



AAMI Career Development Guide

Association for the Advancement of Medical Instrumentation

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Workforce Learning LLC

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Overview

Introduction

Welcome to the AAMI Career Development Guide. Whether you want to grow in your current position or look for other career opportunities in Healthcare Technology Management, the Guide will provide you with what you need to know to create meaningful career goals and to chart the path to advancement. Career development is much more than getting a new job; it is about growing your skills and experience to advance in your career and be more valuable to your current and future employers. Career advancement is also about taking on new challenges and building your enjoyment for your work and your profession.

Purpose of Guide

AAMI's goal in creating the Guide is to foster the development and advancement of its members. Many of our AAMI members work in institutions where they are part of a small staff of HTMs. Finding good guidance on career advancement can be challenging when your organization's leadership lacks the knowledge of careers in the HTM profession. The Guide will give you the information you need to have conversations with your organization's leaders on your future career objectives.

How to Use the Guide

The AAMI Career Development Guide has been written to apply to all healthcare providers who employ HTMs, both in clinical setting as well as manufacturing. The Guide contains general guidelines around what is needed for advancing through the various career ladders and positions. Your organization's specific requirements would take precedence over the guidelines provide by AMMI.

The Guide will be of value for organizations that have not produced their own career ladders and promotional requirements for HTMs. In these organizations, HTM professionals can share the Guide with their organization's leadership to use as a roadmap for career advancement.

It is our hope that the Guide will also serve to establish career standards among our various employers so that HTMs can use the Guide to navigate their career between organizations.

Note for HTM Leaders

If you manage HTM staff, you can use this guide to help your staff develop actionable career paths and personal development plans. Training and developing staff can be a huge asset for organizations. Growing skills and experience not only increases the value of the staff to the organization, it also is a powerful retention tool. Every level of leadership, from front-line supervisors to the C-Suite is responsible for the development of their direct reports. The AAMI Career Development Guide will give leaders a blueprint to use in creating meaningful, goal-driven development plans for their staff.

Letters of Endorsement

Insert here Guide endorsement letter(s) from Board President and other AAMI leaders

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Background, History of Project

- ▲ June 2011 – AAMI launches the Core Curriculum Committee whose charter is to review all the topics covered in the curricula of BMET training programs and to generate a set of core educational objectives
- ▲ June 2012 the Core Curriculum is reviewed and approved at eh Annual conference
- ▲ August 2013 – AAMI initiates a project to develop standard career ladders and pathways to provide BMETs and BTE with a detailed resource for professional growth and opportunities

Content Overview

The AAMI Career Development Guide contains the following sections:

- ▲ **Getting Started** – a step-by-step process to use to create your career plan
- ▲ **Tool Kit** – HTM career graph and specific ladder grids along with planning worksheets
- ▲ **Career Planning** – specific sources of development opportunities for each of the skill and knowledge domains on the career ladder grids
- ▲ **Communicating Your Plans** – meeting guidelines and sample agendas for communicating your career goals and plans with your supervisor and HR department.
- ▲ **Interviewing Tips** – tips and techniques to landing your next opportunity
- ▲ **FAQs** – answers to the most frequently asked questions about career planning

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Getting Started

The Process

Now that you are aware of the importance of planning your career direction, let's look at a process you can use to guide career growth. This section contains a 6 step process that you can use to create career goals and a development plan that will guide you to attaining the skills and experience needed to grow your career.

Step	Definition
1. Determine Your Goals	Identify short and long term career goals that are achievable with your overall goals and strategies
2. Identify Your Needs	Identify what skills, knowledge and expertise are needed for the future position
3. Assess Your Current State	Assess your skills, knowledge and expertise
4. Identify Gaps	Identify gaps for development
5. Create the Plan	Create the development plan
6. Work the Plan	Work the plan, adjusting as needed to changing conditions

This section is designed to be a self-help guide for career planning. You can work through these 6 steps and share the resulting goals and development plans with your supervisor and/or Human Resources. They can then provide the coaching, guidance and support necessary to help you achieve your goals.

Step 1: Determine Your Goals

Where do you want to be in 3 to 5 years?

The answer to this question is the outcome of the first step of career planning. By far, it is the most critical step. Few professionals have a clear sense of their future goals. Most spend time and attention on annual or quarterly achievements, letting the future emerge as an accumulation of short accomplishments. This may be a successful strategy for some, but for others the result is waking up one morning and asking “How the heck did I get myself in this job rut?” Without a career goal, you are at risk of evolving your job into a series of assignments that fall into your lap, and that can be dull dead ends.

Start the research into career goals by asking yourself:

- *What motivates me at work?*
- *What makes me look forward to Mondays?*
- *What tasks, activities, and people make me feel like my work has value?*

Then ask yourself:

- *What do I dislike about my work?*
- *What makes me feel like I have no energy?*
- *What do I dread doing?*
- *With whom do I dislike working?*
- *What makes me wish it was Friday?*

The answers to these questions will tell you the work and work environment that you need to be in. The reflection also prevents you from being swayed by a job title or place on the organizational chart, and paints a clear picture of a motivational goal on which to set your plan.

Examples of career goals:

- *By 2015 obtain a promotion to a Level 2 BMET based on my specialty in XYZ technology*
- *By 2018, complete a BS degree in Clinical Engineering and obtain a Clinical Engineer 1 position in one of the larger area hospitals with room for growth and advancement*

Outcome of Step 1:

A clear, concise, measurable statement of your future career goal with a set timeframe to achieve that goal.

Step 2: Identify Your Needs

What skills, knowledge or experience do you need to achieve your career goals?

What does your future position require for you to be perceived as a good candidate for the job? Knowing what you will need to qualify for career advancement is the next step in determining how ready you are to make the move. This step encompasses all the research you need to gain intelligence on your readiness for the move as well as what you will need to do to fill any gaps.

