Present
31.	Metal Framing and Drywall TTI 104	*	January 1999-Present
32.	OJT/Technical Concentration- Concrete Formwork OJT 102	3 LL	January 1999-Present
33.	OJT/Technical Concentration- Metal Stud Framing & Drywall Application OJT 104	2 LL	January 1999-Present
34.	OJT/Technical Concentration of General Knowledge OJT 101	1 LL	January 1999-Present
35.	OJT/Technical Concentration of Supplemental Skills OJT 107	3 LL	January 1999-Present

\*Course must be combined with other course(s) for award of credit recommendation. See the credit recommendation on the individual course exhibit for details.

New Jersey Regional Council of Carpenters  
Joint Apprenticeship Training Committee

November 3-4, 2005

Index of Course Exhibits  
(Continued)

Page #	Title/Course Number	Credit Recommendation	Dates
36.	OJT/Technical Concentration- Exterior Finish Application OJT 105	2 LL	January 1999-Present
37.	OJT/Technical Concentration- Interior Finish OJT 106	2 LL	January 1999-Present
38.	OJT-Wood Framing and Light Gauge Metal Framing OJT 103	3 LL	January 1999-Present
39.	OSHA 10 Construction Outreach SA 104	*	January 1999-Present
40.	OSHA 30 Construction Outreach PAT101	*	January 1999-Present
41.	Power Actuated Tools-Use and Safety	*	January 1999-Present
42.	Qualified Scaffold Erector 14SC	1 LL	January 1999-Present
43.	Transit and Level GE101 Part II	*	January 1999-Present
44.	The Use of the Laser Level in Construction	*	January 1999-Present
45.	Wood and Light Gauge Metal Framing TTI 103	2 LL*	January 1999-Present

**Total Courses - 39**

**Total Credits - 47**

\*Course must be combined with other course(s) for award of credit recommendation. See the credit recommendation on the individual course exhibit for details.

## **Credit Recommendation**

**Course:** Advanced Welding WE102

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 40 hours

**Dates:** January 1999 - Present

**Objective:** To increase the skills of the welder by introducing the welder to additional electrodes with an emphasis on out of position welding.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: weld out of position using the SMAW welding procedure; utilize additional electrodes to develop their welding skills; prepare and weld flat and horizontal with various joints and joint preparations.

**Instruction:** Major topics covered in the course are: Safety; Oxy-acetylene Torch and Arc Welding. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: demonstrations, exams, projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Introduction to Welding (11/05). Note: The student must complete the following two courses to receive the credit recommendation: Introduction to Welding WE101; and Advanced Welding WE102.

## **Credit Recommendation**

**Course:** Aerial Lift-Use and Safety AL101

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 8 hours

**Dates:** January 1999 - Present

**Objective:** To instruct the apprentice in the safe, proper operation of the Aerial Lift.

**Learning Outcome:** Upon successful completion of this course, the student will be able to:  
understand the safety regulations related to aerial lift operation; operate the aerial lift in a proper safe manner.

**Instruction:** Major topics covered in the course are: Proper safe operation of the Aerial Lift. Methods of instruction include: lecture and lab. Evaluation criteria include: demonstration, exams and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Introduction to Rigging Procedures in Construction (11/05). Note: The student must complete the following three courses to receive the credit recommendation: Introduction to Rigging Hardware and Procedures BAR101, Knots and Splicing Technology KST101, and Aerial Lift AL101.

## **Credit Recommendation**

**Course:** Basic Skills/Basic Hand and Power Tool Use and Safety CBS100

**Location:** Kenilworth, Trenton and Hammonton, NJ

**Length:** 14 hours

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to become familiar with and demonstrate the proper, safe methods of using basic hand and power tools, and to reinforce the necessity for the utilization of proper protective equipment.

**Learning Outcome:** Upon successful completion of this course, the student will be able to:  
Safely and properly use basic hand tools; safely and properly use basic power tools; identify and utilize the proper personal protective equipment.

**Instruction:** Major topics covered in the course are: Applied and job site safety; Proper, safe use of basic hand tools; Proper, safe use of basic power tools; Proper safe and effective use of personal protective equipment. Methods of instruction include lecture, discussion and hands-on lab. Evaluation criteria include: examinations, demonstrations, supervisor observation and projects.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Safety and Standards (11/05). Note: The student must complete the following seven courses to receive the credit recommendation: 1) Basic Hand and Power Tool Use and Safety CBS-100; 2) Cardiopulmonary Resuscitation (CPR); 3) First Five Minutes SA-101; 4) Power Actuated Tools – Use and Safety PAT-101; 5) OSHA 10 Construction Outreach SA-104; 6) OSHA 30 Construction Outreach; 7) General Knowledge Ergonomics.

## **Credit Recommendation**

**Course: Blueprint Reading Part II**

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 24 hours

**Dates:** January 1999 - Present

**Objective:** To expand and reinforce the apprentices' knowledge of Blueprint Reading and introduce them to quantitative take off and estimating.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: reinforce and add to the knowledge gained by completion of Basic Blueprint Reading; develop additional accuracy in reading and interpreting blueprints; perform quantitative take off and estimating of material; gain confidence in their ability to read and interpret the prints and transfer the interpretation over to a construction project.

