



State Apprenticeship Standards for the **Machine Tool Trades**

REVISED
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Prepared by the
Bureau of Apprenticeship Standards
and the
State Machine Tool Apprenticeship Advisory Committee

STATE OF WISCONSIN
**DWD**
Department of Workforce Development

FOREWORD

These Apprenticeship and Training Standards for the Machine Tool Trades are sponsored by the State Machine Tool Apprenticeship Advisory Committee.

The increased skills and versatility needed today by the trades require, as never before, the thorough all-around training and experience provided through apprenticeship as conducted under modern methods.

To meet this need, a State Machine Tool Advisory Committee was implemented by the Department of Workforce Development, Bureau of Apprenticeship Standards. Members have been nominated by the respective organizations representing these occupations and have been designated as advisory to the Department in matters relating to the industrial/manufacturing Industry.

These Standards have been adopted as a guide and the minimum standard for employers, employees, and Technical Colleges throughout Wisconsin.

These standards are consistent with the Wisconsin Apprenticeship Law, Wis. Stats. Chapter 106, Wis. Admin Code DWD Chapter 295, Wis. Admin Code DWD 296 and with the Wisconsin Apprenticeship Manual, as revised.

Prepared by the
Bureau of Apprenticeship Standards
and the
State Machine Tool Apprenticeship Advisory Committee



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Prepared by the
Bureau of Apprenticeship Standards
and the
State Machine Tool Apprenticeship Advisory Committee



I. DEFINITIONS

- A. **Apprentice** means any person who enters into an apprentice contract with the department and with a sponsor or an apprenticeship committee acting as an agent of the sponsor.
- B. **Apprentice Contract** means any contract or agreement of service, express or implied, between an apprentice, the department, and a sponsor or an apprenticeship committee acting as the agent of a sponsor whereby an apprentice is to receive directly from or through the apprentice's employer, in consideration for the apprentice's services in whole or in part, instruction in any trade, craft, or business.
- C. **Bureau of Apprenticeship Standards (BAS)** is the agency within the Department of Workforce Development charged with the oversight responsibilities of Wisconsin's apprenticeship program. BAS approves all Apprentice Contracts in accordance with Chapter 106 of the Wisconsin Statutes.
- D. **Certificate of Registration** means the acceptance and recording of such program by the department as meeting the basic standards and requirements of the department for approval of such program for federal and state purposes, as shown by a certificate of registration.
- E. **Competency** means the attainment of manual, mechanical or technical skills and knowledge, as specified by an occupational standard and demonstrated by an appropriate written and hands-on proficiency measurement.
- F. **Completion rate** means the percentage of an apprenticeship cohort who receives a certificate of apprenticeship completion within 1 year of the projected completion date. An apprenticeship cohort is the group of individual apprentices registered to a specific program during a 1 year time frame, except that a cohort does not include the apprentices whose apprenticeship agreement has been cancelled during the probationary period or who have transferred.
- G. **Department** means the Department of Workforce Development (DWD) which is the state registration agency for the purposes of 29 CFR 29. The Bureau of Apprenticeship Standards is part of the Department of Workforce Development.
- H. **Electronic media** means media that utilize electronics or electromechanical energy for the end user (audience) to access the content; and includes, but is not limited to, electronic storage media, transmission media, the Internet, extranet, lease lines, dial-up lines, private networks, and the physical movement of removable/transportable electronic media and/or interactive distance learning.

- I. **Employer/Sponsor** means any person, firm or corporation regularly engaged in the hiring or training of apprentices that are qualified to train apprentices.
- J. **Interim credential** means a credential issued by the department, upon request of the appropriate sponsor, as certification of competency attainment by an apprentice.
- K. **Journey worker** means a worker who has attained a level of skill, abilities and competencies recognized within an industry as having mastered the skills and competencies required for the occupation and/or hold a State of Wisconsin certification.
- L. **Local apprenticeship committee** means an in-plant committee.
- M. **Quality Assurance Assessment** means a comprehensive review conducted by the department regarding all aspects of an apprenticeship program's performance.
- N. **Qualified Individual** means an individual who has the skills, knowledge and practical hands-on experience equivalent to an up-to-date journey level person in the Machine Tool trades. He/she shall also be trained in, and be familiar with any safety related work practices.
- O. **Registration of an Apprentice Contract** means the acceptance and recording of an apprentice contract by the department as evidence of the apprentice's participation in a particular registered apprenticeship program.
- P. **Related instruction** means an organized and systematic form of instruction designed to provide the apprentice with the knowledge of the theoretical and technical subjects related to the apprentice's occupation. Such instruction may be given in a classroom, through occupational or industrial courses, or by correspondence courses of equivalent value, electronic media, or other forms of self-study approved by the department.
- Q. **Sponsor** means any employer operating an apprenticeship program and in whose name the apprenticeship program is approved by the Bureau of Apprenticeship Standards.
- R. **State Committee** - The Wisconsin State Machine Tool Advisory Committee is advisory to the Department of Workforce Development and the Bureau of Apprenticeship Standards on matters of apprenticeship and to the Wisconsin Technical College System (WTCS) on matters of related instruction for apprentices.
- S. **Transfer** means a shift of apprenticeship registration from one program to another where there is agreement between the apprentice and the affected apprenticeship committees or program sponsors.
- T. **Unassignment** means the temporary interruption of an apprentice contract.