Most job descriptions or job advertisements do a decent job of describing the technical requirements. They will tell you what knowledge you need and experience that is desired. What they won't tell you is the most critical aspects of the job: the things you have already identified as issues that motivate or drain you on a daily basis. Job documentation will not tell you if the supervisor is a micro-manager or if the coworkers have a strong work ethic. They won't tell you the organization's tolerance for mistakes or whether they promote learning or growth. You need to know these factors, along with the ones you have already identified in Step 1, before you seriously consider moving into a new position.

How do you find this information out? By carefully asking questions, not only of the hiring managers but also from direct reports and peers. You need to network in the professional community, read a company's web site, and use any other trick that comes to mind, to ferret out the information not covered in the job posting or job description.

Outcome of Step 2:

A complete inventory of what is needed to qualify for your next move. You will identify not only the technical requirements but also the sometimes undocumented interpersonal and managerial attributes needed for success in the position.

Step 3: Assess Your Current State

What are my skills, knowledge and expertise?

The primary goal of this step is to gain a full and complete inventory of what you currently know, your strengths and the areas that you need to develop. This research step may be the most challenging to do if you have never looked at feedback before. Most people have a reasonably good grasp on their technical qualification. What you also need to know is how well you work with others, your work habits, and your

organizing and time management skills. All of these tell the complete picture of who you are as an employee.

Some useful resources for research may be:

- Performance reviews
- Interpersonal assessments such as Myers Briggs Type Indicator, DiSC
- 360-degree feedback
- Project status reports or debriefs
- Training records, certifications
- Educational transcripts

Outcome of Step 3:

A complete inventory of what you are taking into your career plan as a baseline.

Step 4: Identify Gaps

What's missing? What do I need to learn, do, and achieve to be ready for my next move?

In this step, you will use the outcomes from Step 2, your future needs, and Step 3, your current assets, to determine all development and experience gaps that you need to address in your Personal Development Plan.

Outcome of Step 4:

A list of the career and learning gaps you need to close to be ready for your next career move.

Step 5: Create the Plan

What are my immediate goals and the development activities and assignments I need to achieve them?

Most development plans are little more than laundry lists of activities. “Attend a conference.” “Take a class in ...” These plans serve as a to-do list for learning but they may or may not focus the learning toward the desired end goal.

Start to build your plan by clearly stating what the goal is that you are trying to achieve. Then list those activities and actions that support the goal. Goal-focused plans are built on targeted actions designed to reach an end, not just to be a check list of things to do.

Every activity listed needs a statement of results or outcomes. What will completing this activity do for you? Will it build a specific type of experience? Add to your knowledge base on a subject? What are you hoping to learn by doing this? If you are struggling to define a concrete result for the action, you probably should not be doing it.

Clear result statements also let you evaluate the quality of the activity. For example, if a training class is designed to teach me advanced Excel tables, I should be able to build a sound table at the end. Successful evaluation of the development activities can then be used to update my Skills inventory built in Step 3.

Finally, add the time and cost estimates associated with the developmental activity. These last two factors, in combination with the rest of the information on the plan, will allow you to prioritize your activities. Prioritizing the Development Plan will also allow you to determine if there are any barriers to completing activities. For instance, if you list out the desire to learn more about a specific piece of equipment by shadowing a technical expert in the next 6 months and list obtain a challenging certification which will require extra hours per week of study and classes, you may decide to postpone the certification until after your temporary shadowing assignment is finished. Available time and budget dollars may require you to carefully plan the sequence of activities you have on your plan.

Outcome of Step 5:

A clearly defined Personal Development Plan.

Step 6: Work the Plan

What do I need to do to ensure that I am accomplishing what I set out to do in my development plan?

Having a development plan is a critical start to proactively managing your career. Working the plan is the next essential step. Investing time and money in learning is investing in your future.

There are various ways to obtain knowledge, skills and experience beyond formal academic degree programs. You can attend courses and workshops offered by your local community college or technical school. You can also learn through online resources and webinars. You can gain valuable experience by seeking out on-the-job training through new assignments or by signing up for a mentor if your organization has such a program. On-the-job training, also called experiential learning, is a valuable and often overlooked way to gain good professional experience.

Experiential learning is a fancy way of saying learning by doing. For example, if you want to hone your expertise in project management, look to take the lead on managing a small project that will take you through all the project steps from inception to completion. If you want to increase your negotiation skills, look for a situation that would allow you to work in contracting or procurement.

Learning by doing is a very powerful way to gain expertise. By actually performing the skills you wish to learn, you gain first-hand experience of what works and what fails to work. You can examine your behaviors and actions and see what helps lead to success and what you might need to change.

Experiential learning is especially valuable in acquiring interpersonal or “soft” skills. Expertise in attributes like conflict management and delegation is difficult to acquire by reading books or sitting in a classroom. The best way to grow your skills in handling conflict is to practice resolving contentious situations at work or even in non-work situations. Note what you are doing that helps resolve the conflict and what you do that increases the level of disagreement. Over time, you will build your experience and confidence in handling contentious situations because you will have grown a database of techniques that work.

The next section of this Guide details suggested developmental activities that can be used to grow your knowledge and skills in competency area as defined in the HTM career ladders.