**Instruction:** Major topics covered in the course are: Blueprint Reading; Quantitative take off; Estimating. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: demonstrations, supervisor observation and exams.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Drawing or Blueprint Reading (11/05). Note: The student must complete the following two courses to receive the credit recommendation: Introduction to Blueprint Reading PR101 Part I and Blueprint Reading Part II.

## **Credit Recommendation**

**Course:** **Cardiopulmonary Resuscitation (CPR)**

**Location:** Kenilworth, Trenton, Hammonton, NJ

**Length:** 4 hours

**Dates:** January 1999 - Present

**Objective:** To teach the apprentice when and how to perform CPR safely and properly.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand CPR and how to determine the need for CPR; understand and perform the proper procedures for administering CPR.

**Instruction:** Major topics covered in the course are: What is CPR; When CPR should/should not be administered; How to properly administer CPR. Methods of instruction include: lecture, discussion and role play. Evaluation criteria include: written, hands-on demonstration, observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Safety and Standards (11/05). Note: The student must complete the following seven courses to receive the credit recommendation: 1) Cardiopulmonary Resuscitation (CPR); 2) Basic Hand and Power Tool Use and Safety CBS-100; 3) First Five Minutes SA-101; 4) Power Actuated Tools – Use and Safety PAT-101; 5) OSHA 10 Construction Outreach SA-104; 6) OSHA 30 Construction Outreach; 7) General Knowledge Ergonomics.

## **Credit Recommendation**

**Course:** Concrete Formwork TTI 102

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 160 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentices to and give them basic training in the general knowledge, specific procedures and mandatory subjects that will be utilized by the apprentices as they mature as carpenters and must be introduced through classroom and hands-on training in the laboratory in the training center through related training sessions to increase the apprentice's competency in construction.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand and apply the mathematical concepts related to concrete formwork; understand and practice the proper selection of wall ties and tie spacing based on formwork to be constructed; understand the effects of lateral pressure on formwork and construct forms based on good procedure and evident pressure; understand and apply concrete forming principles to footing, wall and pilaster forming using traditional wood forms; understand and apply concrete principles using patented hardware forming systems and patented form systems.

**Instruction:** Major topics covered in the course are: Mathematical concepts related to concrete forms and forming systems; Tools, materials and fasteners related to concrete formwork; Hand and power tools and safety related to concrete formwork; Estimating, layout and machining of materials; Construction of wood forms; Identification, nomenclature and assembly of patented hardware forming systems and patented forms; Identification and nomenclature of form hardware. Methods of instruction include: lecture and lab. Evaluation criteria include: projects/workgroups, exams, demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Concrete Formwork Construction (11/05).

## **Credit Recommendation**

**Course:** Construction Materials and Methods CMM101

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 64 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentice to the proper use and methods of application of construction materials.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: develop a working knowledge of the materials used in construction; identify the materials used in construction; understand the makeup and characteristics of the materials used in construction; understand and identify the proper application of the materials used in construction; demonstrate the proper methods of application of construction materials.

**Instruction:** Major topics covered in the course are: Construction materials ID and Nomenclature; Makeup and characteristics of the materials used in construction; Safety related to the application of the materials; Proper methods of application of Construction Materials. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: written; exams, hands-on demonstrations, projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Materials and Methods for Carpenters (11/05).

## Credit Recommendation

**Course:** Drywall Finishing DWF101 Part I Basic

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 14 hours

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to perform drywall finishing.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: know drywall finishing technology; be aware of the materials and trim accessories used in drywall finishing; be aware of the tools and procedures used in drywall finishing; prepare and apply the first finish coat.

**Instruction:** Major topics covered in the course are: Drywall Finishing: Materials, Tools and Processes. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: demonstrations, projects, exams and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Millwork and Finishing (11/05). Note: The student must complete the following four courses to receive the credit recommendation: 1) Exterior Finish TT105; 2) Interior Finish TT106; 3) Drywall Finishing DWF101 Part I; 4) Drywall Finishing DWF101 Part II.

## **Credit Recommendation**

**Course:** Drywall Finish DWF101 Part II Advanced

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 14 hours

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to perform drywall finishing from start to completion.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand how to do second and third coat drywall finishing technology; be aware of the tools and procedures used in drywall finishing for the second and third coats; understand how to use automatic tools for drywall finishing.

**Instruction:** Major topics covered in the course are: Drywall Finishing: Materials, Tools and Processes. Methods of instruction include: lecture and lab. Evaluation criteria include: demonstrations, projects, exams and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Millwork and Finishing (11/05). Note: The student must complete the following four courses to receive the credit recommendation: 1) Exterior Finish TT105; 2) Interior Finish TT106; 3) Drywall Finishing DWF101 Part I; 4) Drywall Finishing DWF101 Part II.

