Health Science Career Cluster

1. Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career.

**HL 1.1:** Utilize knowledge of human structure and function to conduct health care role.

*Sample Indicators:*
- Describe the basic structures and functions of cells, tissues, organs and systems as they relate to homeostasis.
- Compare relationships among cells, tissues, organs and systems.
- Explain body planes, directional terms, quadrants and cavities.
- Analyze the interdependence of the body systems as they relate to wellness, disease, disorders, therapies and care rehabilitation.

**HL 1.2:** Utilize knowledge of diseases and disorders to conduct health care role.

*Sample Indicators:*
- Compare selected diseases/disorders including respective classification(s), causes, diagnoses, therapies and care/rehabilitation to include biotechnological applications.
- Analyze methods to control the spread of pathogenic microorganisms.
- Contrast various types of immunities.
- Analyze body system changes in light of diseases, disorders and wellness.
- Compare the aging process among the body systems.

2. Explain the healthcare worker's role within their department, their organization and the overall healthcare system.

**HL 2.1:** Explain systems theory as it applies to the health care environment.

*Sample Indicators:*
- Describe systems theory and its components.
- Construct a general systems model using inputs, throughputs and a feedback loop.

**HL 2.2:** Explain the concept of system change as it applies to the health care environment.

*Sample Indicators:*
- Analyze the cause and effect on health care system change based on the influence of technology, epidemiology, bio-ethics, socio-economics and various forms of complimentary (non-traditional) medicine.

**HL 2.3:** Understand the existing and potential hazards to clients, co-workers and self.

*Sample Indicators:*
- Utilize safe work practices and follow health and safety policies and procedures.
• Diagram the interdependence of health care professions within a given health care delivery system and pertaining to the delivery of quality health care.
• Design a system analysis process that evaluates these outcomes: client satisfaction, productivity, cost effectiveness and efficiency.
• Evaluate the impact of enhanced technology on the health care delivery system.

**HL 2.4:** Identify and explain key systems of the health care delivery system.

*Sample Indicators:*
- Construct a health care delivery system model.
- Predict where and how factors such as cost, managed care, technology, an aging population, access to care, alternative therapies and lifestyle/behavior changes may affect various health care delivery system models.
- Project outcomes as interconnected components of a modified health care system.
- Calculate the cost effectiveness of two separate health care delivery systems using the same client procedure.

3. **Identify existing and potential hazards to clients, co-workers, visitors and self in the healthcare workplace.**

**HL 3.1:** Explain infection control practices and procedures.

*Sample Indicators:*
- Practice infection control procedures.
- Practice appropriate cleaning, disinfecting and sterilizing processes.
- Contrast medical and surgical asepsis.

**HL 3.2:** Demonstrate personal safety practices.

*Sample Indicators:*
- Manage a personal exposure incident in compliance with OSHA regulations.
- Apply principles of body mechanics and ergonomics.
- Use personal protective equipment (PPE) as appropriate to the environment.

**HL 3.3:** Use techniques to insure environmental safety.

*Sample Indicators:*
- Modify the environment to create safe working conditions.
- Demonstrate methods of fire prevention in the health care setting.
- Prevent accidents by using proper safety techniques.
- Practice good housekeeping by maintaining a safe work environment.

**HL 3.4:** Identify common safety hazards.

*Sample Indicators:*
- Use Materials Safety Data Sheets (MSDS).
• Recognize and adhere to hazardous labeling requirements.
• Comply with safety signs, symbols and labels.
• Implement appropriate action when observing a hazardous material problem.
• Apply safety principles within given environment.
• Recognize hazardous chemicals commonly used in the health care environment and utilize in an appropriate manner.

HL 3.5: Describe healthy behaviors.
Sample Indicators:
• Apply behaviors that promote health and wellness.
• Advocate available preventive health screening and examinations.
• Use practices that promote the prevention of disease and injury.
• Use appropriate safety practices as related to high-risk behaviors.
• Evaluate the validity of alternative health practices.

HL 3.6: Utilize emergency procedures and protocols.
Sample Indicators:
• Interpret the evacuation plan for the health care setting.
• Construct an emergency plan for a health care setting in response to a natural disaster or other emergency.
• Follow the facility procedure when a fire is discovered.

4. Evaluate the roles and responsibilities of individual members as part of the healthcare team and explain their role in promoting the delivery of quality health care.