Outcome of Step 6:

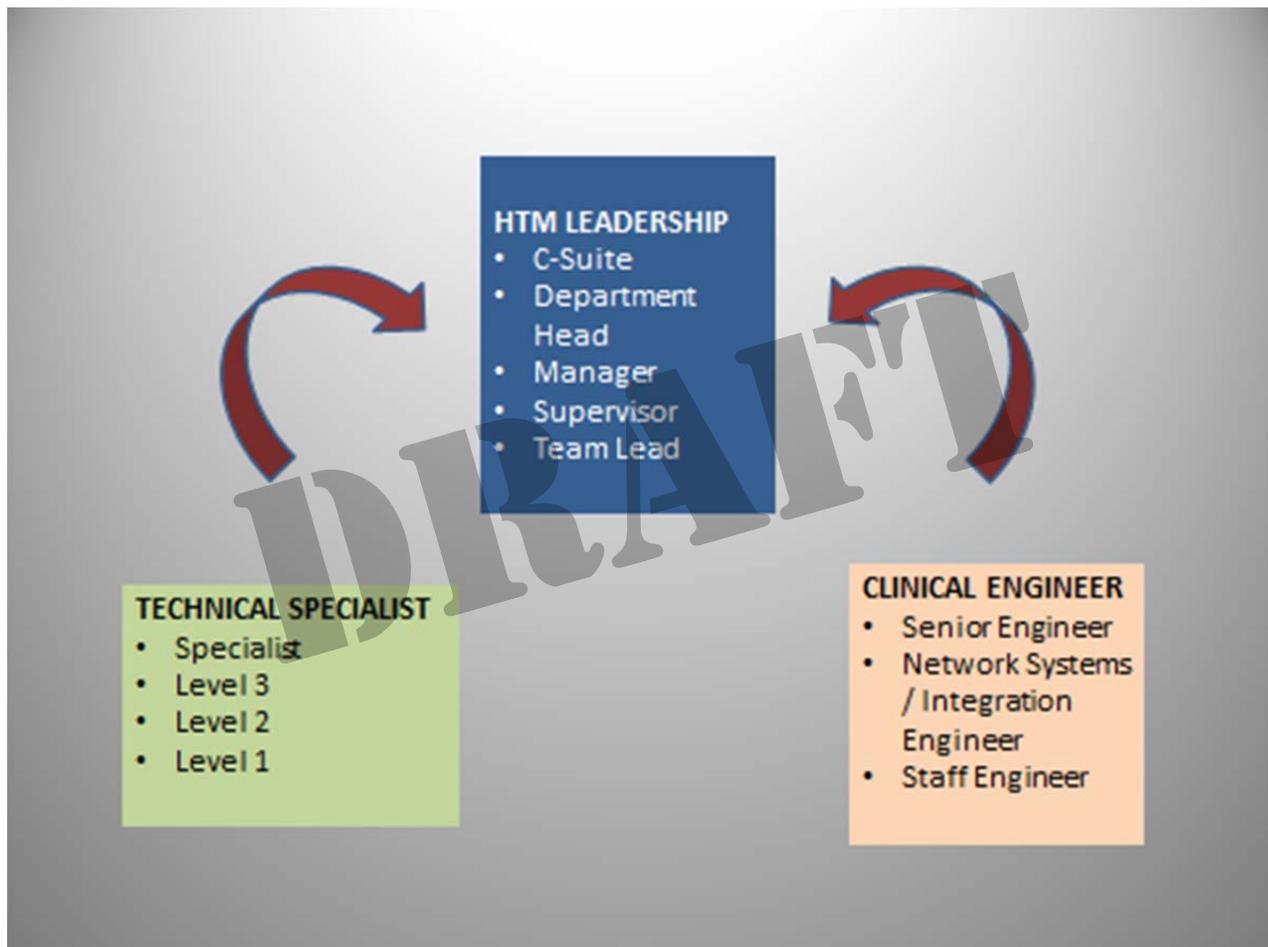
Successful completion of developmental activities and progress toward career goal.

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Tool Kit

HTM Graph

The HTM Graphic depicts the three potential career progressions in the HTM profession, Technical Specialist, Clinical Engineer and Leadership. In this Guide, we will describe the Technical Specialist and Clinical Engineer Ladders. The Leadership Ladder will be covered in a separate Guide, the AAMI Leadership Development Guide.



HTM Grids

The following pages contain the two career grids for the HTM profession:

- Technical Specialist
- Clinical Engineer

Navigating the Grids

The horizontal columns of each grid denote the different levels contained in that job family. For example, the Technical Specialist family has three levels and a specialist level. The vertical rows detail the competencies, experience and skills needed at each level. When you read the column from top to bottom, you get a detailed description of the individual level. By reading a row from left to right, you can see the progression of skill or experience needed to progress through the levels from entry level to highly experienced.

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Technical Specialist

Skill / Experience	LEVEL I	LEVEL II	LEVEL III	Radiology Specialist Network Systems Specialist Laboratory Specialist Project Specialist
General Guidelines	<i>Demonstrates basic knowledge of the job, activity or function, needs supervision or mentoring on advanced assignments. Entry-level or junior position.</i>	<i>Comprehensive knowledge level and experienced in most or all facets of job. Possesses an intermediate level of expertise and is capable of assisting less experienced technicians.</i>	<i>Fully-experienced with an exceptional skill set or knowledge, works with minimal supervision; capable of serving as a trainer, mentor to junior and mid-level staff. Capable of performing in a lead capacity.</i>	<i>Highly specialized HTM having special training or equivalent in laboratory equipment. Performs highly skilled work of considerable difficulty. Considered a technical expert in specialty</i>
Education	Associates degree, military training, or academic work aligned with AAMI Core Competencies (http://my.aami.org/store/detail.aspx?id=CORE-BMET-PDF) and a basic knowledge of mathematics, physics, chemistry, English and professional skills	Associates degree, military training, or academic work aligned with AAMI Core Competencies (http://my.aami.org/store/detail.aspx?id=CORE-BMET-PDF) and a basic knowledge of mathematics, physics, chemistry, English and professional skills plus additional certification and training as needed	Associates degree, military training, or academic work aligned with AAMI Core Competencies (http://my.aami.org/store/detail.aspx?id=CORE-BMET-PDF) and a basic knowledge of mathematics, physics, chemistry, English and professional skills plus increased levels of certification and training as needed	Bachelor's degree or Associates degree , military training, or academic work aligned with AAMI Core Competencies (http://my.aami.org/store/detail.aspx?id=CORE-BMET-PDF) with substantial experience required plus increased levels of certification and training in area of specialty
Leadership	Demonstrated ability to learn from others on the job. Can teach some basic skills to new hires or interns	Demonstrated ability to learn from others on the job. Can teach basic skills to Level I BMETs. Optionally can mentor others in basic skills	Adept at learning on the job as well as teaching and mentoring others. Optionally has developed mastery to the level that they can mentor other mentors	Adept at learning on the job as well as teaching and mentoring others. Considered a technical expert in specialty area and can mentor other mentors
General Skills & Experience	Possesses basic understanding and skills related to general electro-mechanical systems and devices	Possesses comprehensive understanding and skills related to general electro-mechanical systems and devices	Possesses advanced understanding and skills related to general electro-mechanical systems and devices	Possesses advanced understanding and skills related to general electro-mechanical systems and devices as applied to their specialty