## **Credit Recommendation**

**Course:** Exterior Finish TTI 105

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 80 hours

**Dates:** January 1999 - Present

**Objective:** To provide apprentices with basic training specific procedures that will be utilized in exterior finishing work.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand and apply the mathematical concepts taught in the classroom to the hands on application in the laboratory as they relate to the estimating, layout and application of materials used in exterior finish materials; identify and explain the proper application of materials used in exterior finish applications; identify and demonstrate the safe and proper use of hand and power tools related to exterior finish work; identify the types of fastening systems used for exterior finish work; estimate, layout, cut and demonstrate the proper, safe application of materials used in exterior finish work.

**Instruction:** Major topics covered in the course are: Review of mathematical concepts; Safety; Identification of tools, materials and fasteners; How to estimate materials. Methods of instruction include: lecture and lab. Evaluation criteria include: projects/workgroups; exams, demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Millwork and Finishing (11/05). Note: The student must complete the following four courses to receive the credit recommendation: 1) Exterior Finish TT105; 2) Interior Finish TT106; 3) Drywall Finishing DWF101 Part I; 4) Drywall Finishing DWF101 Part II.

## **Credit Recommendation**

**Course:** First Five Minutes SA 101

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 4 hours

**Dates:** January 1999 - Present

**Objective:** To teach participants how to recognize and provide initial treatment for common emergencies.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand emergency first aid; understand the steps to be taken in an emergency first aid situation; recognize an emergency situation and take the appropriate steps to prevent further injury; perform basic first aid and secure the injured person(s) until emergency personnel arrive.

**Instruction:** Major topics covered in the course are: A Basic Understanding of First Aid/Emergency Treatment; The Proper Steps to Take; What You Can and Can Not Do/Should and Should Not Do in an Emergency. Methods of instruction include lecture, discussion, lab. Evaluation criteria include: exams, presentations, demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Safety and Standards (11/05). Note: The student must complete the following seven courses to receive the credit recommendation: 1) Cardiopulmonary Resuscitation (CPR); 2) Basic Hand and Power Tool Use and Safety CBS-100; 3) First Five Minutes SA-101; 4) Power Actuated Tools – Use and Safety PAT-101; 5) OSHA 10 Construction Outreach SA-104; 6) OSHA 30 Construction Outreach; 7) General Knowledge Ergonomics.

## **Credit Recommendation**

**Course:** General Knowledge Ergonomics

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 4 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentice to the study of work, work related injuries and instruct them in more effective ways to work to prevent injury and Cumulative Trauma Disorders.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: recognize the possibility of repetitive work injuries; work more effectively to prevent Cumulative Trauma Disorder; prevent injury to themselves and fellow workers by changing the work and the workplace to fit the worker.

**Instruction:** Major topics covered in the course are: Workplace injuries and how they are caused; The body and the effects work has on it; How to prevent and control work related cumulative trauma disorders; Proper, safe and effective personal protective equipment. Methods of instruction include: lecture, discussion, lab. Evaluation criteria include: projects, demonstrations, exams and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Safety and Standards (11/05). Note: The student must complete the following seven courses to receive the credit recommendation: 1) Cardiopulmonary Resuscitation (CPR); 2) Basic Hand and Power Tool Use and Safety CBS-100; 3) First Five Minutes SA-101; 4) Power Actuated Tools – Use and Safety PAT-101; 5) OSHA 10 Construction Outreach SA-104; 6) OSHA 30 Construction Outreach; 7) General Knowledge Ergonomics.

## **Credit Recommendation**

**Course:** Interior Finish TTI 106

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 120 hours

**Dates:** January 1999 - Present

**Objective:** To provide apprentices with basic training specific procedures that will be utilized in interior finishing work.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand and apply the mathematical concepts taught in the classroom to the hands on application in the laboratory as they relate to the estimating, layout and application of interior finish materials; identify and explain the proper application of materials used in interior finish applications; identify and demonstrate the safe and proper use of hand tools related to interior finish work; identify and demonstrate the safe and proper use of power tools related to interior finish work; identify the types of fastening systems used for interior finish work; estimate, layout, cut and demonstrate the proper, safe application of materials used in interior finish work.

**Instruction:** Major topics covered in the course are: Review of mathematical concepts; Identify tools and materials and fasteners; Identify proper safety; How to estimate materials. Methods of instruction include: lecture and lab. Evaluation criteria include: projects/workgroups; exams; demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Millwork and Finishing (11/05). Note: The student must complete the following four courses to receive the credit recommendation: 1) Exterior Finish TT105; 2) Interior Finish TT106; 3) Drywall Finishing DWF101 Part I; 4) Drywall Finishing DWF101 Part II.

## **Credit Recommendation**

**Course:** Introduction to Blueprint Reading PR101 Part I

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 32 hours

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to understand the concept of blueprint reading.

**Learning Outcome:** Upon successful completion of this course, the student will be able to:  
understand the language of blueprints; read and interpret lines, symbols and details;  
understand sketching and drawing principles and practices.

