



APPRENTICESHIP STANDARDS

FOR

COMPUTER PROGRAMMER

Formulated By

DEPARTMENT OF LABOR & INDUSTRY
TECHNICAL SERVICES DIVISION
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Registered With The

REGISTERED APPRENTICESHIP PROGRAM
WORKFORCE SERVICES DIVISION
MONTANA DEPARTMENT OF LABOR AND INDUSTRY

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Registered Apprenticeship Program

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Attached:

Trade Schedule Supplement

Schedule of Work Experience

Appendix A Supplemental Related Instruction Schedule

DEFINITIONS

STANDARDS: Or, Standards of Apprenticeship means this entire document including the attached "Trade Schedule(s)".

APPRENTICE: Means a person meeting the qualifications described in Section II of these Standards who has entered into a written Apprenticeship Agreement with a Sponsor-employer providing for training and related instruction under these standards and who is registered with the Registration Agency.

OJL: On-the-Job-Learning

APPRENTICE ELECTRONIC REGISTRATION: Is an electronic tool that allows for instantaneous transmission of Apprentice data for more efficient registration of Apprentices by the Sponsor.

APPRENTICESHIP AGREEMENT: Means the written document between the Apprentice and the Sponsor setting forth the responsibilities and obligations of all parties to the Apprenticeship Agreement with respect to the Apprentice's employment and training under these Standards. Each Apprenticeship Agreement must be registered with the Registration Agency.

CAREER LATTICE: Career lattice apprenticeship programs include occupational pathways that move an Apprentice laterally or upward within an industry. These programs may or may not include an interim credential leading to the certificate of completion of apprenticeship.

CERTIFICATE OF COMPLETION OF APPRENTICESHIP: The Certificate of Completion of Apprenticeship issued by the Registration Agency to those registered Apprentices certified and documented as successfully completing the apprenticeship training requirements outlined in these Standards of Apprenticeship.

CERTIFICATE OF TRAINING: The Certificate of Training may be issued by the Registration Agency to those registered Apprentices that the Sponsor has certified in writing to the Registration Agency that the Apprentice has successfully met the requirements to receive an interim credential.

REGISTRATION AGENCY: Means the Registered Apprenticeship Program, Workforce Services Division, Montana Department of Labor and Industry.

PROGRAM SPONSOR: Means the Employer approved to administer the apprenticeship program.

COMPETENCY-BASED OCCUPATION: Means the attainment of manual, mechanical or technical skills and knowledge, as specified by an occupation standard and demonstrated by an appropriate written and hands-on proficiency measurement.

HYBRID OCCUPATION: The hybrid approach measures the individual apprentices' skill acquisition through a combination of specified minimum number of hours of on-the-job-learning and the successful demonstration of competency as described in a work process schedule.

INTERIM CREDENTIAL: Interim Credential means the credential issued by the Registration Agency upon the request of the appropriate Sponsor as certification of competency attainment by an Apprentice.

TRANSFER: A shift of apprenticeship agreement from one program sponsor to another or from one employer within a program to another employer within that same program, where there is agreement between the Apprentice and the affected program Sponsor-employer.

ELECTRONIC MEDIA: Media that utilizes 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.

JOURNEY-WORKER: 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. Use of the term may also refer to a mentor, technician, specialist or other skilled worker who has documented sufficient skills and knowledge of an occupation, either through formal apprenticeship or through practical on-the-job-experience and formal training.

O*NET-SOC CODE: The occupational information network (O*NET) codes and titles are based on the new Standard Occupational Classification (SOC) system mandated by the federal Office of Management and Budget for use in collecting statistical information on occupations. The O*NET classification uses an 8-digit O*NET-SOC code. Use of the SOC classification as a basis for the O*NET codes ensures that O*NET information can be readily linked to labor market information such as occupational employment and wage data at the national, state and local levels.

GENDER CLAUSE: Any reference to either the male or female gender in these Standards is intended to include both genders and is not to be considered as a limitation on either sex. The term journey-worker / journey-workers within these Standards shall be considered a performance level and not a gender term.

PROVISIONAL REGISTRATION: Means the one (1) year initial provisional approval of newly registered programs that meet the required standards for program registration, after which program approval may be made permanent, continued as provisional or rescinded following a review by the registration agency.

MONTANA APPRENTICESHIP ADVISORY COUNCIL: An advisory and consultative council established in (24.21.205 ARM) that will provide the state registration agency advice and counsel regarding matters of interest involving the Montana Apprenticeship Community.

1. PURPOSE

- A. To encourage careful selection of persons entering the trade with due regard to health, physical fitness, aptitude, attitudes and personal characteristics.

- B. To provide an approved plan of training which will equip such persons for profitable employment.
- C. To relate the future supply of skilled workers to probable employment demands.
- D. To assure that the employer may obtain the services of proficient crafts workers.
- E. To provide the public with the highest possible grade of products and services in conformity with approved practices of safety and job skills.

2. QUALIFICATIONS FOR APPRENTICESHIP ENTRY

- A. Applicants accepted and registered as Apprentices shall meet the following basic qualifications:
 - 1) Age: Shall be at least _ years of age. Apprentices must not be less than 16 years of age.
 - 2) Physical: Shall be physically able to perform the essential functions of the occupation, with or without reasonable accommodations, without endangering the health and safety of themselves and/or fellow workers. Physical qualifications will be determined by the employer through visual examination and discussion when the applicant is evaluated.
 - 3) Education: A High School Degree or GED equivalency is required. Proof of high school degree or GED records must be submitted when applicable.
 - 4) Aptitude: Shall possess the basic aptitude essential for acquiring the skills and proficiency of the occupation and be required to satisfactorily pass an approved entry level aptitude test if required.