HL 4.1: Describe team member participation.
Sample Indicators:
• Communicate verbally and nonverbally with team colleagues to assure a best result for the client.
• Collaborate with others to formulate team objectives.
• Identify responsible actions of team members to complete assigned tasks in a timely and effective manner.
• Recognize the importance of active listening to other team members.
• Exercise leadership skills as appropriate.
• Respect and value the expertise and contributions of all team members.
• Recognize the importance of working collaboratively with persons from diverse backgrounds to accomplish a common goal.
• Apply corrective action to an acknowledged conflict situation.
• Exhibit a strong sense of team identity and commitment to purpose.

HL 4.2: Identify and describe health care teams.
Sample Indicators:
- Apply the team concept in providing quality patient/client care.
- Recognize characteristics of effective teams.
- Analyze roles of various team participants.
- Formulate appropriate response to critical situations as a team member and/or leader.
- Recognize the necessity of compromise to ensure the appropriate outcome.

**HL 4.3:** Employ communication strategies used in the delivery of quality health care.

Sample Indicators:
- Identify social media technologies, electronic conferencing, Web pages and e-mail systems to communicate information to team members and colleagues.
- Develop and implement security requirements for storage and transmission of electronic health records.
- Train personnel on technologies, written communications and security measures for documenting, retrieval, storage and communication of health records.

5. **Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace.**

**HL 5.1:** Describe legal implications affecting health care workers.

Sample Indicators:
- Analyze legal responsibilities, limitations and implications of actions.
- Use problem-solving techniques when confronted with legal dilemmas or issues.
- Compare and contrast behaviors and practices that could result in malpractice, liability, or negligence.
- Identify and comply with policies and requirements for documentation and record keeping.
- Identify and comply with established risk management criteria and procedures.
- Evaluate if an incident is reportable.
- Identify and comply with non-discriminatory laws.
- Identify and comply with institutional policy and procedures.

**HL 5.2:** Describe legal practices employed by health care workers.

Sample Indicators:
- Perform duties according to regulations, policies, laws and legislated rights of clients.
- Manage clients’ rights according to the Patients' Bill of Rights.
- Manage confidentiality according to Health Information Portability Access Act (HIPAA).
- Employ practices that adhere to licensure, certification, registration and legislated scope of practice.
- Apply the doctrine of informed consent.
- Evaluate technological threats to confidentiality.
- Employ mandated standards for workplace safety, i.e., OSHA, CDC, CLIA.
Apply mandated standards for harassment, labor and employment laws.

6. Evaluate accepted ethical practices with respect to cultural, social and ethnic differences within the healthcare workplace.

**HL 6.1:** Describe legal and ethical boundaries in health care delivery.
*Sample Indicators:*
- Differentiate between morality and ethics and the relationship of each to health care outcomes.
- Differentiate between ethical and legal issues impacting health care.
- Employ personal, professional and organizational ethics.
- Analyze legal and ethical aspects of confidentiality.
- Discuss bio-ethical issues related to health care.
- Analyze and evaluate the implications of medical ethics.

**HL 6.2:** Describe ethical practice as it applies to health care delivery.
*Sample Indicators:*
- Demonstrate professionalism when interacting with fellow students, patients/clients, co-workers and the organization.
- Recognize and respect interdisciplinary roles of team members.
- Report activities and behaviors by self and others that adversely affect the health, safety, or welfare of students, patients/clients, or co-workers.
- Demonstrate fairness and equal treatment of all persons.
- Practice responsibly within the ethical framework of the Patients' Bill of Rights.
- Employ clients’ independence and determination in their health care.

**HL 6.3:** Explain cultural, social and ethnic diversity as it applies to health care delivery.
*Sample Indicators:*
- Discuss the impact of religions and cultures on those giving and receiving health care with an understanding of past and present events.
- Demonstrate respect of individual cultural, social and ethnic diversity within the health care environment.

**Biotechnology Research & Development Career Pathway (HL-BRD)**

1. Summarize the goals of biotechnology research and development within legal and ethical protocols.

**HL-BRD 1.1:** Identify biotechnology's contributions to quality of life.
*Sample Indicators:*
- Propose a biological or industrial enzyme that could be used for treating disease and contribute to the quality of life.
• Develop a list of environmental diseases or chronic conditions that have been or could be treated with biotechnology products.

