Apprentice Program Guidelines

Management and Labor realize the State is experiencing a skill gap in many occupations as well as an aging workforce that is retirement eligible coupled with a lack of qualified workers to fill these future vacancies. Management and Labor have agreed to establish this Apprentice Program in order to help meet these staffing and skill shortages.

The Apprentice Program is established to meet the staffing needs within the Executive Branch of Montana State Government through a formal Apprentice Program for non-traditional occupations. Examples of apprenticeable occupations include, but are not limited to Computer Programmer, Accounting Technician, Correction Officer, Counselor, Architectural Drafter, Fish & Game Warden, Laboratory Technician, Legal Secretary, and LPN.

An apprenticeship occupation follows these state and federal guidelines:

1. Is typically learned through a structured program of supervised on-the-job training.
2. Is clearly defined and recognized throughout an industry.
3. Involves special skills and knowledge that requires a minimum of 2,000 hours experience.
4. Requires related instruction directly related to the occupation to supplement on-the-job training.

Montana Registered Apprenticeship is an employer designed training program, consisting of not less than 2000 hours (1 year) of On-the-Job Training (OJT), and not less than 144 hours of related college level coursework per 2000 hours of OJT.

Apprenticeship is full-time employment from the start. It is an on-the-job training model that produces good-paying, sustainable jobs and highly skilled workers to meet workforce demands.
Apprenticeship promotes earn – while-you-learn quality training by combining hands-on skills learning alongside a mentor – with related, technical instruction in a classroom and/or online.

The training program is typically two to four years to completion, depending on the occupation. Once completed an apprentice receives a nationally recognized certificate/credential.

Apprenticeship ratios are set at a maximum of 20% of permanent staff unless an exception is approved by a majority vote of the Apprentice Board

For more information about apprenticeships in general please visit:
http://dev.apprenticeship.mt.gov/faq

Steps to Setting-Up a Registered Apprentice Program

1. Read the State of Montana Apprentice Program MOU.
2. Select an apprenticeship trade/occupation..
3. Decide on minimum qualifications – High School Diploma or GED is always required.
4. Identify a Mentor to provide the 2000 minimum hours of on-the-job training. Close supervision is required.
5. Outline the specific on-the-job training and assign hours to each skill, duty, or task (totaling at least 2000 hours). Be specific about what the Apprentice needs to learn and how much time it will take to master each skill, duty, or task. (See attached example below)
6. Identify college classroom or on-line training to meet the minimum 144 hours of instruction. The hiring agency must *cover* the cost of the college classroom or on-line training.
7. Contact the Union (if applicable) to negotiate terms of employment. Apprentices must be paid at least 80% of the starting wage for that occupation as determined by the agency's pay plan. Apprentices must receive incremental wage increases.
8. Contact the Apprentice Board for assistance with finalizing the Apprentice Contract.
9. Advertise for the Apprentice vacancy.
10. Get final approval from the Apprentice Board.
11. Keep records of all provided training and associated hours.
12. Report to the Apprentice Board on a quarterly basis.

Work Process and Classroom Training Duties and Hours		On-the-Job Learning Hours
Period 1	**General Practices - Foundations**	
1	Demonstrate a working understanding of the organization's structure, personnel rules, responsibilities and general understanding of work ethics, interpersonal communications and related policies. Understands and practices safety procedures and rules.	8-20 Hours
2	Demonstrate a working understanding of the goals, mission and vision.	16-24 Hours
3	Demonstrate a working understanding of the organization's office tools such as copiers, fax machines etc.	16-24 Hours
	Subtotal hours for Period 1	**40-68 Hours**
Period 2	**General Practices – Computer Basics**	
1	Demonstrate a working knowledge of the components of a computer and perform basic troubleshooting on communication issues within a computer.	80-160 Hours
Example On-the-Job Duties:	Identify the components of standard desktop personal computers. Install and configure computer components. Maintain and troubleshoot peripheral components. Install and configure operating systems.	
2	Demonstrate a working knowledge of the hardware components of a computer and perform basic troubleshooting on hardware related issues.	60-120 Hours
Example On-the-Job Duties:	Install and configure system components. Troubleshoot system components.	
3	Demonstrate a working knowledge of basic networking, to allow the flow of information between multiple computers.	80-160 Hours
Example On-the-Job Duties:	Manage, maintain, troubleshoot, install, operate and configure basic network infrastructure.	
	Subtotal hours of Period 2	**220-440 Hours**
Period 3	**General Practices – Security Basics**	