3. APPRENTICE SELECTION:

- A. Equal Opportunity Pledge: The recruitment, selection, employment and training of Apprentices during their apprenticeship shall be without discrimination because of race, color, religion, national origin or sex. The Sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under Title 29 of the Code of Federal Regulations, Part 30, as amended, and the Montana Plan for Equal Employment Opportunity in Apprenticeship. If five (5) or more Apprentices are employed, the program Sponsor will submit a written Selection Procedure and Affirmative Action Plan in conformity with the above regulations and will be attached to these Standards as an appendix.
- B. Maintenance of Records: The Sponsor will maintain for a period of five (5) years from the date of last action, all records relating to apprentice application (whether

selected or not), the employment and training of Apprentices and any other information relevant to the operation of the program. This includes, but is not limited to, records on the recruitment, application and selection of apprentices, records of the Apprentice's job assignments, promotions, demotions, layoffs, terminations, rate of pay or other forms of compensation, hours of work and training, evaluations and other relevant data. The records will permit identification of minority and female (minority and non-minority) participants. These records will be made available on request to the Registration Agency.

4. TERM OF APPRENTICESHIP

The term of apprenticeship shall be a period of reasonably continuous employment and training on the job as stated on the attached "Trade Schedule" for the trade or occupation concerned, supplemented by the required hours of related instruction.

5. CREDIT FOR PREVIOUS EXPERIENCE

The Sponsor may grant credit towards the term of apprenticeship to new apprentices who demonstrate previous acquisition of skills or knowledge equivalent to that which would be received under these Standards.

Apprentice applicants seeking credit for previous experience gained outside the supervision of the Sponsor must submit the request at the time of application and furnish such records, affidavits and transcripts to substantiate the claim. Applicants requesting such credit who are selected into the apprenticeship program will start at the beginning wage rate.

The request for credit will be evaluated and a determination made by the Sponsor during the probationary period when actual on-the-job and related instruction performance can be examined. Prior to completion of the probationary period, the amount of credit to be awarded will be determined after review of the Apprentice's previous work and training/education record and evaluation of the Apprentice's performance and demonstrated skill and knowledge during the probationary period.

An Apprentice granted credit will be advanced to the wage rate designated for the period to which such credit accrues. The Registration Agency will be advised of any credit granted and the wage rate to which the Apprentice is advanced. The granting of advanced standing will be uniformly applied to all Apprentices.

6. PROBATIONARY PERIOD

All applicants selected for apprenticeship will serve a probationary period. The probationary period cannot exceed twenty five (25) percent of the length of the program or six months (6) whichever is shorter.

During this period either party may request the termination or cancellation of the Apprenticeship Agreement to the agreement without stated cause by notifying the other party

in writing. The records for each probationary apprentice will be reviewed prior to the end of the probationary period. Records may consist of periodic reports regarding progression made in both the OJL and related instruction and any disciplinary action taken during the probationary period. After the probationary period, the agreement may be cancelled at the request of the Apprentice, or may be suspended, cancelled, or terminated by the Sponsor, for good cause, with due notice to the Apprentice and a reasonable opportunity for corrective action, and with written notice to the Apprentice and to the Registration Agency of the final action taken. Any probationary Apprentice evaluated as satisfactory after a review of the probationary period will be given full credit for the probationary period and continue in the program. The probationary period shall be part of the term of apprenticeship.

7. APPRENTICESHIP AGREEMENT

After an applicant for apprenticeship has been selected, but before employment as an Apprentice or enrollment in related instruction, the Apprentice will be covered by a written Apprenticeship Agreement signed by the Sponsor and the Apprentice and approved by and registered with the Registration Agency. Each Apprentice, and their parent or guardian, if they are minors, shall enter into a written "Apprenticeship Agreement" with the Sponsor.

Each agreement and subsequent actions affecting the agreement shall be registered with the Registration Agency. The Registration Agency will be advised within forty five (45) days of the execution of each Apprenticeship Agreement and will be given all the information required for registering the Apprentice (s).

The Apprenticeship Agreement shall contain a clause making the terms and conditions of these apprenticeship Standards a part of each agreement. For this reason, every Apprentice shall read these Standards before signing the agreement. The following parties shall receive a copy of the agreement properly completed and signed:

- 1) The Apprentice
- 2) The Sponsor
- 3) The Registration Agency
- 4) Veteran's State Approving Agency (if applicable)

Violation of the agreement or terms and conditions of these Standards by the Apprentice or by the Sponsor will constitute just cause for deregistration, cancellation, suspension, or extension of the agreement.

If an employer is unable to fulfill this obligation under the Apprenticeship Agreement, he may transfer the obligation to another employer, with written notice to the Registration Agency, if the other employer has been approved as a registered apprenticeship training provider.

The Registration Agency may refuse to register an Apprentice whenever any part or section of this program is not in compliance.

8. REINSPECTIONS, PROVISIONAL REGISTRATION AND PERFORMANCE EVALUATIONS

- A. Continued recognition of this apprenticeship program by the Registration Agency is subject to periodic evaluation by a representative of the Montana Registered Apprenticeship Program, Montana Department of Labor and Industry or a representative of the Office of Apprenticeship, U.S. Department of Labor. These evaluations allow the Program to determine the progress of the Apprentice in related instruction, work performance and to ensure there is on-going maintenance of the appropriate progress records. The evaluations will further ensure that the registered Sponsor is administering the apprenticeship program in compliance with these Standards. All parties signatory to the Apprenticeship Agreement and these Standards will be reasonably responsible in cooperating with the Registration Agency for scheduling necessary periodic program evaluations.