**HL-BRD 1.2:** Assess legal and ethical considerations associated with using biotechnology.

*Sample Indicators:*
- Assess a current biotechnology-related ethical issue in the news.
- Discuss how a current biotechnology-related ethical issue may affect the quality of life.

2. **Apply the fundamentals of biochemistry, cell biology, genetics, mathematical concepts, microbiology, molecular biology, organic chemistry and statistics to conduct effective biotechnology research and development of products.**

**HL-BRD 2.1:** Apply mathematical concepts to the field of biotechnology.

*Sample Indicators:*
- Illustrate the concepts of percentages and ratios using a biotechnology application.
- Contrast weight-to-weight and weight-to-volume calculations for solutions.
- Explain scientific notation.

**HL-BRD 2.2:** Use statistical data when conducting biotechnology research and development.

*Sample Indicators:*
- Compare the standard deviation and the mean of data results from testing effectiveness of two biotechnology products.
- Graphically illustrate a set of biotech data such that a layman would understand it.

**HL-BRD 2.3:** Apply genetic principles to biotechnology.

*Sample Indicators:*
- Describe the basic structure of a chromosome.
- Construct a karyotype with human chromosomes.
- Differentiate the genetic inheritance of a dominant homozygous trait (e.g. dwarfism) from a heterozygous disease (e.g., sickle cell anemia).

**HL-BRD 2.4:** Apply principles of organic chemistry to biotechnology.

*Sample Indicators:*
- Construct a molecule of a compound with three or more carbon atoms.
- Create an equation of two organic substrates leading to a product.
- Describe atomic number, atomic mass and orbitals.
- Contrast covalent, ionic and hydrogen bonding.

**HL-BRD 2.5:** Apply principles of biochemistry to biotechnology.

*Sample Indicators:*
- Diagram six chemical side groups that could be in a biotechnology product.
• Categorize all amino acids into essential and non-essential.
• Describe the relationship between biochemistry and biotechnology product development.
• Compare the underlying reasons why some molecules are hydrophilic and some are hydrophobic.

**HL-BRD 2.6:** Apply principles of cell biology to biotechnology.
*Sample Indicators:*
  • Describe the basic structures and functions of cells and how this knowledge is used in biotechnology.
  • Select cellular barriers to be overcome for a biotechnology product to work inside a cell.

**HL-BRD 2.7:** Apply principles of molecular biology to biotechnology.
*Sample Indicators:*
  • Diagram the structure of the nucleic acid DNA.
  • Demonstrate DNA replication graphically and its importance to biotechnology product development.
  • Describe the central dogma of molecular biology and how understanding this process impacts biotechnology research and development.

**HL-BRD 2.8:** Apply principles of microbiology to biotechnology.
*Sample Indicators:*
  • Analyze how microorganisms are used in mass producing recombinant proteins.
  • Compare and contrast bacterial, fungal and animal cells and how these similarities and differences affect biotechnology product development and production decisions.
  • Compare and contrast the use of plasmids in bacterial transformation and the process of plasmid DNA isolation.

3. Demonstrate basic knowledge of recombinant DNA, genetic engineering, bioprocessing, monoclonal antibody production, nanotechnology, bioinformatics, genomics, proteomics and transcriptomics to conduct biotechnology research and development.

**HL-BRD 3.1:** Identify techniques used in biotechnology.
*Sample Indicators:*
  • Describe the following techniques: recombinant DNA, genetic engineering, monoclonal antibody production, separation and purification of biotechnology products and bioprocessing.
  • Identify uses of the following techniques: recombinant DNA, genetic engineering, monoclonal antibody production, separation and purification of biotechnology products and bioprocessing.

**HL-BRD 3.2:** Identify trends in the field of biotechnology.
*Sample Indicators:*
• Predict how nanotechnology, bioinformatics, proteomics, genomics and transcriptomics will create new career opportunities.
• Identify how the above career opportunities will impact health care environments.

4. Demonstrate the principles of solution preparation, sterile techniques, contamination control and measurement and calibration of instruments used in biotechnology research.

**HL-BRD 4.1**: Use laboratory procedures to prepare solutions, sterilize, control contamination, use measurement instruments and calibrate instruments.

*Sample Indicators:*
• Describe how molarity relates to solution preparation.
• Calculate the molarity of a given solution and measure the pH of this solution.