U. **Wisconsin Technical College System** is a publicly funded system of colleges subject to Chapter 38 of the WI State Statutes and Technical College System Administrative Rules.

II. ADMINISTRATION -

The administration of these Standards shall be the responsibility of the Employer. The employer is responsible for the apprentices' instruction and experience as outlined in the schedule of work processes, for the attendance at related instruction classes, and for notifying the Bureau of Apprenticeship Standards in writing of all action as required by the Standards.

III. PERSONNEL OF STATE MACHINE TOOL ADVISORY COMMITTEE -

PURPOSE: Formulate Minimum State Standards (and review them every five years) for the trade and make recommendations regarding changes to the Bureau of Apprenticeship Standards.

This Committee shall be composed of no less than ten (10) nor more than thirty (30) members. The intention is to have fair representation from local committees on the state committee. The Bureau will insure that all areas of the state are properly represented on each state trade committee.

- A. Employer representative names will include nominees submitted to the Bureau of Apprenticeship Standards (Bureau) by employers training apprentices in the Machine Tool trades.
- B. Employee representative names will include nominees submitted by employee organizations or in-plant local committees to the Bureau. In cases where there is no in-plant local committee, nominees will be solicited from employers.
- C. Members will serve for a term of three years and may be renominated for further terms. State committee memberships will be staggered to maintain continuity in functioning. State committee members must:
 - 1) Be currently and actively participating in the trade, and attend at least 75 percent of the meetings over the term of their appointment, unless excused by BAS for good cause.
 - 2) Represent organizations that are actively involved with training apprentices at the local level; or
 - 3) Be involved in the development of emerging trades; or
 - 4) Have been involved in the training of apprentices in the last two years.
- D. Exceptions to these requirements can be made by the Bureau in order to expand female and minority participation on committees.
- E. The committee operates on a consensus based decision-making process. This means that there may be concerns after discussion, but committee members may consent to the proposal anyway and allow it to be adopted. Therefore, reaching consensus does not assume that everyone must be in complete agreement, but that all members can live with the decision. When the committee cannot reach consensus, the BAS will make the final decision.

- F. The Bureau may remove a person from membership on a committee for one or more of the following reasons:
 - 1) Failure to attend at least 75% of the committee meetings over the term of the appointment, unless excused by the Bureau for good cause.
 - 2) Failure to meet the membership requirements under paragraph III D unless an exception is granted under III D as noted above.
 - 3) Violation of any state apprenticeship statute, rule or standard.
- G. Vacancies may be filled, or representatives changed in term, at the request of the appropriate employee organization, local committee or employer.

IV. DUTIES OF THE STATE COMMITTEE

- A. Recommend/advise on policy and/or program changes in the trade.
- B. Formulate minimum state standards (and review them every five years) for the trade and make recommendations on changes to the Bureau including:
 - 1) the period of training
 - 2) minimum work process requirements
 - 3) related instruction
 - 4) probation
 - 5) employer requirements to serve as a trainer
 - 6) journey level worker/apprentice ratios
 - 7) apprentice reviews
- C. Recommend curriculum, related instruction and delivery service requirements for the trade to the Bureau and the Wisconsin Technical College System
- D. Assume statewide leadership for the purpose of improving conditions and expanding the number of employers using apprentices in the trade.
- E. Prepare a policy for the trade on proficiency assessment/testing (for work experience and course work) to be utilized by local committees in determining apprenticeship credit for previous experience/education.
- F. Assist in the formation and promotion of local committees where they do not exist.
- G. Review and monitor local committee operations (including biennial reports) and activity levels and recommend changes in operations where appropriate, including AA/EEO.
- H. Assist local committees to work out their programmatic and administrative problems.

- I. The committee will follow these operational guidelines:
 - 1) Meet at least a minimum of two times a year.
 - 2) Elect working officers of the Committee, i.e., a chair and/or co-chairs. Committees will hold an election of officers annually. When an employer representative is elected chair, an employee representative shall be elected co-chair and vice versa.
 - 3) Conduct meetings in conformity with the open meeting law of Wisconsin.
 - 4) A meeting quorum exists when at least two employer and two employee representatives are present.
 - 5) Official meeting minutes will be prepared by the Bureau of Apprenticeship Standards.
 - 6) Committee recommendations will be made by consensus.

V. PERSONNEL OF LOCAL (IN-PLANT) COMMITTEES

- A. The purpose of an in-plant committee is to oversee the training of apprentices and ensure that the conditions of the Apprentice Contract are being satisfied by all parties. Every apprentice will have access to and be responsible to an in-plant committee.
- B. Each in-plant committee will have a minimum of four voting members; two employer representatives and two from the skilled workforce. If members are added to a committee, they must have equal employer and employee representation.
- C. An exception may be made to this requirement for employers who have less than five apprentices.
- D. Multi-trade in-plant committees will be authorized provided that at least one member of the committee is a member of the apprentice's trade that is being reviewed.
- E. Where a firm has a bargaining agreement that establishes an in-plant committee, the sponsor will follow the terms of that agreement, providing that the terms of the agreement are not in conflict with state statutes or apprenticeship rules.
- F. All local committee rosters shall be submitted to the Bureau.
- G. Employer members must be:
 - 1) Nominated by other employer members
 - 2) Involved in the training or supervision of skilled workers within the last five years.