**Instruction:** Major topics covered in the course are: Concepts; Symbols, abbreviations and drawing conventions; Sketching principles in blueprints. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: projects, in-class assignments, exams and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Drawing or Blueprint Reading (11/05). Note: The student must complete the following two courses to receive the credit recommendation: 1) Introduction to Blueprint Reading PR101 Part I; 2) Blueprint Reading Part II.

## **Credit Recommendation**

**Course: Introduction to Computers- Part I COM 100**

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 40 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the student to computer terminology, hardware and software components of a computer, including hard disks, floppies, CD and DVD drives, monitors, software applications and operating systems.

**Learning Outcomes:** Upon successful completion of this course, the student will be able to: understand computer components, start up procedures, use and handling of compact disks and other removable media; to navigate the windows environment; to demonstrate knowledge of system commands, key functions, and file structures; to produce and store documents using a simple word processing program.

**Instruction:** Major topics covered in the course are: Computer hardware, operating systems and word processing applications. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: projects, demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hour in Computer Literacy (11/05). Note: The student must complete the following two courses to receive the credit recommendation: 1) Introduction to Computers Part I COM100; 2) Introduction to Computers – Part II COM 102.

## **Credit Recommendation**

**Course:** Introduction to Computers – Part II COM 102

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 40 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentice to windows based programs using Microsoft Word, Excel and PowerPoint.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: produce, save and print out a document using Microsoft Word; produce, save and print out a spreadsheet using Microsoft Excel; produce, save, present and print out a short PowerPoint presentation.

**Instruction:** Major topics covered in the course are: Computers; Operating Systems; and Word Processing. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: demonstrations, projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Computer Literacy (11/05). Note: The student must complete the following two courses to receive the credit recommendation: 1) Introduction to Computers Part I COM100; 2) Introduction to Computers – Part II COM 102.

## **Credit Recommendation**

**Course:** Introduction to Construction Supervision STP 101 Part I

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 32 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentice to the role of supervision in construction.

**Learning Outcome:** Upon successful completion of this course, the student will be able to:  
understand the principles of leadership; understand the elements of strategy formation and the requirements of leadership; understand the basic psychology of dealing with workers; understand the necessity of planning and organization in a supervisory role.

**Instruction:** Major topics covered in the course are: Defining Supervision; The Requirements of Leadership; The Meaning of Work and Communication; Motivation and Planning; The Psychology of Work and the Worker. Methods of instruction include: lecture, discussion, lab and role play. Evaluation criteria include: written, case-study, presentations, projects, exams and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Management of Field Construction (11/05). Note: The student must complete the following two courses to receive the credit recommendation: 1) Introduction to Construction Supervision STP101 Part I; 2) Introduction to Construction Supervision Part II.

## **Credit Recommendation**

**Course:** Introduction to Construction Supervision STP 101 Part II

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 34 hours

**Dates:** January 1999 - Present

**Objective:** To reinforce the theory of leadership addressed in STRP101 Part I and increase the participants' awareness of the psychology of the worker and the necessity of organization and planning to complete a project on schedule and on budget.

**Learning Outcome:** Upon successful completion of this course, the student will be able to:  
review blueprint reading, quantitative estimating and take off for ordering materials;  
understand the next level of supervisory training; understand additional training on planning, organizing and scheduling a construction job; review and interpret a set of plans and produce a coordination schedule for a job.

**Instruction:** Major topics covered in the course are: Review the Meaning of Supervision and Leadership; Review Estimating and Takeoff; How to Schedule a Job; The Meaning of work and communication; Motivation and Planning. Methods of instruction include: lecture, discussion, lab and role play. Evaluation criteria include: case-study, presentations, projects, exams and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Management of Field Construction (11/05). Note: The student must complete the following two courses to receive the credit recommendation: 1) Introduction to Construction Supervision STP101 Part I; 2) Introduction to Construction Supervision Part II.

## **Credit Recommendation**

**Course:** Introduction to Rigging Hardware and Procedures BAR101

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 16 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentice to proper safe rigging and material handling procedures as they apply to the construction industry.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand the fundamentals of safe rigging and material handling; ensure rigging procedures are accomplished safely without damage or injury; determine load limits; identify the rigging hardware and what it is capable of; determine the proper hardware to be used based on load limits.

**Instruction:** Major topics covered in the course are: Rigging theory, procedures, hardware and safety. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: exams, demonstrations, presentations, projects, supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Introduction to Rigging Procedures in Construction (11/05). Note: The student must complete the following 3 courses to receive the credit recommendation: 1) Introduction to Rigging Hardware and Procedures BAR101; 2) Knots and Splicing Technology KST101, and 3) Aerial Lift AL101.

## **Credit Recommendation**

**Course: Introduction to Welding WE101**

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 40 hours

**Dates:** January 1999 - Present

**Objective:** To safely use the oxy-acetylene torch and properly, safely run a flat weld.

**Learning Outcome:** Upon successful completion of this course, the student will be able to:  
safely and properly use the oxy-acetylene torch for cutting and burning; safely and properly  
setup the Electric Arc Welding machine; use the SMAW process to run an acceptable flat  
butt weld.