**HL-BRD 4.2**: Apply biosafety protocols in the laboratory environment.

*Sample Indicators:*
• Maintain a safe laboratory environment using biosafety protocols.
• Describe the criticality of the requirements of sterile techniques.
• Respond to a hypothetical laboratory accident appropriately as a member of a laboratory team.

5. Determine processes for product design and production and how that work contributes to an understanding of the biotechnology product development process.

**HL-BRD 5.1**: Explain biotechnology product development processes.

*Sample Indicators:*
• Diagram the process involved in making one biotech product in an industrial setting.
• Analyze the role of pre-clinical and clinical trials in biotechnology product development.

**HL-BRD 5.2**: Explain regulations affecting the processes for biotechnology product development.

*Sample Indicators:*
• Examine the role of a Quality Assurance person in this process.
• Define Current Good Manufacturing Practices (CGMP) and why it is important in biotech production.

6. Summarize and explain the larger ethical, moral and legal issues related to biotechnology research, product development and use in society.

**HL-BRD 6.1**: Explain biotechnological implications on society.

*Sample Indicators:*
• Differentiate between morality and ethics and the relationship of each to biotechnology health care product development.
• Discuss bioethical issues related to biogenetic products.
• Contrast personal, professional and organizational ethics.

**HL-BRD 6.1:** Apply institutional protocols to biotech research and product development.
*Sample Indicators:*
- Identify and comply with policies and requirements for documentation and record keeping.
- Identify and comply with institutional ethical policies and procedures.

**Diagnostics Career Pathway (HL-DIA)**

1. **Communicate information within a healthcare environment and convey Communicate key diagnostic information to healthcare workers and patients in an accurate and timely manner.**

   **HL-DIA 1.1:** Employ effective oral communication techniques when communicating diagnostic information with departments and professionals.
   *Sample Indicators:*
   - Assess the appropriate communication techniques based on the other’s ability to understand.
   - Apply active listening skills using reflection, restatement and clarification.
   - Demonstrate courtesy to others, including self introduction.
   - Interpret verbal and nonverbal behaviors to augment communication within scope of practice.
   - Demonstrate interviewing skills.

   **HL-DIA 1.2:** Employ effective written communication techniques when communicating diagnostic information with departments and professionals.
   *Sample Indicators:*
   - Identify correct syntax and grammar appropriate to patient/client.
   - Report relevant information in a timely manner.
   - Distinguish between subjective and objective information when reporting.
   - Analyze communication for appropriate response and provide feedback.
   - Organize, write and compile technical information and summaries.
   - Use medical terminology in order to interpret, transcribe and communicate information, data and observations.

2. **Assess and report patient's/client's health status in order to monitor and document patient progress.**

   **HL-DIA 2.1:** Assess patient's/client's health status using accepted processes.
   *Sample Indicators:*
   - Analyze available information to assess patient/client viability.
   - Complete procedures for attaining information necessary that is not readily available.
   - Evaluate and appraise appropriateness of information.
• Evaluate patient and other client response to treatment and/or procedure.
• Document results accurately and appropriately.

3. Demonstrate the principles of body mechanics for positioning, transferring and transporting of patients/clients and perform them without injury to the patient/client or self.

   **HL-DIA 3.1:** Apply techniques for patient/client safety when positioning, transferring and transporting patients/clients.
   **Sample Indicators:**
   • Assess the patient/client status.
   • Evaluate potential hazards to patient/client.
   • Identify and employ appropriate transport methods.
   • Identify and employ appropriate transfer methods.
   • Assess correct positioning to accommodate patient/client status.
   • Identify and employ effective and appropriate infection control procedures.

   **HL-DIA 3.2:** Use equipment for positioning, transferring and transporting patients/clients safely.
   **Sample Indicators:**
   • Evaluate equipment for possible hazards.
   • Employ appropriate equipment for transportation.
   • Employ appropriate equipment for transfer.
   • Assess and adjust equipment and modify techniques to accommodate patient/client status.
   • Practice preventive measures for disease transmission during equipment use.

4. Explain procedures and goals to the patient/client accurately and effectively, using strategies to respond to questions and concerns.