- H. Employee members must be:
 - 1) Nominated by employee organizations, local committees or employers
 - 2) A journey level worker and working at the trade or represent active journey level workers
- I. Exceptions to these requirements can be made in order to expand female and minority participation on committees.
- J. Members will serve for a term of three years and may be renominated for further terms. Terms will be staggered to insure that continuity of the committee is maintained.
- K. Members must attend at least 75% of the meetings over the term of their appointment, unless excused for good cause.
- L. An individual may be removed from membership on a committee for one or more the following reasons:
 - 1) Failure to attend at least 75% of the committee meetings over the term of the appointment, unless excused for good cause.
 - 2) Failure to meet the membership requirements under paragraph V E, unless an exception is granted under V E as noted above.
 - 3) Violation of any state apprenticeship statute, rule or standard.

VI. DUTIES OF LOCAL (IN-PLANT) COMMITTEES

- A. Ensure that apprentices get the required range of work process experience and safeguard the training of apprentices on the job.
- B. Review the status and progress of every apprentice prior to the end of the six month probationary period and recommend any appropriate action to the employer.
- C. Review and make sure that adequate classroom and on-the-job records are kept for apprentices. All reviews should be in writing.
- D. Review and evaluate classroom and on-the-job performance on a regular basis, as recommended by the state committee, (at least annually and a minimum of at least two times during the term of the Apprentice Contract, in person) and before recommending completion to the Bureau.
- E. Recommend credit for previous experience/education in conformity with Council or state trade committee policy and procedures.
- F. Advise the Bureau and Technical Colleges on all matters pertaining to related instruction in the committee area. Assist in securing related instruction with the state, local Technical College or other provider of related instruction
- G. Respond to surveys and questionnaires sent by the Bureau regarding information on participating employers, apprentices, meetings held and AA/EEO progress.

- H. Conform to the state committee's written meeting procedure requirements, if any
- I. Encourage parties to an Apprentice Contract to bring issues before the local committee. If not resolved, provide recommendations to the Bureau on its resolution.
- J. Take part in statewide trade or industry marketing and apprenticeship promotion.
- K. Recommend modifications to ratios in state standards to help meet workforce needs in conformity with bargaining agreements, when applicable.
- L. Report back to the respective nominating organizations and keep them fully informed and active in promoting the local program.
- M. The committees will follow these operational guidelines:
 - 1) Meet at least twice each year.
 - 2) Keep written minutes of all meetings.
 - 3) Ensure that apprentices are properly registered in conformity with Wisconsin Apprenticeship regulations.

VII. MINIMUM QUALIFICATIONS OF APPRENTICES

- A. High School graduate or equivalency, and must be able to furnish record of schooling and grades obtained
- B. Not less than 18 years of age, and must be able to furnish proof of age
- C. Must be physically able to perform the work of the trade with reasonable accommodations and without hazard to themselves or others. Applicants may be required to furnish a statement of physical condition from a physician at the time of the job offer. Applicants may be required to undergo drug or alcohol testing at time of selection as an apprentice.

VIII. MINIMUM QUALIFICATIONS OF EMPLOYERS

- A. The employer must insure that apprentices are trained in the core work processes identified for this trade and employ a full time journey worker to supervise the apprentice and insure safe training at all times.
- B. The employer must employ a full time journey worker or work at the trade full time.

IX. RATIO OF APPRENTICES TO JOURNEY WORKERS

In order to assure adequate supervision and instruction of all apprentices on-the-job, the maximum ratio of apprentices to journey workers shall be one (1) apprentice for one (1) journey worker.

X. APPEAL PROCEDURE

In the case of a dispute between the apprentice and the sponsor with regard to an Apprentice Contract, either party may appeal in writing to the BAS.

- A. In cases of a problem or dispute involving a matter of policy, the matter shall be referred to the State Machine Tool Apprenticeship Advisory Committee for review. If the State committee cannot satisfactorily resolve the matter, it will provide the Bureau with its recommendations.
- B. For apprentice applicants who are already employees of the firm, initial appeals should be made in accordance with grievance procedures to either the employer or the local union. If no satisfaction is received from this/these resources, the individual may appeal to BAS. For those applicants who are not an employee of the firm, the initial appeal should be made directly to the BAS. If the decision not to accept the applicant is made by the employer, not the in-plant committee, the appeal should also be made directly to the BAS.
- C. All applicants, employers or apprentices have the right of appeal to the Bureau on any recommendation or action taken by the local committee. The advisory status of a local committee shall include the following statement in their disciplinary actions or denial correspondence:

"Should you feel the recommendation or action taken by the local Apprenticeship Committee to be contrary to the area apprenticeship standards, you have the right to appeal in writing to the Department of Workforce Development, Bureau of Apprenticeship Standards, P. O. Box 7972, Madison, Wisconsin 53707, stating the specific section of said standards or addendum to same which you feel was violated."
- D. Any party to the contract may file an appeal in writing within 20 calendar days of the final decision. When an appeal is received, the BAS Director will review the appeal and issue a written determination within 40 days of the appeal.
- E. If requested in writing within ten days by one of the parties, the Bureau Director's decision may be appealed in writing the DWD Legal Counsel. The DWD Legal Counsel will review the case and issue a final determination within ten days.
- F. Right to Hearing. A dissatisfied party may file a written request with the BAS or the DWD Legal Counsel for a formal administrative hearing to review the reasonableness of a DWD order as outlined in Chapter 5 of the Wisconsin Apprenticeship Manual. DWD shall respond to a request for an administrative hearing within 20 days. DWD has the discretion to determine whether or not it will hold a hearing. DWD's final decision is reviewable in Circuit Court.
- G. Items not Subject to a Hearing. Actions of the employer that involve the employment relationship and not the apprenticeship program are not subject to a

hearing. Violations of employer work rules may not be subject to a hearing contingent upon a review that the employer is not illegally discriminating in its administration of apprenticeship policy.

XI. APPRENTICE CONTRACTS

The apprentice shall sign an agreement which shall also be signed by the employer. This agreement shall contain the apprentice's name, address, birth date, sex, trade, starting date of apprenticeship, credit for previous experience, veteran status, and ethnic background. The apprenticeship agreement signed by the apprentice and employer shall be furnished to the Bureau of Apprenticeship Standards for the purpose of registration and collection of national statistics. In the case of cancellation or suspension of the apprenticeship, the Bureau of Apprenticeship Standards shall be notified. Every apprentice agreement entered into under these Standards shall contain the terms and conditions of these Standards as part of the Apprenticeship Agreement. The following shall receive a copy of the agreement:

- 1) The apprentice
- 2) The employer
- 3) The Bureau of Apprenticeship Standards
- 4) The listed Technical College

XII. TERM OF APPRENTICESHIP

A. Trade information

1. See attached Exhibit A's
2. Employers have the option of choosing a longer term of apprenticeship and/or pursue implementing competency or hybrid apprentice programs in addition to time-based. Hybrid and competency based programs must be reviewed by the State Machine Tool Apprenticeship Advisory Committee and approved by the BAS.

B. Competency-Based Approach

Local committees who choose to employ a competency-based approach to apprenticeship must comply with the following requirements:

1. The occupation must be recognized and approved as a competency-based apprenticeable occupation. If the program is not approved by US DOL as a competency based program, the sponsor must consult with the BAS to determine if it is suitable as a competency based program.
2. The on-the-job learning component of the apprenticeship program must be identified in the program standards.
3. The related instruction component of the competency-based approach must comply with all of the provisions of DWD 295 as referenced in the Wisconsin Apprenticeship Manual.

4. Program sponsors must identify within the program standards the required competencies that must be mastered within the program standards, and the required competencies that must be mastered by the apprentice during their apprenticeship.
5. Successful completion of the term of apprenticeship will require that the apprentice demonstrate mastery of identified competencies.
6. Demonstration of the acquisition of the identified competencies must be determined by both written and hands-on proficiency evaluations.
7. All testing and evaluation of the identified competencies must occur in a controlled learning environment that permits accurate and verifiable results by a qualified proctor.
8. Program sponsors must identify and document the methods and means used to qualify testing and evaluation proctors.

C. Time Based Approach

The time based approach is the traditional term of apprenticeship and the term is stated in years, months or hours or a combination of thereof. This approach measures an individual skill through completion of at least 8,000 hours of on-the-job learning as described in a work process schedule.

D. Hybrid Approach

Local committee's that choose to use the hybrid approach to apprenticeship measures an individual's skills through a combination of hours of on-the-job learning and successful completion of competency as described in a work process schedule. The program must comply with the guidelines for the competency-based portion of the apprentice's term of apprenticeship

XIII. PROBATIONARY PERIOD

- A. The probationary period may be up to 25% of the term of the apprenticeship but it shall not exceed twelve calendar months.
- B. Termination of the apprenticeship agreement during the probationary period may be made by either party in writing without stated cause. Such notification must be sent to the Bureau.
- C. After the probationary period expires, there must be good cause provided to the Bureau for the cancellation of the Apprentice Contract (check legal opinion, such as 90-day waiting period) "Expectation that the apprentice will remain employed with the sponsor for the duration of the apprenticeship?"

XIV. RELATED INSTRUCTION ATTENDANCE

- A. The apprentice shall attend school and satisfactorily complete the course of instruction recommended by the State Committee for no less than 400 hours unless otherwise approved by the Bureau and the State Committee.
- B. The apprentice shall be paid the same rate for regular school attendance as for work on the job. Apprentices are paid 'straight time' rate for paid school hours. An employer is not required to pay overtime (time and one-half) to apprentices while receiving paid related instruction, unless such requirements are contained in an applicable collective bargaining agreement.
- C. Apprentices shall attend unpaid school or required classes as required by the employer. Required hours shall not exceed 120 unless approved by the State Committee in writing.