- B. Applications for new programs that the Registration Agency determines meet the required standards for program registration must be given provisional approval for a period of one (1) year. The registration agency must review all new programs for quality and conformity with the requirements of this part at the end of the first year after registration. At that time: 1) A program that conforms with the requirements of this part may be made permanent or may continue to be provisionally approved through the first full training cycle. 2) A program not in operation or not conforming to the regulations during the provisional approval period must be recommended for cancellation or deregistration procedures.

- C. Performance Evaluations – 1) The State Registered Apprenticeship Program shall conduct periodic performance evaluations, as provided for by 29 CFR section 29.6 as adopted by the department in (24.21.302 ARM) for each apprenticeship program operating in Montana. 2) The State Registered Apprenticeship Program may withdraw the registration of an apprenticeship program (“deregister the apprenticeship program”) if the apprenticeship program does not comply with the requirements of the applicable statutes or administrative rules. Registration may not be withdrawn before the program sponsor is afforded notice and an opportunity to be heard. 3) Notice and an opportunity to be heard will be afforded pursuant to the provisions of the Montana Administrative Procedure Act, Title 2, Chapter 4, Part 6, MCA, and in accordance with the hearings provisions of (24.21.416.4 ARM) For good cause shown, a person directly affected by a proposed withdrawal of registration of an apprenticeship program may intervene in a proceeding provided for by (3). (24.21.405 ARM)

9. WORK EXPERIENCE AND TRAINING

During the apprenticeship, the Apprentice shall receive such on-the-job learning and related instruction in all phases of the trade as are necessary to develop a practical and skilled worker versed in the theory and practices of the trade. The on-the-job-learning will be under the direction and guidance of the immediate supervisor of the Apprentice. The Apprentice shall perform other such duties in the shop as are commonly related to the apprenticeship.

The "Appendix A -Schedule of Work Experience" for each trade is shown on the applicable "Trade Schedule" attached to and forming a part of these standards. It is understood that the sequences of training experiences will be governed by the flow of work in the shop. Appropriate instructions in safe work practices and habits shall be included with each unit of job training.

10. RELATED INSTRUCTION

During each segment of training each Apprentice is required to participate in coursework related to the job as outlined in Appendix A. For each occupation, the recommended term of apprenticeship will include no less than 144 hours of related instruction for each year of apprenticeship however, some occupations by industrial standards will require more than the minimum hours stated. Apprentices agree to take such courses the Sponsor deems advisable.

The Sponsor will secure the instructional aids and equipment it deems necessary to provide quality instruction. In cities, towns or areas having no vocational school or other schools that can furnish related instruction; the Apprentice may be required to utilize an alternate form of instruction that meets the approval of the Sponsor and the Registration Agency.

Such related and supplemental instruction may be given by classroom instruction, correspondence course, home study, electronic media or other form of approved self-study. Apprentices shall not be paid for hours spent in classes of related instruction, and this time shall not be considered as hours of work except where classes are held during regular working hours. Safety shall also be taught in related classes. The supplemental related instruction schedule for each trade covered in these Standards is stated in Appendix A.

Any Apprentice who is absent from related instruction classes, unless officially excused will satisfactorily complete all coursework deficiencies before being advanced to the next period of training. In cases of failure of an Apprentice to fulfill his/her obligations regarding related instruction without due cause, the Sponsor will take appropriate disciplinary action and may terminate the Apprenticeship Agreement after due notice to the Apprentice and the opportunity for corrective action.

Periodic review and evaluation of the Apprentice's progress shall be conducted and grades and attendance shall be filed in the Apprentice's individual file. To the extent possible, related instruction will be closely correlated with the practical experience and on-the-job learning.

Failure on the part of the Apprentice to fulfill their related training and/or attendance obligations or their failure to maintain passing grades therein shall constitute adequate cause for cancellation of their Apprenticeship Agreement upon adequate notification for corrective action.

11. SAFETY AND HEALTH TRAINING

All Apprentices will receive instruction in safe and healthful work practices both on-the-job and in related instruction that are in compliance with the Occupational Safety and Health

Standards promulgated by the Secretary of Labor under 29 U.S.C. 651 et seq., as amended, dated December 29, 1970 and subsequent amendments to that law, or State Standards that have been found to be at least effective as the Federal Standards. Apprentices will be taught that accident prevention is very largely a matter of education, vigilance and cooperation and that they should strive at all times to conduct themselves in their work to ensure their own safety and that of their fellow workers.

12. SUPERVISION OF APPRENTICES

The Sponsor/Mentor will be responsible for the training of the Apprentice on the job. Apprentices will be under the general supervision of the Sponsor and under the direct supervision of the journey-worker to whom they are assigned. The supervisor of the Apprentice (s) designated by the employer will be responsible for the Apprentice's work assignments and will ensure the Apprentice is working under the supervision of a skilled journey-worker, evaluation of work performance and completion and submittal of progress reports to the Sponsor.