Skill / Experience	LEVEL I	LEVEL II	LEVEL III	Radiology Specialist Network Systems Specialist Laboratory Specialist Project Specialist
Specific Experience	<ul style="list-style-type: none"> Exhibits a basic understanding and can communicate the use of devices supported Can provide basic support of acuity equipment for direct patient care. Is familiar with the operations and environment that they support such as hospital, clinic, and so on. Has minimal experience in their assigned clinical environment. Possesses minimal understanding of common clinical terminology as well as that of life sciences such as anatomy and physiology 	<ul style="list-style-type: none"> Exhibits a comprehensive understanding and can communicate the use of devices supported Can provide comprehensive support of acuity equipment for direct patient care. Is familiar with the operations and environment that they support such as hospital, clinic, and so on. Has comprehensive experience in their assigned clinical environment. Possesses comprehensive understanding of common clinical terminology as well as that of life sciences such as anatomy and physiology 	<ul style="list-style-type: none"> Exhibits a detailed understanding and can fully communicate the use of devices supported Can provide advanced support of acuity equipment for direct patient care. Has in depth understanding of the operations and environment that they support such as hospital, clinic, and so on. Has advanced experience in their assigned clinical environment. Possesses in depth understanding of common clinical terminology as well as that of life sciences such as anatomy and physiology 	<ul style="list-style-type: none"> Exhibits a detailed understanding and can fully communicate the use of devices supported Can provide advanced support of acuity equipment for direct patient care. Has in depth understanding of the operations and environment that they support such as hospital, clinic, and so on. Has advanced experience in their assigned clinical environment. Possesses in depth understanding of common clinical terminology as well as that of life sciences such as anatomy and physiology
Public Safety & Regulatory Requirements	Has a basic understanding of both local and national public safety and regulatory issues	Has a comprehensive understanding of both local and national public safety and regulatory issues	Is knowledgeable about both local and national public safety and regulatory issues	Is knowledgeable about both local and national public safety and regulatory issues, especially those issues that apply to their area of specialty
Customer Service	Able to solve basic front-line customer service issues	Demonstrates the ability to solve service line customer service problems	Can successfully solve organization-level customer service issues and complaints	Can successfully support the solution of organization-level customer service issues and complaints, especially those issues that apply to their area of specialty
Specific Equipment Expertise	<ul style="list-style-type: none"> Demonstrated a basic understanding of clinical equipment such as radiological, laboratory and network medical systems. Has a basic understanding of project management terms and methods 	<ul style="list-style-type: none"> Demonstrated a working knowledge of clinical equipment such as radiological, laboratory and network medical systems. Has a basic understanding of project management terms and methods 	<ul style="list-style-type: none"> Demonstrated a working knowledge of clinical equipment such as radiological, laboratory and network medical systems so that work beyond single devices can be appropriately accomplished. Has a basic understanding of project management terms and methods. 	<ul style="list-style-type: none"> Demonstrated a working knowledge of clinical equipment such as radiological, laboratory and network medical systems. Has a basic understanding of project management terms and methods. Project Specialists have advanced mastery and certification in project management methodologies.

Clinical Engineer

Skill / Experience	Staff Engineer	Networked Systems / Integration Engineer	Senior Engineer
General Guidelines	<i>Demonstrates basic knowledge of the job, activity or function, needs supervision or mentoring on advanced assignments</i>	<i>Demonstrates basic knowledge of the job, activity or function, needs supervision or mentoring on advanced assignments.</i>	<i>Fully-experienced with an exceptional skill set or knowledge, works with minimal supervision; capable of serving as a trainer, mentor to junior and mid-level staff. Capable of performing in a lead capacity.</i>
Education	Bachelor's degree in Engineering in a related discipline required, Masters desirable	Bachelor's degree in Engineering in a related discipline required, Masters desirable	Bachelor's degree in Engineering in a related discipline required, Masters desirable
Leadership	Demonstrated ability to learn from others on the job. Can teach basic skills to entry level staff. Optionally can mentor others in basic skills	Demonstrated ability to learn from others on the job. Can teach basic skills to entry level staff. Optionally can mentor others in basic skills	Adept at learning on the job as well as teaching and mentoring others. Desirable to be considered a technical expert and can mentor other mentors
General Skills & Experience	Possesses comprehensive understanding and skills related to general electro-mechanical systems and devices	Possesses comprehensive understanding and skills related to general electro-mechanical systems and devices	Possesses advanced understanding and skills related to general electro-mechanical systems and devices
Specific Experience	<ul style="list-style-type: none"> • Is familiar with the operations and environment that they support such as hospital, clinic, and so on • Has minimal experience in their assigned clinical environment. • Possesses basic understanding of common clinical terminology as well as that of life sciences such as anatomy and physiology 	<ul style="list-style-type: none"> • Has comprehensive understanding of the operations and environment that they support such as hospital, clinic, and so on. • Has comprehensive experience in their assigned clinical environment. • Possesses minimal understanding of common clinical terminology as well as that of life sciences such as anatomy and physiology 	<ul style="list-style-type: none"> • Has advanced understanding of the operations and environment that they support such as hospital, clinic, and so on. • Has advanced experience in their assigned clinical environment. • Possesses basic understanding of common clinical terminology as well as that of life sciences such as anatomy and physiology