XV. CREDIT FOR PREVIOUS EXPERIENCE

Apprentices may be eligible for credit and care should be taken in evaluating credit requests to be sure that credit is properly applied.

- A. Previous Apprentice Contract Time Credit: All credit for all previous Apprentice Contract time in the trade (work and school) must be given to apprentices with such experience, unless extenuating circumstances are explained in writing and the credit is not approved by the Bureau.
- B. This credit (unless not approved) must be applied at the beginning of the Apprentice Contract.
- C. If application of the credit advances the apprentice to a higher wage, then that wage must apply.
- D. Credit for Previous Experience: Apprentices may be granted credit for previous work or school experience. Such credit should only reflect actual work time that relates directly to the trade or school time relating directly to the trade related instruction. Credit should be granted prior to the end of the probationary period, or at least as soon as a proper evaluation can be made of the credit request.

If application of the credit advances the apprentice to a higher wage, then that wage must apply.

- E. All credit must be in writing and approved by the Bureau.

XVI. SCHEDULE OF PROCESSES TO BE WORKED

(See Trade Information attached.)

XVII. CONDITIONS OF WORK -

The apprentice shall be governed by the same working hours as the journey worker or the employer under whose supervision the apprentice is employed. Under no conditions shall the hours of work conflict with the required hours of school attendance nor with State or Federal Regulations.

XVIII. CONTINUITY OF EMPLOYMENT -

When an apprentice is temporarily laid off in a trade because of business conditions, the apprentice shall be offered reinstatement before any additional apprentices are employed in that trade. An apprentice, suspended for this reason, when reinstated shall complete the time set forth in the training schedule before the next period may be started.

XIX. EVALUATION AND COMPLETION OF APPRENTICES

Upon successful completion of the apprenticeship under these Standards, the Employer shall request the Bureau of Apprenticeship Standards to issue the apprentice a Certificate of Completion of Apprenticeship. Said Certificate shall be signed by the Employer and the Director of Bureau of Apprenticeship Standards, State of Wisconsin. Sponsors are required to keep records of the apprentice training for five years from the date of last activity.

XX. CONSULTANTS

Consultants on apprenticeship shall attend meetings upon request of the apprenticeship sponsor and render such assistance that will aid the improvement of the preparation of the apprentice. Consultants will be asked to participate without vote in conference on special problems related to apprenticeship training which affect the agencies they represent. The recognized agency for consultation on apprenticeship training is the Bureau of Apprenticeship Standards.

XXI. MODIFICATION OF STANDARDS

These Standards may be modified at any time by the State Committee. The Bureau of Apprentice Standards shall be advised of any and all modifications and has the final approval. Modifications shall not alter any apprenticeship in force without the consent of all parties concerned.

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 Electrical Discharge Machinist • 2-609380010-01-T
 Exhibit A - Program Provisions

Approved: February 12, 2015

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 3 years of not less than 6,240 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 1560 hours of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 512 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Precision Measurement and Inspection 1. Includes geometric dimensioning and tolerancing, using prints of drawings, if applicable, and cutting tools. 2. Layout and verify dimensions of parts using precision measuring, marking instruments and knowledge of general mathematics and trigonometry. 3. Measure, examine and test products to ensure conformance to specifications. 4. Confer with engineering, supervisory and manufacturing personnel to exchange technical information.	200
Milling Machines 1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool. 2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs. 3. Calculate and set controls to regulate machining; or enter commands to retrieve, input or edit computerized machine control media. 4. Safely operate and adjust the machine tool to produce quality product efficiently and economically. 5. Clean, lubricate and maintain machines, tools and equipment to remove grease, rust, debris and foreign matter.	250
EDM Drilling Machines 1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool. 2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs. 3. Calculate and set controls to regulate machining; or enter commands to retrieve, input or edit computerized machine control media. 4. Safely operate and adjust the machine tool to produce quality product efficiently and	750

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Exhibit A - Program Provisions

economically.

5. Clean, lubricate and maintain machines, tools and equipment to remove grease, rust, debris and foreign matter.

Turning Machines

250

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.

2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.

3. Calculate and set controls to regulate machining; or enter commands to retrieve, input or edit computerized machine control media.

4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.

5. Clean, lubricate and maintain machines, tools and equipment to remove grease, rust, debris and foreign matter.

Grinding Machines

300

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.

2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.

3. Calculate and set controls to regulate machining; or enter commands to retrieve, input or edit computerized machine control media.

4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.

5. Clean, lubricate and maintain machines, tools and equipment to remove grease, rust, debris and foreign matter.

Cut-Off Machines

100

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.

2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.

3. Calculate and set controls to regulate machining; or enter commands to retrieve, input or edit computerized machine control media.

4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.