1	Demonstrate knowledge of "best practices" in general network security.	80-160 Hours
Example On-the-Job Duties:	Implement secure network communications. Designate how to manage public key infrastructure and certificates.	
2	Create a security awareness program in the organization which is used to communicate "best practices" for end users.	80-160 Hours
3	Create an asset tag inventory of all equipment, and verify following license agreements on software, under the jurisdiction of the IT Department.	80-160 Hours
Example On-the-Job Duties:	Configure User Account Controls. Configure Local Security Policies. Configure Windows Firewall. Configure Windows Defender. Set indexing locations and modify advanced options. Create a library and set security permissions. Create and deploy a search connector.	
	Subtotal hours for Period 3	220-440 Hours
Period 4	Client Operating System Basics	
	Install and configure client operating systems for the organization.	100-160
Example On-the-Job Duties:	Configure User Account Controls. Configure Local Security Policies. Configure Windows Firewall. Configure Windows Defender. Set indexing locations and modify advanced options. Create a library and set security permissions. Create and deploy a search connector.	
	Subtotal hours for Period 4	100-160
Period 5	Network Operating Systems	
1	Demonstrate a working knowledge of how to configure and troubleshoot network operating systems.	60-120 Hours
Example On-the-Job Duties:	Install and configure servers. Configure and troubleshoot domain name system (DNS). Configure and manage Windows Internet Name Service (WINS). Configure and troubleshoot Dynamic Host Configuration Protocol (DHCP). Configure and troubleshoot IPv6 Transmission Control Protocol/Internet Protocol (TCP/IP). Configure and troubleshoot Routing and Remote Access. Install, configure, and troubleshoot the Network Policy Server Role service.	

2	Demonstrate a working knowledge of how to configure and troubleshoot Active directory.	60-120 Hours
Example On-the-Job Duties:	Configure Active Directory Domain Services. Perform backup and restore, and monitor and troubleshoot Active Directory related issues.	
3	Demonstrate a working knowledge of how to configure and troubleshoot Active Directory.	60-120 Hours
Example On-the-Job Duties:	Configure, identity, and access solutions with Windows Server 2008 Active Directory. Describe identity and access solutions. Configure Active Directory Certificate Services. Deploy and manage certificates.	
4	Plan and administer Windows Server 2008.	60-120 Hours
Example On-the-Job Duties:	Plan for both Windows Server installation and upgrades. Plan and implement network connectivity by using Internet Protocol version 4 (IPv4)-related technologies and plan a migration strategy to IPv6. Plan the deployment of Active Directory related services.	
	Subtotal hours for Period 5	**240-480 Hours**
Period 6	**General Practices – Advanced Networking**	
1	Perform basic Cisco Networking	60-120 Hours
Example On-the-Job Duties:	Monitor and distribute traffic on an Ethernet Local Area Network (LAN) and identify switched LAN technology solutions to Ethernet networking issues.	
2	Interconnect Cisco devices.	60-120 Hours
Example On-the-Job Duties:	Configure and troubleshoot network and expand the switched network from a small LAN to a medium-sized LAN. Use multiple switches, to support VLANs, trunking, and spanning tree.	
3	Recognize security threats in a network.	60-120 Hours
	Subtotal hours for Period 6	**180-360 Hours**
Period 7	**Demonstrating Learned Competencies**	
1	Utilize all of the skills taught during all of the GPs and document ways to improve the company's current Active Directory design.	1040-1044