Skill / Experience	Staff Engineer	Networked Systems / Integration Engineer	Senior Engineer
Public Safety & Regulatory Requirements	Has a basic understanding of both local and national public safety and regulatory issues	Has a basic understanding of both local and national public safety and regulatory issues	Is knowledgeable about both local and national public safety and regulatory issues
Customer Service	Can successfully solve organization-level customer service issues and complaints	Can successfully solve organization-level customer service issues and complaints	Can successfully support the solution of organization-level customer service issues and complaints, especially those issues that apply to their area of specialty
Specific Equipment Expertise	<ul style="list-style-type: none"> • Demonstrated basic understanding of clinical equipment such as radiological, laboratory and network medical systems. • Has a basic understanding of project management terms and methods 	<ul style="list-style-type: none"> • Demonstrated basic knowledge of clinical equipment such as radiological and laboratory devices. • Possesses a mastery of network medical systems so that work beyond single devices can be appropriately accomplished. • Has a basic understanding of project management terms and methods. 	<ul style="list-style-type: none"> • Demonstrated a mastery of general medical surgical equipment • Has a working knowledge of clinical equipment such as radiological, laboratory and network medical systems. • Demonstrates a mastery of project management terminology and methodology

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Planning Worksheets

Skills Inventory Worksheet

Using past performance reviews, project post-mortems, assessment data, certification records and any other sources of information you have, complete the self-assessment by rating your perceived level of expertise in each of the areas. You can also have your inventory reviewed and rated by a trusted colleague or even your current supervisor to reduce the bias you may have in your self-rating.

Rating scale:

(1 = no skill, 2 = basic, 3 = adequate, 4 = proficient, 5 = expert)

SKILL / EXPERIENCE	RATING
Leadership <ol style="list-style-type: none"> Teaching and mentoring others Learning new skills on the job 	<ol style="list-style-type: none">
General Skills & Experience <ol style="list-style-type: none"> General electro-mechanics systems and devices Specialty systems and devices 	<ol style="list-style-type: none">
Specific Equipment <ol style="list-style-type: none"> Ability to communicate about the devices supported Fundamentals of healthcare delivery Experience in assigned clinical environment Clinical terminology Anatomy Physiology 	<ol style="list-style-type: none">
Public Safety & Regulatory Requirements <ol style="list-style-type: none"> Local and national public safety and regulatory issues Accrediting entities Regulatory entities Standards entities. 	<ol style="list-style-type: none">
Customer Service <ol style="list-style-type: none"> Customer service policies and procedures Patient experience/ HCAP Problem solving skills Analytical skills Communication skills 	<ol style="list-style-type: none">
Specific Equipment Expertise <ol style="list-style-type: none"> Radiology, laboratory and network medical systems Project management 	<ol style="list-style-type: none">
Other Skill or Experience	

Gap Analysis

Transfer the skill ratings from the **Skills Inventory Worksheet** to the **Self Assessment** column below. Determine the skill level needed for your desired future position by reading the position description or by talking with the supervisor who currently manages the position. The difference between the **Level Needed** and your **Self Assessment** is the gap that you will need to fill with training and development.

SKILL / EXPERIENCE	SELF ASSESSMENT RATING	LEVEL NEEDED	GAP
Leadership <ol style="list-style-type: none"> Teaching and mentoring others Learning new skills on the job 	<ol style="list-style-type: none"> 		
General Skills & Experience <ol style="list-style-type: none"> General electro-mechanics systems and devices Specialty systems and devices 	<ol style="list-style-type: none"> 		
Specific Equipment <ol style="list-style-type: none"> Ability to communicate about the devices supported Fundamentals of healthcare delivery Experience in assigned clinical environment Clinical terminology Anatomy Physiology 	<ol style="list-style-type: none"> 		
Public Safety & Regulatory Requirements <ol style="list-style-type: none"> Local and national public safety and regulatory issues Accrediting entities Regulatory entities Standards entities. 	<ol style="list-style-type: none"> 		
Customer Service <ol style="list-style-type: none"> Customer service policies and procedures Patient experience/ HCAP Problem solving skills Analytical skills Communication skills 	<ol style="list-style-type: none"> 		
Specific Equipment Expertise <ol style="list-style-type: none"> Radiology, laboratory and network medical systems Project management 	<ol style="list-style-type: none"> 		
Other Skill or Experience			

Personal Development Plan

Name: _____ Date: _____

Developmental Goal			
Specific Action	Est. Time	Est. Cost	Result
Developmental Goal			
Specific Action	Est. Time	Est. Cost	Result
Developmental Goal			
Specific Action	Est. Time	Est. Cost	Result

Career Planning Opportunities

This section details the various activities, actions, and opportunities available to grow knowledge and experience in the HTM profession for the Technical Specialist and Clinical Engineering Ladders. The Leadership Ladder will be covered in a separate Guide.

Education

Definition

Formal education for those in the HTM profession has various options depending upon the career goals of the individual. The following list describes the different academic degrees and military programs available for the HTM professional.

- **Associate's Degrees** – Two year degrees that cover the fundamentals of supporting biomedical devices.
- **Military Programs** – Various training programs in areas such as biomedical equipment management and computer-based medical systems available to active and former military.
- **Bachelor's Degrees** – Four year degrees that support engineering disciplines such as clinical engineering, biomedical engineering science, and biomedical engineering technology. HTM professional may also obtain a four year degree in business management, engineering management, or organizational leadership.
- **Master's Degrees** – Graduate level degrees that support advanced study in engineering or may be obtained in business or related disciplines for those aspiring to management positions.
- **Doctoral Degrees** – Advanced graduate study for those aspiring to obtain research positions or to teach at the university level.

Note:

You can see a complete listing of academic institutions that grant HTM degrees on the AAMI website under Career Tools.