To ensure complete all around training at the trade apprentices shall be assigned to competent journey-workers who will be responsible for the direct supervision and instruction of the Apprentice's on-the-job training consistent with the following practices:

Supervision Required:

- A. A qualified journey-worker or master must supervise the work of an Apprentice in the proper ratio prescribed in the registered Standards. Supervision means the following:
 - 1) A journey-worker or master must be assigned to the job site and be able to give direction and check the work of the Apprentice except during absences as required in the scope of business and otherwise provided in this chapter.
- B. Except as otherwise provided in this chapter, an Apprentice may not work without supervision of a journey-worker or master while engaging in an activity covered by the Apprenticeship Agreement or registered apprenticeship Standards of the Sponsor.
- C. Sponsors employing apprentices in occupations that require a residential focus may work an Apprentice in areas of experience with limited supervision based on prior performance and a demonstration of competency.
- D. An Apprentice who has completed no less than 70% of the Apprentice's required term and is completely current with related instruction may work with limited supervision. The Apprentice's work must be physically examined on a daily basis by a journey-worker or master for correctness.

- E. During the last 20% of the apprenticeship term, an Apprentice who is completely current with required related instruction may work without supervision, provided that the Apprentice's work will be physically examined weekly by a journey-worker or master, and provided that the Apprentice's prior performance demonstrated sufficient competence to perform the work. (24.21.1002 ARM)

13. APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages for each hour spent on the job during the apprenticeship, based on the acquisition of increased skill and competence as the training progresses.

Before an Apprentice is advanced to the next segment of training or to journey-worker status, the Sponsor will evaluate all progress to determine whether advancement has been earned by satisfactory performance in their OJL and in related instruction courses. In determining whether satisfactory progress has been made, the Sponsor will be guided by the work experience and related instruction records and reports.

The progressive wage schedule will be an increasing percentage of the journey-worker wage rate. The percentages that will be applied to the applicable journey-worker rate are shown on the wage schedule for each trade covered in these Standards is stated on the applicable "Trade Schedule" attached to the back of these Standards.

At no time will the starting wage be less than the current minimum wage as set by the Secretary of Labor or that set by applicable Montana State laws.

All wages and working conditions must be consistent with those recognized by the Registration Agency.

14. RATIO OF APPRENTICES TO JOURNEY-WORKER (24.21.1003 ARM)

- A. The apprentice-to-journeyman ratio may not exceed the following criteria:
 - 1) The first journeyman employed by a sponsor may supervise one apprentice.
 - 2) Two additional journeymen employed by the sponsor are required to supervise each additional apprentice.
- B. An apprentice that has completed 60 percent or more of the on-the-job training hours and 60 percent or more of the related instruction in an apprenticeship program is not counted for purposes of the apprentice-to-journeyman ratio provided for in (A).
- C. The apprentice-to-journeyman ratio applies to individual work sites as well as the entire firm or operation of the registered apprenticeship sponsor.

- D. In order to prevent abuse of the apprentice-to-journeyman ratio, the department will monitor the progress toward completion of all apprentices who have reached the 60 percent completion criteria provided for in (B).
- 1) An apprentice that does not, without good cause, maintain significant progress towards completion of the apprenticeship will be suspended from the apprenticeship program. Not maintaining significant progress, for the purpose of this rule, means that the apprentice's number of hours of related instruction and number of hours of experience are less than 90 percent of the number of hours provided for in the apprenticeship standards, relative to the amount of time the apprentice has been working. An apprentice that is notified by the department of insufficient progress has 60 days in which to catch up to the number of hours of related instruction and work experience before being suspended,
 - 2) An apprenticeship sponsor who fails, without good cause, to have at least a 60 percent rate of apprentices that timely complete the apprenticeship will be subject to restrictions on the sponsor indenturing new apprentices, and may be subject to deregistration as an apprenticeship sponsor.
 - 3) As a general practice, the apprentice-to-journeyman ratio may not ordinarily be more than one apprentice to one journeyman, notwithstanding the provisions of (2). A ratio of more than one-to-one may be allowed in the special case of a shop with a single working master with no journeyman employees, or in the event of a separation from employment by a journeyman employee that temporarily creates a more than one-to-one ratio.
 - 4) An apprentice who is aggrieved by a suspension, or a sponsor who is aggrieved by a restriction or deregistration may request in writing a contested case within 30 days of the department's action of suspension, restriction, or deregistration.

15. RATIO WAIVER PROCESS (24.21.415 ARM)

- A. The registration agency may consider waiver of ratio standards only if the registered apprenticeship sponsor is in full compliance with registered standards and there are no outstanding complaints directly related to the specific registered apprenticeship program. The registration agency may waive ratio standards for a registered apprenticeship sponsor who demonstrates the need for a waiver by documented proof of all of the following.
- 1) The registered apprenticeship sponsor's existing apprentices are current with the required related instruction, including apprentices that have been granted credit;

- 2) The registered apprenticeship sponsor's existing apprentices have a documented 80 percent or higher accumulated grade average in related instruction;
- 3) The registered apprenticeship sponsor must notify and document attempts to seek qualified journeymen from internal trade associations, area employers in like occupations, or by posting a confidential job order through the local job service office that is nearest to the shop where the apprentice is to be employed; and

The registered apprenticeship sponsor must have an established completion rate that is at least 60 percent, based on the total number of all past and current apprentices. That number does not include:

- a) apprentices who have rolled over to other programs registered with the sponsor; and
- b) cancellations by apprentices, either through noncompliance or cancellations that have occurred during the probation period stated in the registered apprenticeship sponsor's registered standards.

16. HOURS OF WORK

Hours of work for apprentices shall be the same as the hours of work for journey-workers and other conditions for apprentices shall be the same as for journey-workers within the Sponsor's workforce doing comparable work. No apprentice will be allowed to work overtime if it interferes with attendance in related instruction classes. Apprentices who do not complete the required hours of on-the-job-learning (OJL) during a given segment will have the term of that segment extended until the required number of hours of training are accrued.