5. Clean, lubricate and maintain machines, tools and equipment to remove grease, rust, debris and foreign matter.

Materials and Metallurgy

200

1. Select, examine and test materials to ensure product conformance to specifications.

2. Measure, examine and test product to detect defects and ensure conformance to specifications.

3. Operate brazing, heat-treating and welding equipment to cut, solder and braze metals.

Jigs and Fixtures

250

1. Fabricate, assemble and modify tooling, such as jigs, fixtures, templates, molds or dies to produce parts to specification.

2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering/production needs.

CAD/CAM Programming

500

DETA-10408-E (R. 12/2010)

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Exhibit A - Program Provisions

1. Study sample parts, blueprints, drawings, and engineering information to determine methods and sequence of operations.
2. Prepare geometric layout from graphic displays using computer-assisted drafting software or drafting instruments and graph paper.
3. Write instruction sheets and machine instruction programs to guide setup.
4. Analyze drawings, specifications and design data to calculate dimensions, tool selection, machine speeds and feed rates.
5. Determine reference points, machine cutting paths or hold locations, and compute angular and linear dimensions, radii and curvatures.
6. Compare computer printout with original program sheet to verify accuracy of instructions.
7. Enter computer commands to store or retrieve parts patterns, graphic displays or programs to transfer data to other media.
8. Load and unload machine data instructions, and observe operation of machine on trial run to test programmed instructions.
9. Review shop orders to determine job specifications and requirements.

EDM Work Processes 2928

1. Sort shop orders into groups to maximize materials utilization and minimize machine setup.
2. Revise programs to eliminate instruction errors and omissions.
3. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.
4. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media.
5. Safely operate and adjust the machine tool to produce quality product efficiently and economically.
6. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering/productions needs.
7. Clean, lubricate and maintain machines, tools and equipment to remove grease, rust, debris and foreign matter.

Paid Related Instruction 512

TOTAL 6240

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship (DWD 295.05). The apprentice may not be started at less than minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

State Machine Tool Apprent Adv Comm • Madison WI
Electrical Discharge Machinist • 2-609380010-01-T
Exhibit A - Program Provisions

Work credit hours approved:	N/A
School credit hours approved:	
Paid related instruction:	N/A
Unpaid related instruction:	N/A
Total credit hours to be applied to the term of the apprenticeship:	N/A

SPECIAL PROVISIONS:

The apprentice will complete the standard Red Cross First Aid and CPR courses during the first year of the apprenticeship and maintain such certification throughout the apprenticeship.

The apprentice must take and successfully complete the Transition to Trainer course during the final 12 months of the Apprentice Contract.

State Machine Tool Apprent Adv Comm • Madison WI
Machinist • 2-600280022-01-T
Exhibit A - Program Provisions

Approved: February 12, 2015

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 8,320 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 2080 hours of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 432 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Perform precision measurement and inspection, including Geometric Dimensioning and Tolerancing, using prints of drawings, if applicable, and cutting tools. 1. Lay out and verify dimensions of parts, using precision measuring and marking instruments and knowledge of general mathematics and trigonometry. 2. Measure, examine and test products to ensure conformance to specifications. 3. Confer with engineering, supervisory and manufacturing personnel to exchange technical information.	400
Milling, Including Manual and/or CNC Controlled 1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool. 2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs. 3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media. 4. Safely operate and adjust the machine tool to produce quality product efficiently and economically. 5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.	2000
Drilling, Including Manual and/or CNC Controlled 1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool. 2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs. 3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media. 4. Safely operate and adjust the machine tool to produce quality product efficiently and economically. 5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and	200

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Machinist • 2-600280022-01-T
Exhibit A - Program Provisions

foreign matter.

Turning, Including Manual and/or CNC Controlled 2000

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.
2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.
3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media.
4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.
5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.

Cut-Off, Including Manual and/or CNC Controlled 200

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.
2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.
3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media.
4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.
5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.

Materials and Metallurgy 200

1. Select, examine and test materials to ensure product conformance to specifications.
2. Measure, examine and test product to detect defects and ensure conformance to specifications.
3. Operate brazing, heat-treating and welding equipment to cut, solder and braze metals.

Bench Work/Layout (Assembly): 500

1. Assemble parts into completed units using jigs, fixtures, and hand and power tools.
2. Fabricate, assemble and modify tooling, such as jigs, fixtures, templates, molds or dies to produce parts and assemblies to specification.
3. Dismantle equipment using hand and power tools to examine parts for defect or to remove defective parts.
4. Cut and shape sheet metals, and heat and bend metals to specified shapes.
5. Confer with engineering, supervisory and manufacturing personnel to exchange technical information.
6. Design fixtures, tooling and experimental parts to meet special engineering/production needs.
7. Evaluate procedures and recommend changes or modifications for efficiency and adaptability to setup and production.

Local Optional Work Processes 2388

These hours may be used for additional work in any of the above listed work processes and/or for additional processes identified by the employer, including but not limited to the following:

1. Grinding
2. EDM
3. Jigs and fixtures

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Exhibit A - Program Provisions

- 4. CAD/CAM
- 5. CNC programming and planning
- 6. Indexing/rotary devices
- 7. Turret lathe
- 8. Broaching and/or keyseating
- 9. Gearing and jig boring
- 10. Welding

Paid Related Instruction	432
TOTAL	8320

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship (DWD 295.05). The apprentice may not be started at less than minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
School credit hours approved:	
Paid related instruction:	N/A
Unpaid related instruction:	N/A
Total credit hours to be applied to the term of the apprenticeship:	N/A

SPECIAL PROVISIONS:

The apprentice will complete standard Red Cross First Aid and CPR courses during the first year of the apprenticeship and maintain such certification throughout the apprenticeship.