   **HL-DIA 4.1:** Explain procedures and goals to the patient/client accurately and effectively.
   **Sample Indicators:**
   • Assess ability of patient/client to comprehend.
   • Interpret assessment and modify.
   • Assess patient/client understanding.
   • Employ strategies for interacting with and responding to patient/client questions and concerns.
   • Apply strategies for interacting with and responding to patient/client questions and concerns.

5. Select, demonstrate and interpret diagnostic procedures.

   **HL-DIA 5.1:** Perform specific procedures to create diagnostic results.
   **Sample Indicators:**
   • Recognize scope of practice to be employed.
   • Perform procedure competently within scope of practice.
Perform procedure according to protocol.
Assess and modify procedure, as required, within constraints of patient/client and personal safety.

HL-DIA 5.2: Document diagnostic results.
Sample Indicators:
- Summarize diagnostic results.
- Communicate diagnostic results to health care team.

Health Informatics Career Pathway (HL-HI)

1. Communicate health information accurately and within legal and regulatory guidelines, upholding the strictest standards of confidentiality.

HL-HI 1.1: Employ techniques for effectively communicating health/medical information within legal/regulatory guidelines.
Sample Indicators:
- Manage the accuracy, effectiveness and timeliness of the transfer of information.
- Evaluate how legal and regulatory requirements apply to the transfer of information.
- Distinguish who in the organization needs information and when they need it.

HL-HI 1.2: Employ techniques for confidentially communicating health/medical information in compliance with legal/regulatory guidelines.
Sample Indicators:
- Manage recorded information and other documents within protocols that ensure confidentiality and privacy.
- Communicate information ensuring confidentiality of content is maintained.
- Communicate information on a need-to-know basis for optimum patient/client outcomes.

2. Describe the content and diverse uses of health information.

HL-HI 2.1: Employ techniques for abstracting and coding information from medical records and documents.
Sample Indicators:
- Interpret and extract information from medical records and documents.
- Assemble appropriate, accurate information including proper codes to record charges for reimbursement.
- Identify and apply accurate medical terminology.
- Analyze and determine the need for requesting further clarification when transcribing/ transferring information that may be unclear.
- Assess and apply information for regulatory and legal purposes.
**HL-HI 2.2:** Apply principles for the development of functional information systems to design and implement effective processes.

*Sample Indicators:*
- Synthesize the information systems utilized by the organization.
- Assess how systems interact to facilitate the timely and accurate flow.
- Organize information within the parameters of the information systems.
- Integrate information for timely, accurate dissemination.
- Evaluate effectiveness of systems.
- Assess and recommend systems for improvement.

**HL-HI 2.3:** Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines.

*Sample Indicators:*
- Assemble and accurately document required information.
- Interpret information that has been collected.
- Differentiate the purposes and audiences for whom the information is collected.
- Prepare accurate documentation for various audiences within legal and regulatory requirements, as requested.
- Disseminate information to various audiences using systems and guidelines within the facility.
- Establish and maintain a records storage system within legal requirements and protocols.
- Assess and recommend procedures for improvement as necessary.

3. **Demonstrate the use of systems used to capture, retrieve and maintain confidential health information from internal and external sources.**

**HL-HI 3.1:** Employ techniques for effectively documenting, communicating and maintaining health information within legal and regulatory guidelines.

*Sample Indicators:*
- Assemble and accurately document required information.
- Interpret information that has been collected.
- Differentiate the purposes and audiences for whom the information is collected.
- Prepare accurate documentation for various audiences within legal and regulatory requirements, as requested.
- Disseminate information to various audiences using systems and guidelines within the facility.
- Establish and maintain a records storage system within legal requirements and protocols.
- Assess and recommend procedures for improvement as necessary.

**HL-HI 3.2:** Employ strategies for effectively and accurately operating a system used to capture, retrieve and maintain information from internal and external sources.

*Sample Indicators:*>
• Analyze the internal and external sources of information and resources available.
• Project outcomes as interconnected components of a modified health care system.
• Select the systems and sources of information necessary for the successful completion of the task.
• Participate in the design of operational systems and processes.
• Evaluate operational systems and processes for improvement.

Support Services Career Pathway (HL-SUP)

1. Describe, differentiate and safely perform the responsibilities of healthcare support services roles.

**HL-SUP 1.1:** Perform administrative tasks following established internal and external guidelines.
*Sample Indicators:*
- Develop and implement departmental mission statement, goals, objectives and strategic plan.
- Develop and implement departmental policies, procedures and processes. Modify as required.
- Coordinate departmental activities with other departments, outside agencies and contractors, including event planning and logistics.
- Implement new and existing services specific to the working environment and responsibilities.
- Implement an employee recognition program.