17. APPRENTICE RECORDS

Each Apprentice may be responsible for maintaining a record of his/her work experience/on-the-job learning and in related instruction and for having this record verified by his/her supervisor at the end of each week. The Apprentice will authorize an effective release of their completed related instruction records from the local school authorities to the Sponsor. The record cards and all data, written records of progress, evaluations, corrective and final actions pertaining to the apprenticeship, will be maintained by and will be considered the property of the Sponsor. This record will be included in each Apprentice's record file maintained by the Sponsor.

Before each period of advancement or at any time when conditions warrant, the Sponsor will evaluate the Apprentice's record to determine whether he/she has made satisfactory progress.

If an Apprentice's related instruction or on-the-job learning progress is found to be unsatisfactory, the Sponsor may determine whether the Apprentice will continue in a

probationary status, or require the Apprentice to repeat a process or series of processes before advancing to the next wage classification. In such cases, the Sponsor will initiate a performance plan with the Apprentice.

Should it be determined by the Sponsor that the Apprentice does not have the ability or desire to continue the training program to become a journey-worker, the Sponsor will, after the Apprentices has been given adequate assistance and opportunity for corrective action, terminate the Apprenticeship Agreement.

18. CERTIFICATE OF COMPLETION OF APPRENTICESHIP AND INTERIM CREDENTIALS

- A. Upon satisfactory completion of the requirements of the apprenticeship program as established in these Standards, the Sponsor will so certify in writing to the Registration Agency and request that a Certificate of Completion of Apprenticeship be awarded to the completing Apprentice (s). Such request will be accompanied by the appropriate documentation for both the on-the-job training hours and the related instruction as may be required by the Registration Agency.
- B. Certificate of Training – A Certificate of Training shall be issued by the Registration Agency to those registered Apprentices that the Sponsor has certified in writing to the Registration Agency that the Apprentice has successfully met the requirements to receive an interim credential.
- C. The State Registered Apprenticeship Program shall award interim credentials to apprentices who demonstrate the appropriate competencies when requested to do so by program sponsors as provided by 29 CFR section 29.5 as adopted by the department in (24.21.302 ARM). The State Registered Apprenticeship Program will work with interested program sponsors to develop appropriate benchmarks and competency testing that will apply to the sponsor's apprenticeship program and competency testing will not be recognized for a given apprentice until the benchmarks and testing protocols are incorporated in the apprenticeship standards. (24.29.431 ARM)

19. ADJUSTMENT OF DIFFERENCES

The Sponsor will have full authority to supervise the enforcement of these Standards. Its decision will be final and binding on the employer, the Sponsor and the Apprentice unless otherwise noted below.

If an applicant or an Apprentice believes an issue exists that adversely affects his/her participation in the apprenticeship program or violates the provisions of the Apprenticeship

Agreement or Standards, relief may be sought through the avenues stated in Sections twenty-two (22) and twenty-three (23) of these Standards.

20. CONTINUITY OF EMPLOYMENT

The program Sponsor intends and expects to give the Apprentice steady employment. The Sponsor reserves the right, however, to suspend Apprentices either entirely or in part whenever conditions of business make it necessary.

The Apprentice will have reasonable assurances of continuity of employment for the term of the apprenticeship and upon the satisfactory completion thereof, reasonable assurance of continued employment as a skilled worker.

Before a Sponsor may request registration for a new Apprentice, the Sponsor shall offer the rehire of any Apprentice that had worked for the Sponsor, but had been laid off or terminated without good cause.

(24.21.412 ARM)

21. REGISTRATION, CANCELLATION, DEREGISTRATION AND MODIFICATION OF STANDARDS

These Standards will, upon adoption by the Sponsor be submitted to the Registration Agency for approval. Such approval will be acquired before implementation of the program. These Standards of Apprenticeship are registered by the Registration Agency as meeting the requirements set forth in CFR 29, Part 29, and the Montana regulations for apprenticeship registration. The Sponsor reserves the right to discontinue at any time the apprenticeship program set forth herein. The Registration Agency will be notified promptly in writing of any decision to terminate the program. Deregistration or cancellation of these Standards may be initiated by the Registration Agency for failure of the Sponsor to abide by the provisions herein. Such deregistration or cancellation will be in accordance with the Registration Agency's regulations and procedures. Within fifteen (15) days of cancellation of the apprenticeship program whether voluntary or involuntary, the Sponsor will notify each Apprentice of the cancellation and the effect of same. This notification conforms to the requirements of Title 29, CFR part 29.7 and comparable state requirements.

The Standards may be revised or modified at any time by the Sponsor as business conditions or experience demand; such revisions or modifications shall be registered with the Registration Agency before being placed in effect. No revision or modification in the Standards shall alter an Apprenticeship Agreement in force at the time of such change without the consent of all parties to the agreement. A copy of each amendment or modification adopted will be furnished to each Apprentice to whom the amendment or modification applies.

22. COMPLAINT PROCEDURE

A. Any Apprentice or apprentice applicant who believes that he or she has been discriminated against on the basis of race, color, religion, national origin or sex, with

regard to apprenticeship or that the equal opportunity standards with respect to his/her selection have not been followed in the operation of an apprenticeship program, may personally or through an authorized representative, file a complaint with the Registration Agency or at the Apprentice or applicant's election with the Human Rights Bureau, Montana Department of Labor and Industry as per EEO and Affirmative Action procedures stated in Title 29 CFR 30.11 and the Montana Plan for Equal Opportunity in Apprenticeship (24.21.421 ARM).