Developmental Activities

- Using the career ladder grids as a guide, determine long-term career goals. Identify the future formal education you need to attain your long-term goal.
- Talk with your manager or Human Resources representative to see if your organization offers tuition reimbursement for additional education.
- Research available colleges and universities under the Career Section of the AAMI website.

Leadership

Definition

Personal leadership encompasses the ability to learn new technical skills on the job. Personal learning is critical for HTM professionals due to the changing nature of healthcare and the technology needed to support it. As biomedical technicians advance in their careers, they increase their ability to learn from others while also increasing the amount of training and guidance they provide to junior staff and interns.

Developmental Activities

- Identify a mentor in your organization who can provide you with help and guidance on learning new tools and technologies. Set learning goals with your mentor and meet regularly with him/her to assess your progress on achieving your learning goals.
- Identify an external mentor who can provide you with guidance on workplace situations from an objective point of view. Use this external mentor to help you identify areas for improvement and learning opportunities to grow your skills and experience.
- Read about the different learning styles or preferences of adult learners. Identify your own learning preferences and adapt your learning activities to get the most out of them. For example, if you prefer team learning, establish a cohort learning team to tackle complex learning such as certification preparation.
- Read books or attend workshops about the different leadership styles to develop and understanding of your own style of leadership and your strengths and areas of improvement as you grow your leadership abilities.
- Look for opportunities to mentor others. Engage as a formal mentor with at least one staff person new to your organization. Ask your mentee for feedback on how well you are providing guidance and helping them. Use this feedback to adapt and adjust your mentoring to be more effective.
- Use your understanding of adult learning preferences to vary the learning approaches you are using with your mentees. Incorporate as many approaches as feasible to ensure that their learning goals are achieved.
- Seek out opportunities to lead teams and to supervise others.
- Volunteer to serve as team lead or chairperson on an organization-wide committee or task force.
- Volunteer to serve in a leadership role in a local, state or national professional organization or society.
- Obtain Project Management Professional (PMP) certification through the Project Management Institute.

General Skills and Experience

Definition

The ability to comprehend and communicate the fundamentals of health support systems and devices.

Developmental Activities

- Obtain an Associate's degree
- Complete relevant military training in biomedical equipment and computer-based medical systems.
- Attend a communication skills or presentation skills workshop offered by your hospital or local community college or adult education center.
- Work with a mentor to identify the basic devices used at your hospital for non-acute patient care. Establish goals and timeframes to gain experience with each of the devices.
- Continue to expand your knowledge and experience of the overall biomedical device inventory at your healthcare institution through on-the-job training and reading manuals and equipment literature. Seek out opportunities to train on the equipment under a more senior HTM professional.
- Read professional journals, attend AAMI and other field related professional organization or society conferences and webinars, and participate in professional online communities and chat rooms to maintain current levels of understanding on new equipment and technology.
- For BMETs, obtain International Certification Commission (ICC) certification: biomedical equipment technicians (CBET), radiology equipment specialists (CRES), and laboratory equipment specialists (CLES).
- For Clinical Engineers, obtain American College of Clinical Engineering (ACCE) Clinical Engineering certification.
- Be an active member in your local biomed association or society.
- Attend AAMI and other field related professional organization or society conferences. Report back on conference learning for those unable to attend.

Specific Experience

Definition

The ability to gain in depth knowledge and experience on more advanced medical equipment and technology. Increased ability to support equipment in higher levels of acuity and direct patient care. Also, increased familiarity with workplace operations and, i.e., hospital, clinic, etc. and the clinical workflow of the organization. Ability to support specialized equipment or specific healthcare function such as operating room equipment support.

Developmental Activities

- Attend manufacturer classes on devices used in your specialty.
- Read professional journals, attend AAMI and other field related professional organization or society conferences and webinars, and participate in professional online communities and chat rooms to learn of leading-edge changes and improvements to specialty.
- Develop and teach in-service presentations to others on specific devices.
- Present at professional conferences and workshops on area of specialty.
- Be considered the subject matter expert (SME) or go-to person for certain devices and equipment.

- Serve on task force or committee for the purchase or lease of new devices.
- Attend technical writing and presenting workshops to gain expertise in teaching complex equipment to others.

Public Safety & Regulatory Requirements

Definition

The ability to understand, comply with and communicate the various safety and regulatory issues that apply to the clinical environment, for example, the Joint Commission and National Fire Protection Agency.

Developmental Activities

- Obtain from your manager the most current safety and regulatory information governing your workplace. Determine the processes and procedures you need to follow to be compliant.
- Maintain a basic understanding of the overall safety and regulatory requirements of the healthcare industry.
- Continue to monitor all updates and changes to regulations and incorporate these changes into your organization's policies and procedures.
- Read the publications from the Joint Commission such as *Environment of Care* and other updates from accrediting organizations.
- Take classes and webinars in risk management and risk mitigation.
- Serve on your organization's Business Continuity or Disaster Recovery task force or committee.
- Serve on a task force or committee that oversees safety and regulatory issues for your hospital.
- Take classes and workshops in safety in healthcare.
- Research the impact of Accrediting Organizations (AOs) on your organizations policies and procedures.
- Present at AAMI and other field-related professional organization or society conferences on the topics of safety and regulatory regulations.
- Identify opportunities to influence changes in standards and regulations by serving on a standards committee for your organization.
- Volunteer to help create standards for AAMI standards and regulatory committees and task forces

Customer Service

Definition

The ability to provide optimal customer service to both clinical staff and patients. To rapidly solve customer service problems and issues from individual cased to organization-wide customer service problems.