The apprentice must attend and successfully complete the Transition to Trainer course during the last twelve (12) months of the Apprentice Contract.

State Machine Tool Apprent Adv Comm • Madison WI
Mold Maker (Die Cast) (Plastic) • 2-601280030-01-T
Exhibit A - Program Provisions

Approved: February 12, 2015

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 10,400 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 2080 hours of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 576 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Perform precision measurement and inspection, including Geometric Dimensioning and Tolerancing, using prints of drawings, if applicable, and cutting tools. 1. Lay out and verify dimensions of parts, using precision measuring and marking instruments and knowledge of general mathematics and trigonometry. 2. Measure, examine and test products to ensure conformance to specifications. 3. Confer with engineering, supervisory and manufacturing personnel to exchange technical information.	400
Milling, Including Manual and/or CNC Controlled 1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool. 2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs. 3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media. 4. Safely operate and adjust the machine tool to produce quality product efficiently and economically. 5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.	2000
Drilling, Including Manual and/or CNC Controlled 1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool. 2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs. 3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media. 4. Safely operate and adjust the machine tool to produce quality product efficiently and economically. 5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and	200

State Machine Tool Apprent Adv Comm • Madison WI
Mold Maker (Die Cast) (Plastic) • 2-601280030-01-T
Exhibit A - Program Provisions

foreign matter.

Turning, Including Manual and/or CNC Controlled 300

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.
2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.
3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media.
4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.
5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.

Grinding (Precision), Including Manual and/or CNC Controlled 800

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.
2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.
3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media.
4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.
5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.

Cut-Off, Including Manual and/or CNC Controlled 200

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.
2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.
3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media.
4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.
5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.

Materials and Metallurgy 300

1. Select, examine and test materials to ensure product conformance to specifications.
2. Measure, examine and test product to detect defects and ensure conformance to specifications.
3. Operate brazing, heat-treating and welding equipment to cut, solder and braze metals.

Jigs and Fixtures 400

1. Fabricate, assemble and modify tooling, such as jigs, fixtures, templates, molds or dies, to produce parts and assemblies to specification.
2. Design fixtures, tooling and experimental parts to meet special engineering and production needs.

Mold Making 2000

1. Study blueprint or specifications of part, tool or mold/die.
2. Fabricate mold components using a variety of machine tools and operations.
3. Confer with engineering, supervisory and manufacturing personnel to exchange

State Machine Tool Apprent Adv Comm • Madison WI
Mold Maker (Die Cast) (Plastic) • 2-601280030-01-T
Exhibit A - Program Provisions

technical information.

4. Assemble and adjust mold components so that mold produces parts to specification.

Bench Work/Layout (Assembly) 1500

1. Assemble parts into completed units using jigs, fixtures, hand and power tools.
2. Dismantle equipment using hand and power tools to examine parts for defect and wear or to remove defective parts.
3. Smooth and polish flat and contoured surfaces using hand and power tools.
4. Evaluate procedures and recommend changes or modifications for efficiency and adaptability to setup and production.

Local Optional Work Processes 1724

These hours may be used for additional work in any of the work processes listed above and/or for additional processes identified by the employer, including but not limited to the following:

1. CAD/CAM
2. Program and plan CNC.
3. Design molds and die.

Paid Related Instruction 576

TOTAL 10400

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship (DWD 295.04). The apprentice may not be started at less than minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved: N/A

School credit hours approved:
Paid related instruction: N/A

Unpaid related instruction: N/A

Total credit hours to be applied to the term of the apprenticeship: N/A

SPECIAL PROVISIONS:

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Mold Maker (Die Cast) (Plastic) • 2-601280030-01-T
Exhibit A - Program Provisions

The apprentice will complete standard Red Cross First Aid and CPR courses during the first year of the apprenticeship and maintain such certification throughout the apprenticeship.

The apprentice must attend and successfully complete the Transition to Trainer course during the last twelve (12) months of the Apprenticeship Contract.