**HL-SUP 1.2:** Apply strategies to measure safety and improve quality of support services provided.
*Sample Indicators:*
- Monitor patient/client and organizational expectations through satisfaction survey and measurement tools to assure adequacy of products, services and performance improvement as necessary.
- Provide support of standardization, consolidation and/or re-engineering processes.
- Evaluate cost effectiveness of alternative methodologies.
- Perform quality management activities.

**HL-SUP 1.3:** Perform support service tasks following established guidelines.
*Sample Indicators:*
- Adhere to a code of ethics to ensure corporate compliance.
- Ensure compliance with legal, regulatory and accreditation standards or codes.
- Coordinate with environmental health agency to administer the hazardous materials management program.
- Coordinate with physicians, departmental directors/managers and outside agencies in the development of Emergency Preparedness Plans.
- Inspect buildings, facilities and grounds to ensure compliance with standards, regulations and codes.
- Evaluate work of staff to ensure compliance with applicable safety and building regulations.
2. Demonstrate work practices that maintain a clean and healthy healthcare facility to reduce or eliminate pathogenic organisms.

HL-SUP 2.1: Perform cleaning and decontamination tasks using best practices for eliminating pathogenic organisms.  
Sample Indicators:
- Demonstrate various decontamination techniques and procedures.
- Demonstrate knowledge of standard precaution guidelines.
- Select procedures and precautions to be followed when using chemicals.
- Demonstrate techniques for mechanical and manual cleaning procedures.
- Evaluate potential causes and methods of transmitting infection.
- Integrate infection control standards with relevant activities and procedures.

HL-SUP 2.2: Employ best safety practices for handling hazardous materials and managing waste.  
Sample Indicators:
- Develop, implement and monitor hazardous waste disposal and recycling policies and procedures in accordance with regulatory requirements.
- Assess and monitor the operations of a waste management program, including recycling and reduction of regulated medical, solid, hazardous chemical and radioactive and biological waste materials.
- Develop systems and procedures that minimize customer cost of ordering, storing and using supplies, services and equipment.
- Develop and implement a plan to safely handle, package, store and dispose of waste in accordance with federal, state and local regulations.

HL-SUP 2.3: Employ best safety practices for handling and storing a variety of materials common to the health services environment.  
Sample Indicators:
- Demonstrate process and environmental requirements for proper handling and storage of sterile and non-sterile items.
- Demonstrate appropriate inventory control and distribution systems.
- Describe and implement a program to purchase materials, supplies and capital equipment within allocated resources.
- Evaluate the effectiveness of optimal material flow and layout.
- Recommend policies and procedures to monitor distribution, consumption and pilferage of materials.
- Provide adequate space to meet standards of storage.

3. Follow established internal and external guidelines in order to provide high-quality, effective support services in the healthcare facility.
HL-SUP 3.1:  
*Sample Indicators:*  
- None available at this time

4. Maximize available resources for proper care and use of healthcare equipment and materials.

HL-SUP 4.1: Utilize financial information and data to make appropriate decisions regarding purchase and maintenance of equipment and materials.  
*Sample Indicators:*  
- Implement and evaluate purchasing processes and agreements.  
- Evaluate audit activities, including the review of discrepancies, purchase orders and invoices.  
- Assess cost benefits that support best product recommendations.  
- Explain competitive pricing, terms and service levels.  
- Identify opportunities for reduction in resource consumption.  
- Identify inventory reduction targets and implement to achieve targets.

HL-SUP 4.2: Employ organizational protocols when making decisions about the use and maintenance of equipment.  
*Sample Indicators:*  
- Review capital purchasing processes.  
- Assess procedures and processes for the selection, acquisition, distribution and maintenance of equipment.  
- Implement written instructions for the equipment manufacturer's operations manual and departmental policies and procedures.  
- Design a preventive maintenance (PM) process for buildings, equipment, parts, supplies and utilities as appropriate.  
- Develop and implement equipment systems training programs for maintenance staff and user groups.