Developmental Activities

- Serve on customer care committees to identify ways to improve customer service.
- Attend workshops on problem solving, critical thinking, and decision making.
- Develop superior listening skills to ensure understanding and empathy with customers.
- Take workshops and webinars on the differences in personality types and behaviors such as Myers Briggs Type Indicator (MBTI) and DiSC interpersonal behavior assessments to improve on your ability to assess and understand customer issues.
- Study various approaches to changing management and leading change to be able to mitigate change resistance in staff and patients.
- Seek out experience and obtain feedback in your ability or effectively manage conflict and to improve on skills in conflict resolution and negotiating positive outcomes.
- Read and understand your hospital's policies and procedures for patient care, care plans, and project management procedures.
- Take courses, complete research and reading on anatomy and physiology to better support patient care.
- Take classes or workshops in customer service processes and techniques for direct patient care.
- Take classes or workshop on team process and how to be an effective team leader.
- Using an internal mentor, gain understanding of clinical workflow and root cause analysis to identify the best solution to customer problems and complaints.
- Learn how the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is used to guide customer care standards in your organization and how your department can support these efforts.
- Understand and be able to articulate your hospitals customer service policies and procedures to patients and their families.
- Develop your ability to characterize your contributions, importance, and value to patient care to various clinical stakeholders.

Specific Equipment Expertise

Definition

The ability add high quality focused support to specific, advanced and costly equipment and devices of high acuity and with direct patient contact, to include:

- General medical surgery equipment
- Radiological equipment
- Laboratory equipment
- Networked medical systems

Developmental Activities

- Attend vendor schools or manufacturer's training courses to gain expertise on advanced equipment.

- Serve as a team member on a special project, committee or quality improvement work group utilizing special equipment.
- Gain expertise on specific equipment to be seen as the in house expert for that device.
- Stay current on all relevant trade magazines and technical journals.
- Review service manuals for specific equipment.
- Obtain Project Management Professional (PMP) certification through the Project Management Institute.
- Develop training materials to train new BMETs on specialty equipment.
- Serve on a task force or committee chartered to purchase new equipment.
- Present at AAMI and other field related professional organization or society conferences on your area of specialty.
- Be adept at communicating how your specialty affects patient flow, clinical workflow and other aspects of healthcare administration and outcomes

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Communicating Your Plan

Guide for Meeting with Supervisor

Use the following checklist to organize the meetings you will have with your supervisor to discuss your career goal and development plan. You will want to meet with your supervisor on a regular basis to review the plan and progress made toward your goals to get input and advice on future steps and actions.

Step 1: **Planning** the meeting

- ✓ What is the goal for the meeting?
- ✓ Where can the meeting be held to remove all distractions and interruptions?
- ✓ Review and have ready any questions you may have about developmental opportunities
- ✓ Review and have ready any questions you may have about resources you may need including budget dollars and internal support resources like mentors or training programs
- ✓ Prioritize the issues

Step 2: **Conduct** the meeting

- ✓ Review the goal for the meeting. Make sure it is the same for both of you
- ✓ Review the development accomplished to date
- ✓ Review the development results. Were they as anticipated?
- ✓ Preview the development actions for the next period of time
- ✓ Make the conversation a dialogue, open and two-way
- ✓ Use active listening skills; look for any emotional cues that you need to explore
- ✓ What are the supervisor' concerns / issues about the progress of your development?
- ✓ What are your concerns / issues about the progress of your development?
- ✓ Remember to summarize information before moving on
- ✓ Agree on the proposed next actions
- ✓ Make mutual commitments for next steps

Step 3: **Follow up** after the meeting

- ✓ Obtain any approvals needed for formal training
- ✓ If needed, schedule time off, backup
- ✓ Send email summarizing next steps, revised Development Plan
- ✓ Set a date for next progress review

Guide for Meeting with HR

If your career goal is to advance through the levels of the career ladder or to eventually advance your education to move into management, you may want to also meet with your Human Resources staff to verify that there is organizational opportunity to support your goal. As with the meeting you have with your supervisor, prepare for the meeting with HR by using the checklist below.

Step 1: **Planning** the meeting

- ✓ What is the goal for the meeting?
- ✓ Where can the meeting be held to remove all distractions and interruptions?
- ✓ Review and have ready any questions about your career goal
- ✓ Review and have ready any support resources including budget dollars and internal support resources like mentors or training programs if they are to come from HR
- ✓ Prioritize the issues

Step 2: **Conduct** the meeting

- ✓ Review the goal for the meeting. Make sure it is the same for both of you
- ✓ Review your career goal and development plan
- ✓ Preview the development actions for the next period of time
- ✓ Make the conversation a dialogue, open and two-way
- ✓ Use active listening skills; look for any emotional cues that you need to explore
- ✓ What are HR's concerns / issues about the goal and/or plans?
- ✓ Remember to summarize information before moving on
- ✓ Agree on the proposed next actions
- ✓ Make mutual commitments for next steps

Step 3: **Follow up** after the meeting

- ✓ Send email summarizing next steps
- ✓ Set a date for next meeting, if needed

Interviewing Tips

Do's and Don't of Interviewing

The following tips are provided by Bob Corlett, Founder and President, Staffing Advisors

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Staffing Advisors arranges hundreds of interviews annually, but most job applicants interview infrequently. Consequently, people at every career level tend to overlook at least one of the three key points outlined below. If you take half an hour to review the following, you will make a much stronger impression, and you'll be far better positioned to land the job you want.

Answering Interview Questions

Have you noticed that most people don't get right to the point in conversation? They ramble on a bit, tell stories, go back and add in a few details, and occasionally wander off on a tangent. Eventually they might get to the point, but not always. And in normal conversation, that's fine, but in a job interview it's a disaster — a very common disaster.

A job interview is not a normal conversation, so normal conversational style is held against you when you interview. An interview follows four very different rules than normal conversation.

- First, in normal conversation you are usually talking with people who share a certain context with you – a co-worker, a friend, a neighbor. But in an interview, you must provide context before you make your point. And most people ramble on with irrelevant story telling when they are should be providing a brief bit of context on the way to quickly making their point.
- Second, in an interview, the interviewer picks all the topics and the whole meeting is their agenda, not yours. They decide what to talk about, and for how long. Most candidate answers go on for about twice as long as the interviewer would prefer.
- Third, a normal conversation does not have a time limit like an interview does, so most candidates are not comfortable fitting all their thoughts into the allotted time.
- Fourth, in normal conversation you never try to make multiple points, but in an interview you simply must demonstrate how you meet all the key competencies required for the job.