State Machine Tool Apprent Adv Comm • Madison WI
 Patternmaker All Around • 2-693280014-01-T
 Exhibit A - Program Provisions

Approved: February 11, 2015

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 5 years of not less than 10,400 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 2080 hours of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 576 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Perform general shop work including cleaning, material handling and machine maintenance.	520
Perform general machining on manual and CNC-controlled machines.	1560
Perform general pattern tooling including gating, rigging, mounting, fitting, layout, repair, and bench work.	1560
Lay out and construct simple pattern tooling using manual, CNC, duplicating and CAM machining.	2080
Design and construct complex pattern tooling using manual, CNC, duplicating, CAD design and CAM machining.	2080
Local Optional Work Processes: These hours may be used for additional work in the processes listed above and/or for additional processes identified by the employer, including but not limited to the following: 1. General wood pattern finishing and construction 2. Plastic construction 3. CNC programming	2024
Paid Related Instruction	576
TOTAL	10400

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

DETA-10408-E (R. 12/2010)

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Patternmaker All Around • 2-693280014-01-T
Exhibit A - Program Provisions

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship (DWD 295.04). The apprentice may not be started at less than minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved: N/A

School credit hours approved:
Paid related instruction: N/A

Unpaid related instruction: N/A

Total credit hours to be applied to the term of the apprenticeship: N/A

SPECIAL PROVISIONS:

The apprentice will complete standard Red Cross First Aid and CPR courses during the first year of the apprenticeship and maintain such certification throughout the apprenticeship.

The apprentice must attend and successfully complete the Transition to Trainer course during the last twelve (12) months of the Apprentice Contract.

State Machine Tool Apprent Adv Comm • Madison WI
Tool And Die Maker • 2-601260010-01-T
Exhibit A - Program Provisions

Approved: February 12, 2015

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 10,400 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 2080 hours of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 576 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Perform precision measurement and inspection, including Geometric Dimensioning and Tolerancing, using prints of drawings, if applicable, and cutting tools. 1. Lay out and verify dimensions of parts, using precision measuring and marking instruments and knowledge of general mathematics and trigonometry. 2. Measure, examine and test products to ensure conformance to specifications. 3. Confer with engineering, supervisory and manufacturing personnel to exchange technical information.	400
Milling, Including Manual and/or CNC Controlled 1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool. 2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs. 3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media. 4. Safely operate and adjust the machine tool to produce quality product efficiently and economically. 5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.	2000
Drilling, Including Manual and/or CNC Controlled 1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool. 2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs. 3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media. 4. Safely operate and adjust the machine tool to produce quality product efficiently and economically. 5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and	200

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foreign matter.

Turning, Including Manual and/or CNC Controlled 300

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.
2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.
3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media.
4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.
5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.

Grinding (Precision), Including Manual and/or CNC Controlled 800

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.
2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.
3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media.
4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.
5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.

Cut-Off, Including Manual and/or CNC Controlled 200

1. Select, align and secure holding fixtures, cutting tools, attachments, accessories and materials onto machine tool.
2. Design, fabricate, and install fixtures, tooling and experimental parts to meet special engineering and production needs.
3. Calculate and set controls to regulate machining, or enter commands to retrieve, input or edit computerized machine control media.
4. Safely operate and adjust the machine tool to produce quality product efficiently and economically.
5. Clean, lubricate and maintain tools and equipment to remove grease, rust, debris and foreign matter.

Materials and Metallurgy 300

1. Select, examine and test materials to ensure product conformance to specifications.
2. Measure, examine and test product to detect defects and ensure conformance to specifications.
3. Operate brazing, heat-treating and welding equipment to cut, solder and braze metals

Jigs and Fixtures 400

1. Fabricate, assemble and modify tooling, such as jigs, fixtures, templates, molds or dies to produce parts and assemblies to specification.
2. Design fixtures, tooling and experimental parts to meet special engineering and production needs.

Die Making 2000

1. Study blueprint or specifications of part, tool or die.
2. Fabricate die components using a variety of machine tools and operations.
3. Confer with engineering, supervisory and manufacturing personnel to exchange

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 Tool And Die Maker • 2-601260010-01-T
 Exhibit A - Program Provisions

technical information.

4. Assemble and adjust die components so that die produces parts to specification.

Bench Work/Layout (Assembly) 1500

1. Assemble parts into completed units using jigs, fixtures, and hand and power tools.
2. Fabricate, assemble and modify tooling, such as jigs, fixtures, templates, molds or dies to produce parts and assemblies to specification.
3. Dismantle equipment using hand and power tools to examine parts for defect or to remove defective parts.
4. Cut and shape sheet metals, and heat and bend metals to specified shapes.
5. Confer with engineering, supervisory and manufacturing personnel to exchange technical information.
6. Design fixtures, tooling and experimental parts to meet special engineering/production needs.
7. Evaluate procedures and recommend changes or modifications for efficiency and adaptability to setup and production.

Local Optional Work Processes 1724

These hours may be used for additional work in any of the processes listed above and/or for additional processes identified by the employer, including but not limited to the following:

1. EDM
2. Jigs and fixtures
3. CAD/CAM
4. CNC programming and planning and stamping
5. Die designing

Paid Related Instruction 576

TOTAL 10400

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage during the term of the apprenticeship. (Ind 95.05) The apprentice may not be started at less than minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved: N/A

School credit hours approved:
Paid related instruction: N/A

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Unpaid related instruction:

N/A

Total credit hours to be applied to the term of the apprenticeship:

N/A

SPECIAL PROVISIONS:

The apprentice will complete standard Red Cross First Aid and CPR courses during the first year of the apprenticeship and maintain such certification throughout the apprenticeship.

The apprentice must attend and successfully complete the Transition to Trainer course during the last twelve (12) months of the Apprentice Contract.