**Instruction:** Major topics covered in the course are: Safety; Setup Cutting, Burning; and  
SMAW welding. Methods of instruction include: lecture, discussion and lab. Evaluation  
criteria include:

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 2  
semester hours in Introduction to Welding (11/05). Note: The student must complete the  
following 2 courses to receive the credit recommendation: 1) Introduction to Introduction to  
Welding WE101; and 2) Advanced Welding WE102.

## **Credit Recommendation**

**Course: Knots and Splicing Technology KST101**

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 8 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentice to the technology of knots and splicing and make the apprentice aware of the necessity of applying the proper technology to avoid accidents and injuries while handling and moving construction materials.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: tie an eye splice on the end of a rope; tie a crown knot and back splice the end of a rope; short splice two ropes; tie six knots selected from the seventeen listed in the chapter.

**Instruction:** Major topics covered in the course are: Types of rope; Knots and how to tie them; Splicing-why and how; Proper, safe and effective personal protective equipment. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: exams, demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Introduction to Rigging Procedures in Construction (11/05). Note: The student must complete the following 3 courses to receive the credit recommendation: 1) Knots and Splicing Technology KST101; 2) Introduction to Rigging Hardware and Procedures BAR101; and 3) Aerial Lift AL101.

## **Credit Recommendation**

**Course:** Labor History (Parts I – IV) LAH101

**Location:** Kenilworth, Trenton and Hammonton, NJ

**Length:** 48 hours (5 days) over 4 years

**Dates:** January 1999 - Present

**Objective:** To provide an understanding of labor history, why unions came into being and why they have survived.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: trace the organized labor timeline from its beginnings to modern day; understand why unions have gained membership prior to and immediately following World War II; understand the reasons behind the loss of union members and the lower percentages of organized workers.

**Instruction:** Major topics covered in the course are: Part I: What is a union; Why were unions formed; What were some of the hardships/resistances unions faced in the early years; What impact/success did unions have prior to World War I. Part II: The new direction for unions after the war; Failures and successes after the war; Union strengths/weaknesses prior to and during World War II. Part III: Labor's standing prior to World War II; Labor's part in the war; the effects of World War II on organized labor. Part IV: Labor's position during the war; Labor's attempt to capitalize on the concessions made during the war; Labor's growth following the war; Labor's decline since World War II. Methods of instruction include lecture and lab. Evaluation criteria include examinations, supervisor observation; hands-on projects; and a written 3-5 page, independent research paper on the future of trade unions.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Labor History (11/05).

## **Credit Recommendation**

**Course:** Level and Transit GE101 Part I

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 24 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentice to the setup and use of the transit and level.

**Learning Outcome:** Upon successful completion of this course, the student will be able to:  
setup the transit properly; understand and read the vernier scale; setup over a point and turn angles; transfer elevations.

**Instruction:** Major topics covered in the course are: Introduction to the engineers rule and related mathematics; ID and nomenclature relating to the David White Transit; Proper care and use of the transit; Proper setup of level/transit; Proper setup of Level/Transit. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: demonstrations, projects, exams, and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Surveying Instruments for Construction (11/05). Note: The student must complete the following 3 courses to receive the credit recommendation: 1) Level and Transit GE101 Part 1; 2) Use of Laser Level in Construction; and 3) Transit and Level Part II.

## Credit Recommendation

**Course:** Mathematics for Construction

**Location:** Kenilworth, Trenton, Hammonton, NJ

**Length:** 32 hours

**Date(s):** January 1999 - Present

**Objective:** To assess, review, increase and reinforce the mathematical skills that are required of a carpenter to include addition, subtraction, multiplication and division of whole numbers, common, mixed fractions and decimals. Additionally areas of mathematical study will include ratio, percentages, measurement and calculation of the perimeter, square and cubic area of common geometric forms.

**Learning Outcomes:** Upon successful completion of this course, the student will be able to: understand the basic concepts of mathematics as applied to the construction industry; properly apply the construction related math; accurately complete practical and comprehensive problems in construction related math; Accurately complete problems related to square and cubic measurement as applied to construction related math; layout a footing using a 3 – 4 – 5 right triangle.

**Instruction:** Major topics covered in the course are: Mathematics (addition, subtraction, division, multiplication, fractions and decimals) as related to Construction. Methods of instruction include lecture, discussion and lab. Evaluation criteria include examinations, demonstrations, supervisor observation and projects.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Technical Mathematics (01/05).

## **Credit Recommendation**

**Course:** Metal Framing and Drywall TTI 104

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 160 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentices to and give them basic training in the general knowledge, specific procedures and mandatory subjects that will be utilized by the apprentices as they mature as carpenters and must be introduced through classroom and hands-on training in the laboratory in the training center through related training sessions to increase the apprentice's competency in construction.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: identify and explain the proper applications of materials used in metal framing and drywall applications; identify and demonstrate the safe and proper use of metal stud and drywall related hand and power tools; demonstrate the proper, safe layout and construction of metal stud walls and the application of drywall; understand and apply the mathematical concepts taught in the classroom and hands-on laboratory as they relate to metal stud and drywall application.