So when you use your comfortably familiar conversation style to interview, you fail. Instead, go into an interview like you would go into a structured briefing with a very busy senior executive. The rules are simple:

- Be prepared, be bright, be brief and be gone.

Anticipate their questions, so when you are asked, you can give concise, structured answers. No matter what the question, you have about 3 minutes to provide all the following information:

- **Context:** What situation where you in? What background information does the listener need to understand it?

- **Action:** What action did you take? (You might also want to outline what alternatives you considered).
- **Result:** What impact did your actions have? (It does not have to be all puppies and rainbows, you can admit that you got it wrong on the first try and then had to go back and fix something).

How do you prepare? Read the job description, decide what key competencies you need to demonstrate, and prepare direct, candid 3 minute answers to the predictable questions.

Ask Good Questions

Here are some basic interview questions you should ask, but you need to go far beyond these. Don't rely on generic questions you get off the internet. Instead, do your homework. Learn about the company, learn about the job, learn about what is expected of you in the job. Ask the kinds of questions you would ask if you were already working there.

- "How fast do you expect me to come up to speed on this job and what kind of training did you have in mind?"
- "What kind of results do you expect of me, and by when?"
- "Who will I primarily be working with to get the results you anticipate? How are they to work with?"
- "How many competing priorities will I have at any one time?"
- "What are the biggest obstacles I will face on my way toward achieving the goals you set out?"
- "How have other people fared in meeting your expectations?"
- "How have other people failed in this job and how can I avoid that?"

Keep asking questions until you are absolutely sure that you understand what they expect from you, that you have the training and resources to be successful, and that you and your new supervisor can really work well together.

After the Interview

If an organization hires you, you will be spending about 2,000 hours a year with them. But they'll only interview you for about 4 hours (if that). So during the interview process, they are paying 500 times more attention to little things—things that won't matter nearly as much after you start work. You'll really be under the microscope in every interaction. So you simply must be more meticulous keeping track of the little things—all the little things—because you never know what their hot button issue is going to be.

Consider this simple list below:

- Did your resume or cover letter have any mistakes?
- Were you on time and prepared for the phone interview?
- Were you on time and dressed appropriately for the interview?
- Did you prepare for the interview properly?

- Were you ready for their interview questions, and did you have relevant experiences you could confidently share?
- Did you ask smart questions during the interview?
- Did you send a Thank You note to everyone you met?
- Did you send references or other follow-up material in a timely manner?

Obvious and simple, right? Except at least a third of job applicants routinely fail to do this. That's because what it takes to keep a job is quite different than what it takes to land a new one.

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Appendices

FAQs

Why did AAMI create this Career Guide? Who should be using it?

AAMI created the Career Guide to help HTM professionals plan their career advancement. Some HTMs work in large organizations that provide them with career guidance. Others work in smaller healthcare settings which lack the resources to provide career planning guidance. AAMI goal in creating the Career Guide is to provide a set of standardized information that HTMs can use to plan their career progression.

My organization does not have level 2 or level 3 Technical Specials positions. What can I do to advance in my career?

Start by talking over your career goals with your supervisor. Don't have you goal to simply get promoted. Describe how you plan to grow your skills and experience. List out the technologies and equipment that you would like to grow your skills around. Discuss possible future specialize experience that you want to base your career growth on.

The next step would be to take your career plans to Human Resources to investigate the possibility that your organization can add level 2 or 3 positions. The critical issue is generally a financial one. Smaller organizations simply do not have a large enough salary budget to have many higher level positions. If this is the case at your organization, you may need to research other larger healthcare organizations to work for that have higher positions in their workforce plan.

Share the Career Graphic and Grids contained in this Guide with your supervisor and Human Resources so that they can see the career progression the AAMI has proposed for HTMs.

Can you provide us with salary ranges for the different levels?

Salary ranges for positions vary across the country based on the size of the organization, its salary budget and the availability of professional in the job market. It would not be possible for AAMI to research and publish salary information that would be accurate for all the locations that hire HTMs. You need to check with your HR department to determine the salary range for your position and other positions in your organization.

Your Career grid states that Technical Specialists need to have an Associate's degree. I do not have one. With I get demoted or fired?

AAMI recommends that Technical Specialists have at minimum an Associate's degree. A recommendation from a professional association cannot be used as sole grounds for demoting or terminating an individual.

I would like to return to school and obtain more education in the HTM field. How can I find the academic institutions that provide these kind of degrees?

The AAMI website has a section called Career Tools which has a listing of academic institutions that support the HTM professional.

I live in an area that does not have college or universities with BMET or Clinical Engineering courses or degrees. Are there other ways I can advance my professional learning?

There are various e-learning programs that can be accessed anywhere. Webinars also offer a way to learn remotely. For example, the Colorado Association of Biomedical Equipment Technicians (CABMET) offers a CBET review course that is available to anyone over the country. The AAMI website lists a number of virtual learning programs under its Career Tools tab.

Massive Open Online Courses (MOOCs) may also contain courses that could be used for professional development. MOOCs are college-level courses that are offered free of charge by some academic institutions. Coursera (www.coursera.org) and edX (www.edx.org) are the two largest providers of MOOCs.

When I finished my BS degree last year, I thought I was done with taking classes and seminars. This Guide makes it sound like I need to continue to take training classes my entire career.

To be a successful HTM professional, you need to stay abreast of the technical and regulatory changes that occur in the field. Technology and medical devices are constantly moving forward and continued professional development is the only way to maintain your currency of the new developments in healthcare and technology. In the Career Planning Opportunities section of this Guide, we've outlined numerous ways to learn and develop. The AAMI website also lists learning resources and ways to keep current. The annual AAMI Conference, as well as local and state conferences are additional venues for learning and keeping up your skills.

Contact Information

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