HL-SUP 4.3: Implement principles and organizational protocols when acquiring and distributing equipment and materials.  
*Sample Indicators:*  
- Assess and implement purchasing and procurement techniques that improve the overall supply chain.  
- Analyze timely order placement and supplier performance and continuously review for effectiveness.  
- Assess a supplier’s performance standards program.  
- Organize catalogs, price lists, inventory records, purchase order files and product/supplier files, ensuring that they are updated and current.
• Assess and offer recommendations to departments requiring assistance in resource allocation.
• Assess the integration of resource functions.
• Evaluate distribution strategies and systems to ensure optimal materials flow.
• Maintain adequate quantities of supplies, equipment, instruments and medical devices.

5. Implement healthcare facility standards in order to maintain high-quality healthcare facilities.

**HL-SUP 5.1:** Employ strategies to establish, maintain and improve the presentation of the facility's physical environment.

*Sample Indicators:*
- Implement and participate in a comprehensive training and education program on safety, infection control, hazardous materials and new equipment use.
- Analyze labor distribution for projects and operations.
- Review and evaluate reporting mechanisms for departmental functions.
- Communicate with other departments on selection of facility finishes and furnishings following appropriate safety codes.
- Review and participate in the development of design and construction plans.
- Analyze the therapeutic and functional aspects of color décor and furnishing.
- Maintain facility accessibility as a clutter-free environment.
- Evaluate repair status of facility and report recommendations as appropriate.
- Organize, deliver and present products and services in a quality manner.

**Therapeutic Services Career Pathway (HL-THR)**

1. Utilize communication strategies to answer patient/client questions and concerns on planned procedures and goals.

**HL-THR 1.1:** Employ effective oral communication techniques when responding to patient questions and concerns.

*Sample Indicators:*
- Assess patients/clients’ understanding of the information provided.
- Demonstrate empathy for patients/clients.
- Construct communication appropriate to the needs of the patient/client and the situation.

**HL-THR 1.2:** Employ effective written communication techniques when responding to patient questions and concerns.

*Sample Indicators:*
- Develop clearly written patient/client information and instructions.
- Keep written records as appropriate within facility policies and protocols.
2. Communicate patient/client information among healthcare team members to facilitate a team approach to patient care.

**HL-THR 2.1:** Utilize facility protocol and regulatory guidelines for collecting patient/client health care needs, strengths and problems.

*Sample Indicators:*
- Monitor and identify patient/client health care needs, strengths and problems.
- Select appropriate tools for information to be collected.
- Format and develop collected information.
- Maintain confidentiality according to facility protocol.

**HL-THR 2.2:** Analyze team interactions that identify effective patterns of communication among team members.

*Sample Indicators:*
- Distinguish appropriate role and responsibilities of each team member.
- Respect and value the expertise and contributions of all team members.
- Evaluate relevancy of information to be conveyed.
- Formulate and report information in a way that is clear and concise.

3. Utilize processes for assessing, monitoring and reporting patient's/clients' health status to the treatment team within protocol and scope of practice.

**HL-THR 3.1:** Monitor patient/client using protocols for assessing, monitoring and reporting health status.

*Sample Indicators:*
- Analyze and assess patient/client response.
- Assess need for follow-up and alternative care to treatment plan.
- Respond to patient/client health changes as prescribed by facility protocol.
- Evaluate patient/client response to administered treatments and procedures.

**HL-THR 3.2:** Utilize strategies that support patient/client goals when developing treatment plans.

*Sample Indicators:*
- Create a treatment plan using a problem-solving model, incorporating patient/client input.
- Select appropriate resources to implement treatment plan.
- Evaluate the plan for appropriate outcomes and intervention opportunities.

**HL-THR 3.3:** Implement treatment plans that adhere to facility protocols, regulatory guidelines and scope of practice.

*Sample Indicators:*
- Evaluate priorities in order to organize work.
Use equipment and instruments according to the manufacturer's guidelines and accepted safety practice.
Document actions according to facility protocol and regulatory guidelines.

4. Evaluate patient/client needs, strengths and problems in order to determine if treatment goals are being met.

**HL-THR 4.1:** Employ accepted protocols for evaluating patient/client needs, strengths and problems during treatment.
*Sample Indicators:*
- Identify appropriate evaluation tools to assess patient/client response to treatment plan.
- Analyze information gathered.
- Revise or create modifications to treatment plan based on patient/client response.