**Instruction:** Major topics covered in the course are: Application of math as it relates to metal stud and drywall application; Applied safety, personal and job related; Proper application of hand and power tools; Application of materials and fasteners used on construction; Accurate layout and application of metal stud framing procedures; Proper application of drywall and drywall related products. Methods of instruction include: lecture and lab. Evaluation criteria include: exams, demonstration and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Light Frame Construction (11/05). Note: The student must complete the following 2 courses to receive the credit recommendation: 1) Metal Framing and Drywall TTI104; and 2) Wood and Light Gauge Metal Framing TTI103.

## **Credit Recommendation**

**Course:** On-the-Job Training/Technical Concentration – Concrete Formwork OJT 102

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 1500 hours (37 weeks, 2 ½ days)

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to apply the knowledge and procedures learned through the classroom and laboratory in the Technical Training Center to enhance their competency through hands-on training directed by Journey level carpenter mentors and supervisory personnel.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand and apply the mathematical concepts related to concrete formwork; understand and apply concrete forming principles to footing, wall and pilaster forming using traditional wood forms; understand and apply concrete forming principles using patented hardware and forming systems; understand and practice the proper selection of wall ties and tie spacing based on formwork to be constructed; understand the effects of lateral pressure on formwork and construct forms based on good procedures and the evident pressure.

**Instruction:** Major topics covered in the course are: Mathematical concepts related to concrete forms and forming systems; Tools, materials and fasteners related to concrete formwork; Hand and power tools and safety related to concrete formwork; Estimating, layout and machining of materials; Construction of wood forms; Identification, nomenclature and assembly of patented hardware forming systems and patented forms; Identification and nomenclature of form hardware. Methods of instruction include the practicum (field experience). Evaluation criteria include: projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Internship or Cooperative Education (11/05).

## **Credit Recommendation**

**Course:** On the Job Training/Technical Concentration Metal Stud Framing and Drywall Application OJT 104

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 1000 hours (25 weeks)

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to apply basic and job specific metal framing and drywall application.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: identify and explain the proper applications of materials used in metal framing and drywall applications; identify and demonstrate the safe and proper use of metal stud and drywall related hand and power tools; demonstrate the proper, safe layout and construction of metal stud walls and the application of gypsum wall board; understand and apply the mathematical concepts taught in the classroom and hands-on laboratory as related to metal stud and gypsum wall board construction.

**Instruction:** Major topics covered in the course are: Application of metal stud/drywall related math concepts; Proper application of safety; Proper application of hand and power tools; Accurate layout and application of metal stud framing procedures; Proper application of drywall and drywall related materials. Methods of instruction include: practicum (field experience). Evaluation criteria include: projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Internship or Cooperative Education (11/05).

## **Credit Recommendation**

**Course:** On-the-Job/Technical Concentration of General Knowledge OJT 101

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 500 Hours (12 weeks, 2 ½ days)

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to apply the knowledge and procedures learned through the classroom and laboratory in the Technical Training Center to enhance competency through hands-on training directed by Journey level carpenter mentors and supervisory personnel.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand hand tool safety and be able to safely use basic hand tools; understand power tool safety and be able to safely use basic power tools; understand job safety and apply safe work practices on the job; understand and apply the mandatory course curriculum as outlined in the apprentice requirements; understand and apply the related math performance on the job.

**Instruction:** Major topics covered in the course are: Application of construction related math; Application of hand and power tools safety and use; Application of materials and fasteners; Application of mandatory related training requirements. Method of instruction includes: the practicum (field experience). Evaluation criteria include: projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Internship or Cooperative Education (11/05).

## **Credit Recommendation**

**Course:** On the Job/Technical Concentration of Supplemental Skills OJT 107

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 1500 hours (37 weeks, 2 ½ days)

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to apply the knowledge and procedures learned through classroom and laboratory in the Technical Training Center to enhance their competency through hands-on training directed by Journey level carpenter mentors and supervisory personnel.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand and be able to demonstrate the practical application in the task of drywall finishing from start to finish coat; demonstrate the proper procedures for operating an aerial lift; understand and apply the OSHA safety standards learned through 30 hours of Construction Outreach; understand the basic of supervisory responsibilities as they relate to construction; understand and demonstrate the proper set up and operation of the level and transit; read and understand blueprints and demonstrate take off and quantitative estimating using the blueprints.

**Instruction:** Major topics covered in the course are: Drywall finishing; Operation of aerial lifts; OSHA 30 Construction Outreach Safety; Introduction to supervisory training; Set up and operation of level and transit; Blueprint reading and quantitative estimating. Methods of instruction include: practicum (field experience). Evaluation criteria include: projects and supervisor/mentor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Internship or Cooperative Education (11/05).