- B. A dispute or complaint involving an Apprenticeship Agreement and the registered Apprenticeship Standards subject to the jurisdiction of the Registered Apprenticeship Program (Registration Agency) may be filed with the Registered Apprenticeship Program, Department of Labor and Industry, PO Box 1728, Helena, MT 59624-1728, telephone (406) 444-3998, or fax to (406) 444-3037. The Complaint Process will be followed as specified in (ARM 24-21.416).

23. SEXUAL HARASSMENT

It shall be the policy of this Sponsor to prohibit sexual harassment in the work place. As defined by the United States Equal Opportunity Commission: Sexual harassment is the unwelcome or unsolicited verbal, physical, or sexual conduct that is made a term or condition of employment, is used as a basis for employment or advancement decisions, or has the effect of unreasonably interfering with work or creating an intimidating, hostile, or offensive work environment.

The Sponsor will take whatever actions are necessary to preclude incidents of sexual harassment from occurring so that all Apprentices are afforded the opportunity to work in an environment free from unsolicited, unwelcome, sexual overtones.

All Apprentices are expected to support the efforts of the Sponsor by fostering an open and friendly work environment, yet one free of inappropriate pressures for all members of the workforce.

Complaints of sexual harassment in the workplace may be filed and processed under Title 29, CFR Part 30, the Montana State Plan for Equal Employment Opportunity in Apprenticeship, and the procedures set forth in Section 22 of these Standards.

24. CONSULTANTS AND TECHNICAL ASSISTANCE

Representatives of the Registered Apprenticeship Program, Workforce Services Division, Montana Department of Labor and Industry or the Office of Apprenticeship, U.S. Department of Labor, or other agencies or persons who may be called upon for advice or assistance in the formulation and operation of this apprenticeship program shall be known as consultants and are available to provide technical assistance to the Sponsor and the Apprentice (s) in the operation and administration of this registered apprenticeship program. The Sponsor is encouraged to invite representatives from industry, education, business,

private and/or public sector agencies to provide consultation and advice for the successful operation of their training program.

25. APPROVAL AND ADOPTION

These Standards of Apprenticeship and all terms and conditions contained herein are accepted as the system by which apprentices are to be trained and are hereby approved by the Registration Agency and adopted as the policy and program of training of apprentices.

26. NOTIFICATION TO REGISTRATION AGENCY

The Registration Agency will be notified within forty-five (45) days of all new apprentices to be registered, credit granted, suspension for any reason, reinstatements, extensions, modifications, completions, cancellation and termination of Apprenticeship Agreements and causes. *

27. OUT OF STATE RECIPROCAL APPROVAL

Apprenticeship Programs and standards of employers; employers and unions which jointly form a sponsoring entity on a multi-state basis and are registered pursuant to all requirements of Title 29 CFR Part 29 by any registration agency shall be accorded approval reciprocity for federal purposes by the State Registered Apprenticeship Program, if such reciprocity is requested by the sponsoring entity. An apprenticeship program must comply with Montana's Statutes and administrative rules, including but not limited to: a) the applicable ratio requirements and b) the apprenticeship wage rates established pursuant to 39-6-108, MCA (24.21.401-3 ARM)

Registered Montana Sponsor-employers of apprenticeship working on projects outside of Montana may be granted reciprocal approval for Federal Davis-Bacon or State Prevailing Wage purposes but only for apprentices and apprenticeship programs approved and recognized by state or federal registration agencies. Reciprocal state or federal registration agencies may require compliance to: area wage provisions, area ratio standards applicable licensing requirements and other provisions required by the reciprocal state.

Prior to placing apprentices on a project in another state, the program Sponsor is encouraged to contact the Montana Registered Apprenticeship Program for the appropriate state or federal registration agency contact information. Regional states with approved state registration agencies include California, Nevada, Oregon and Washington. Regional states with approved federal registration agencies include North and South Dakota, Utah, Idaho, Colorado and Wyoming.

28. TRANSFER OF AN APPRENTICE AND TRAINING OBLIGATIONS

The transfer of an Apprentice between apprenticeship programs in like occupations must be based on agreement between the Apprentice and the affected apprenticeship program Sponsors and must comply with the following requirements:

- A. The transferring Apprentice must be provided a transcript of related and instruction and on-the-job-learning hours by the program Sponsor.
- B. The transfer must be to the same occupation.
- C. A record of cancellation and a new Apprenticeship Agreement must be executed when the transfer occurs between the program Sponsors.

29. RESPONSIBILITIES OF THE APPRENTICE

Apprentices, having read these Standards formulated by the Sponsor and having signed an Apprenticeship Agreement with the Sponsor or his designee agree to all the terms and conditions contained therein and further agrees to abide by the Sponsor's rules, policies, including any amendments, serve such time, perform such manual training and study such subjects as the Sponsor may deem necessary to become a skilled journey-worker. In signing the Apprenticeship Agreement, Apprentices assume the following responsibilities and obligations under the apprenticeship program:

- A. Perform diligently and faithfully the work of the occupation and other pertinent duties assigned by the Sponsor in accordance with the provisions of these Standards.
- B. Respect the property of the Sponsor and abide by the working rules and regulations of the Sponsor.
- C. Attend and satisfactorily complete the required hours in the on-the-job-learning and in related instruction in subjects related to the occupation as provided under these Standards.
- D. Maintain and make available such records of work experience and training received on-the-job and in related instruction as may be required by the Sponsor.

- E. Develop and practice safe working habits and work in such a manner as to assure his/her personal safety and that of other fellow workers.

30. STATE APPRENTICESHIP ADVISORY COUNCIL

The department shall establish on a continuing basis a state apprenticeship advisory council pursuant to the Provisions of 29 CFR 29 and in accordance with 2-15-122, MCA. The State Registered Apprenticeship Program will use the State Apprenticeship Advisory council in a consultative role regarding matters of interest to the program and the apprenticeship community. The Registered Apprenticeship Program will utilize the State Apprenticeship Advisory Council as an additional means of fostering dialogue and communication between the program and sponsors, apprentices, industry and educators. (24.21.205)

SPONSOR: DEPARTMENT OF LABOR & INDUSTRY-TECHNICAL SERVICES DIVISION

BY: KIM WARREN

TITLE: BUREAU CHIEF

DATE: FEBRUARY 8, 2016

REGISTERED APPRENTICESHIP PROGRAM
WORKFORCE SERVICES DIVISION
DEPARTMENT OF LABOR AND INDUSTRY

SURVEYED BY: TOM LETELLIER

TITLE: PROGRAM SPECIALIST

NOTE: (Registration of this apprenticeship program by the department will not interfere with nor modify in any way the provisions of any collective bargaining agreement to which the employer or his employees are signatory parties, nor will such registration modify any law, federal or state, which may apply to the employer or his employees.)

REMARKS:

RELATED INSTRUCTION WILL BE PROVIDED THROUGH AN APPROVED HOME STUDY COURSE BY MUTUAL AGREEMENT OF THE PROGRAM SPONSOR AND THE INDIVIDUAL APPRENTICE OR AN APPROVED CLASSROOM CURRICULUM OR ON-LINE IEC PROGRAM PROVIDED BY THE SPONSOR THROUGH THEIR MEMBERSHIP AND SUPPORT OF THE APPROVED MONTANA STATE CHAPTER INDEPENDENT ELECTRICAL CONTRACTORS ASSOCIATION TRAINING PROGRAM.

THE SPONSOR AND THE APPRENTICE(S) WILL BE RESPONSIBLE FOR ALL COST OF THE RELATED INSTRUCTION IN ACCORDANCE WITH THE COST OPTION SELECTED ON THE COURSE OPTION SHEET OR A PREVIOUSLY APPROVED COST SHARING AGREEMENT.

WAGE SCHEDULE FOR: COMPUTER PROGRAMMER O*NET - SOC CODE: 15-1131.00

This trade schedule supplement is attached to and a part of the Apprentice-ship and Training Standards for:

DEPARTMENT OF LABOR & INDUSTRY - TECHNICAL SERVICES DIVISION, HELENA, MONTANA

1. TERM OF APPRENTICESHIP (Sec. 4)

The term of apprenticeship shall be a period of two (2) years (not less than 4000 hours) of reasonably continuous employment and training on the job, supplemented by the required hours of related technical instruction.

2. RATIO OF APPRENTICES TO JOURNEYMEN (Sec. 13)

One (1) apprentice may be employed in each shop or department employing a qualified journeyman and one (1) additional apprentice for each one (1) additional mentor regularly employed.

3. APPRENTICE WAGE SCHEDULE (Sec. 12)

Apprentices shall be paid a progressively increasing schedule of wages based on the recognized mentor wage rate, as follows:

1st period Months or 0-1000 Hours \$18.80 Per Hour or % Mentor Wage

2nd period Months or 1000-2000 Hours \$20.47 Per Hour or % Mentor Wage

3rd period Months or 2000-3000 Hours \$21.88 Per Hour or % Mentor Wage

4th period __ Months or 3000-4000 Hours \$23.53 Per Hour or % Mentor Wage

The recognized mentor's wage rate for this occupation is \$23.53 per hour If the apprentice performs labor, which is subject to a higher wage rate either by contract or by law than that specified herein, the higher wage rate shall be paid by the employer.

WORK PROCESS SCHEDULE

Information Technology Apprenticeship COMPUTER PROGRAMMER O*NET-SOC CODE: 15-1131.00

Description: Convert project specifications and statements of problems and procedures to detail logical flow charts for coding into computer language. Develop and write computer programs to store, locate, and retrieve specific documents, data, and information. May program websites.

On-The-Job-Learning Outline: Apprentice will receive training in the various work experiences listed below. The order in which this training is given will be determined by the flow of work on the job and will not necessarily be in the order listed.

Competencies

A. Foundational

- The apprentice will adhere to the organization's rules, responsibilities, policies, and basic workplace ethics. The apprentice will demonstrate basic principles of interpersonal communication and knowledge of the organization's basic structure and functions. The apprentice will follow established safety procedures.
- The apprentice will be able to integrate organizational mission/goals and vision into work practices. The apprentice will use benchmarking and "best practices" to improve performance.
- The apprentice will be able to engage and utilize employee benefits and development programs.
- The apprentice will be able to identify and demonstrate knowledge of the appropriate common office tools used to produce documents, spreadsheets, and presentations.
- The apprentice will be able to develop or update work processes or procedures in accordance with the organization's standards.

- The apprentice will be able to prepare and deliver oral presentations that effectively convey information, concepts, and ideas.
- The apprentice will be able to prepare a complete, accurate, and convincing formal report, on a technical subject, using standard formats and office tools.
- The apprentice will be able to communicate effectively and develop effective communications techniques with others.
- The apprentice will participate as an effective member of a team and work collaboratively with team members.

B. Design Application

- The apprentice will be able to identify and demonstrate the organization's design principles used for application development.
- The apprentice will be able to identify and demonstrate the process to review and provide input for user documentation.
- The apprentice will be able to identify and demonstrate the process to integrate feedback and recommendations into product development.