## **Credit Recommendation**

**Course:** On the Job/Technical Concentration Exterior Finish Application OJT 105

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 1000 hours

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to apply the basic and specific procedures and techniques learned through classroom and hands on training in the laboratory in the training center during related training sessions to develop and increase the apprentice's competency in exterior finish.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand and apply the mathematical concepts taught in the classroom to the hands on application in the laboratory as they relate to the estimating, layout and application of exterior finish materials; identify and explain the proper application of materials used in exterior finish applications; identify and demonstrate the safe and proper use of hand and power tools related to exterior finish work; identify the types of fastening systems used for exterior finish work; estimate, layout, cut and demonstrate the proper, safe application of materials used in exterior finish work.

**Instruction:** Major topics covered in the course are: Application of math as it relates to the estimating, layout and application of exterior finish materials; Identify and explain the proper application of materials used in exterior finish applications; Safe and proper use of hand tools related to exterior finish work; Safe and proper use of power tools related to exterior finish work; Applied safety, personal and job related; Proper types of fasteners and fastening systems used for exterior finish work; Estimate, layout, cutting and the safe application of materials used in exterior finish work. Methods of instruction include: the practicum (field experience). Evaluation criteria include: projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Internship or Cooperative Education (11/05).

## **Credit Recommendation**

**Course:** On the Job Training/Technical Concentration-Interior Finish OJT 106

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 1000 (25 weeks)

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to apply the general knowledge introduced through classroom and laboratory in the Technical Training Center as related training and enhance their carpentry through hands-on experience on the job site under the direction of journey level carpenter mentors and supervisory personnel.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: Fully understand the mathematical concepts taught in the classroom and laboratory in the Training Center as they relate to interior finish work; identify and explain the proper application of the materials and fasteners related to interior finish; identify and demonstrate the safe, proper use of hand and power tools used in interior finish work; identify the types of fastening systems used for interior finish work; estimate, layout, cut and demonstrate the proper application of the interior finish materials.

**Instruction:** Major topics covered in the course are: Interior finish materials; Proper hand tool safety; Proper power tool safety; Applied safety, personal and job related; Identify and properly apply fasteners, fastening systems and materials related to interior finish work; Estimating, layout, cutting and application of interior finish materials. Methods of instruction include: practicum (field experience). Evaluation criteria include: projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Internship or Cooperative Education (11/05).

## Credit Recommendation

**Course:** On-the-Job/Wood Framing and Light Gauge Metal Framing OJT 103

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 1500 hours (37 weeks, 2 ½ days)

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to apply the framing techniques and procedures that were introduced through classroom and laboratory in the Technical Training Center as related training and enhance their carpentry through hands-on experience on the job site under the direction of journey level carpenter mentors and supervisory personnel.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand the materials, tools and procedures of wood framing; understand the material, tools and procedures of light gauge metal framing; understand and apply the proper construction procedures to wood framing; understand and apply the proper construction procedures to light gauge metal framing; understand and apply related framing mathematical concepts to the actual framing processes.

**Instruction:** Major topics covered in the course are: Mathematical concepts related to framing; Applied safety procedures related to framing; Materials and fasteners; Layout, cutting and framing of rafters and joists; Framing layout and installation of walls and roofs. Methods of instruction include: practicum (field experience). Evaluation criteria include: projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Internship or Cooperative Education (11/05).

## **Credit Recommendation**

**Course:** OSHA 10 Construction Outreach SA 104

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 10 hours

**Dates:** January 1999 - Present

**Objective:** To make the apprentice aware of the hazards inherent in construction and how to recognize and correct them.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand OSHA and the Code of Federal Regulations; be aware of and recognize hazards on the jobsite; understand their rights and responsibilities under OSHA.

**Instruction:** Major topics covered in the course are: What is the OSHA act; Hazards and how they are classified; What is the CFR 1926; Hazards and how to prevent or correct them; Workers' rights and responsibilities under the OSHA act. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: demonstrations, workgroup exercise; exams, case-study and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Safety and Standards (11/05). Note: The student must complete the following 7 courses to receive the credit recommendation: 1) OSHA 10 Construction Outreach SA-104; 2) Cardiopulmonary Resuscitation (CPR); 3) Basic Hand and Power Tool Use and Safety CBS-100; 4) First Five Minutes SA-101; 5) Power Actuated Tools – Use and Safety PAT-101; 6) OSHA 30 Construction Outreach; and 7) General Knowledge Ergonomics.

## **Credit Recommendation**

**Course:** OSHA 30 Construction Outreach PAT 101

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 30 hours

**Dates:** January 1999 - Present

**Objective:** To make the apprentice aware of the hazards inherent in construction and how to recognize and correct them.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand OSHA and the Code of Federal Regulations; be aware of and recognize hazards on the job site; understand their rights and responsibilities under OSHA.

**Instruction:** Major topics covered in the course are: Construction Outreach Safety; CPR. Methods of instruction include: lecture, discussion, lab and workgroup exercises. Evaluation criteria include: workgroup exercises, exams, case-study, demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Safety and Standards (11/05). Note: The student must complete the following 7 courses to receive the credit recommendation: 1) OSHA 30 Construction Outreach; 2) Cardiopulmonary Resuscitation (CPR); 3) Basic Hand and Power Tool Use and Safety CBS-100; 4) First Five Minutes SA-101; 5) Power Actuated Tools – Use and Safety PAT-101; 6) OSHA 10, Construction Outreach SA-104; and 7) General Knowledge Ergonomics.