C. Develop Application

- The apprentice will be able to identify coding languages and standards used by the organization.
- The apprentice will be able to identify and demonstrate the application development process including coding, documentation, and testing.
- The apprentice will be able to review an application's code as part of a peer group.
- The apprentice will be able to revise and adapt existing code to meet emerging requirements.

D. Test and Validate Applications

- The apprentice will be able to demonstrate the process for developing a test plan for an application, including unit testing and integration tasks.
- The apprentice will be able to perform validation testing on new applications.
- The apprentice will be able to demonstrate how to interpret test results and make recommendations.
- The apprentice will demonstrate knowledge of how to support user acceptance testing.

E. Implement, Support, and Maintain Applications

- The apprentice will be able to assist in the development of a release plan for an application.
- The apprentice will be able to transition an application to a new platform.
- The apprentice will be able to maintain and support applications.
- The apprentice will be able to evaluate, implement, and document application enhancements.
- The apprentice will be able to perform system maintenance for application security.
- The apprentice will be able to identify common security risks and threats.

SKILLS, KNOWLEDGE, ABILITIES AND TASKS

(Technical and Functional Expertise)

Skills

***Note:** The technical and functional skills listed below are based on general occupational qualifications for Computer Programmers commonly recognized by most employers. Typically, you will not be required to have all of the skills listed to be a successful performer. Recruitment and selection standards for an individual state job must be based on the specific knowledge, skills, and abilities for that job as indicated in the job announcement and job description in the Employee Work Profile.*

1. Writing computer programs for various purposes.
2. Communicating effectively in writing as appropriate for the needs of the audience.
3. Understanding written sentences and paragraphs in work related documents.
4. Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Analyzing needs and product requirements to create a design.
8. Determining causes of operating errors and deciding what to do about it.
9. Talking to others to convey information effectively.
10. Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Knowledge

Note: The technical and functional knowledge statements listed below are based on general occupational qualifications for Computer Programmers commonly recognized by most employers. Typically, you will not be required to have all of the knowledge listed to be a successful performer. Recruitment and selection standards for an individual state job must be based on the specific knowledge, skills, and abilities for that job as indicated in the job announcement and job description in the Employee Work Profile.

The **Knowledge** of:

1. Computer hardware and software, including applications and programming.
2. Arithmetic, algebra, geometry, calculus, statistics, and their applications.
3. Structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
4. Administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.
5. Media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media.

Abilities

Note: The technical and functional abilities listed below are based on general occupational qualifications for Computer Programmers commonly recognized by most employers. Typically, you will not be required to have all of the abilities listed to be a successful performer. Recruitment and selection standards for an individual state job must be based on the specific knowledge, skills, and abilities for that job as indicated in the job announcement and job description in the Employee Work Profile.

The **Ability** to:

1. Communicate information and ideas clearly in both the written and spoken word so others will understand.
2. Listen to and understand information and ideas presented through spoken words and sentences.
3. Read and understand information and ideas presented in writing.
4. Apply general rules to specific problems to produce answers that make sense.
5. Choose the right mathematical methods or formulas to solve a problem.
6. Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

Tasks

Note: The following is a list of sample tasks typically performed by Computer Programmers. Employees in this occupation will not necessarily perform all of the tasks listed.

Tasks

1. Compile and write documentation of program development and subsequent revisions, inserting comments in the coded instructions so others can understand the program.
2. Conduct trial runs of programs and software applications to be sure they will produce the desired information and that the instructions are correct.
3. Consult with managerial, engineering, and technical personnel to clarify program intent, identify problems, and suggest changes.
4. Correct errors by making appropriate changes and then rechecking the program to ensure that the desired results are produced.
5. Investigate whether networks, workstations, the central processing unit of the system, and/or peripheral equipment are responding to a program's instructions.
6. Perform or direct revision, repair, or expansion of existing programs to increase operating efficiency or adapt to new requirements.
7. Perform systems analysis and programming tasks to maintain and control the use of computer systems software as a systems programmer.
8. Prepare detailed workflow charts and diagrams that describe input, output, and logical operation, and convert them into a series of instructions coded in a computer language.
9. Write, analyze, review, and rewrite programs, using workflow chart and diagram, and applying knowledge of computer capabilities, subject matter, and symbolic logic.
10. Write, update, and maintain computer programs or software packages to handle specific jobs, such as tracking inventory, storing or retrieving data, or controlling other equipment.

APPENDIX A – RELATED INSTRUCTION FOR: Computer Programmer

Length of Programs: 4 semesters

Type of program: Associate of Applied Science

Semester of Entry: Fall and spring.

First Year

Fall Semester

BMIS285	Fundamentals of Management Information Systems	3 credits
CSC1100	Introduction to Programming	3 credits
WRIT121T	Introduction to Technical Writing	3/4 credits

Spring Semester

CSCI111	Programming with Java 1	4 credits
CSCI240	Databases and SQL	3 credits
IKUW	Agile Development with Scrum	8 class hours
IKUW	(GTR) Oracle Forms and Reports Development	40 class hours

Second Year

Fall Semester

CSCI221	Systems Analysis and design	4 credits
CSCI245	Modern Database Systems	3 credits
CSCI276	Application Security	2 credits

Spring Semester

CSCI121	Programming with Java II	4 credits
CSCI238	Standard based Mobile Applications	3 credits
CSCI257	Web Services	3 credits

We will provide the Apprentice access to additional training opportunities via Lynda.com, DVD's, books and instructor lead off site training as directed by the needs of the Department.