## **Credit Recommendation**

**Course: Power Actuated Tools-Use and Safety PAT101**

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 4 hours

**Dates:** January 1999 - Present

**Objective:** To instruct the apprentice in the safe, proper use of power actuated tools to enable them to accomplish certification as required by OSHA regulations.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand the use and function of power actuated tools; understand the OSHA regulations and safety related to power actuated tools, demonstrate the proper, safe use of the power actuated tool.

**Instruction:** Major topics covered in the course are: Power actuated tool use and safety; Maintenance and repair of power actuated tools. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: exams, demonstrations, presentations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 3 semester hours in Construction Safety and Standards (11/05). Note: The student must complete the following 7 courses to receive the credit recommendation: 1) Power Actuated Tools – Use and Safety PAT-101; 2) Cardiopulmonary Resuscitation (CPR); 3) Basic Hand and Power Tool Use and Safety CBS-100; 4) First Five Minutes SA-101; 5) OSHA 10, Construction Outreach SA-104; 6) OSHA 30 Construction Outreach; and 7) General Knowledge Ergonomics.

## **Credit Recommendation**

**Course:** Qualified Scaffold Erector 14SC

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 40 hours

**Dates:** January 1999 - Present

**Objective:** To make the apprentice aware of the OSHA regulations regarding how to erect safe, proper scaffolds using various systems.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand the OSHA regulations regarding scaffolds and scaffold erection; understand the proper methods of erecting scaffolds; erect safe regulation scaffolds from prints.

**Instruction:** Major topics covered in the course are: OSHA regulations related to scaffold erection; Proper safe and economical scaffold erection. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: projects, exams, case-study, demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in OSHA Qualified Scaffold Erector (11/05).

## **Credit Recommendation**

**Course:** Transit and Level GE101 Part II

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 24 hours

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to increase their competency in the use of Transit and Level.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: set up batterboards and establish building lines from property lines; transfer benchmark levels requiring multiple transit setups; increase accuracy in reading the vernier scale.

**Instruction:** Major topics covered in the course are: Advanced setup and operation of the Level and Transit. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: demonstrations, exams, projects and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Surveying Instruments for Construction (11/05). Note: The student must complete the following 3 courses to receive the credit recommendation: 1) Level and Transit GE101 Part 1; 2) Use of Laser Level in Construction; and 3) Transit and Level Part II.

## **Credit Recommendation**

**Course:** The Use of the Laser Level in Construction

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 8 hours

**Dates:** January 1999 - Present

**Objective:** To enable the apprentice to setup and use the laser level safely and properly.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: gain an understanding of the laser level; understand the advantages, disadvantages and limitations of the laser level; setup the laser for accuracy, establish points and operate the laser in a project; understand the OSHA regulations and safety measures that must be followed while operating a low power laser.

**Instruction:** Major topics covered in the course are: Low power laser level and how it is used; Advantages and disadvantages of laser levels; Comparison in usefulness and effectiveness to a traditional leveling system; How to setup and check the laser; OSHA laser related safety. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 1 semester hour in Surveying Instruments for Construction (11/05). Note: The student must complete the following 3 courses to receive the credit recommendation: 1) Level and Transit GE101 Part 1; 2) Use of Laser Level in Construction; and 3) Transit and Level Part II.

## **Credit Recommendation**

**Course:** Wood and Light Gauge Metal Framing TTI 103

**Location:** Kenilworth, Trenton, and Hammonton, NJ

**Length:** 120 hours

**Dates:** January 1999 - Present

**Objective:** To introduce the apprentices to and give them basic training in the general knowledge, specific procedures and mandatory subjects that will be utilized by the apprentices as they mature as carpenters and must be introduced through classroom and hands-on training in the laboratory in the training center through related training sessions to increase the apprentice's competency in construction.

**Learning Outcome:** Upon successful completion of this course, the student will be able to: understand and apply the related mathematical concepts to the actual framing processes; understand and apply the materials and tools related to framing to the actual framing processes; understand and apply proper construction procedures to wood framing; understand and apply the proper construction procedures to light gauge metal framing.

**Instruction:** Major topics covered in the course are: Mathematical concepts as they relate to framing; Safety procedures related to framing; Hand and power tool safety as it applies to framing; Materials and fasteners used in framing; Layout, cutting of joists and rafters; Layout, cutting and framing of roofs and walls. Methods of instruction include: lecture, discussion and lab. Evaluation criteria include: projects/workgroups' exams, demonstrations and supervisor observation.

**Credit Recommendation:** In the lower division baccalaureate/associate degree category, 2 semester hours in Light Frame Construction (11/05). Note: The student must complete the following 2 courses to receive the credit recommendation: 1) Wood and Light Gauge Metal Framing TTI103; and 2) Metal Framing and Drywall TTI104.