PATHWAY: Therapeutic Services

Pathway Topic: Client Interaction

Pathway KS Statement: Therapeutic services professionals will be able to explain planned procedures to patients and health professionals including goals, side effects and coping strategies. They will use various strategies to respond to questions and concerns of patients.

Performance Element: Use Oral Communications.
  Measurement Criteria: Assess patients’ understanding of the information provided.
  Measurement Criteria: Demonstrate empathy for patients.
  Measurement Criteria: Modify communication to the needs of the patients and appropriate to the situation.

Performance Element: Use Written Communication.
  Measurement Criteria: Develop clear written patient information and instructions.
  Measurement Criteria: Keep written records as appropriate within facility policies and protocols.

Pathway Topic: Employ Intra Team Communication

Pathway KS Statement: Therapeutic services professionals will be able to communicate patient information among team members allowing for feedback as needed.

Performance Element: Understand Team Interactions.
  Measurement Criteria: Distinguish appropriate role and responsibilities of each team member.
  Measurement Criteria: Respect and value the expertise and contributions of all team members.
  Measurement Criteria: Evaluate relevancy of information to be conveyed.
  Measurement Criteria: Formulate and report information in a way that in a clear And concise manner.

Pathway Topic: Collect Information

Pathway KS Statement: Therapeutic services professionals will use facility protocol and regulatory guidelines for collecting patient information. They will participate in identifying patient health care needs, strengths and problems and respond appropriately.

Performance Element: Collect Information.
  Measurement Criteria: Collect and format information using facility protocols and regulatory guidelines.
  Measurement Criteria: Analyze information collected to develop appropriate therapeutic response.
  Measurement Criteria: Maintain confidentiality according to facility protocol.

Pathway Topic: Treatment Planning and Implementation

Pathway KS Statement: Therapeutic services professionals will understand the purposes of the treatment plan and collaborate in planning procedures that support the goals for the patient according to facility protocol, regulatory guidelines and within their scope of practice.
Pathway Topic:  **Treatment Planning and Implementation**

**Performance Element:**  Utilize planning strategies.

**Measurement Criteria:**  Create a treatment plan using a problem-solving model, incorporating patient input.

**Measurement Criteria:**  Select appropriate resources to implement treatment plan.

**Measurement Criteria:**  Evaluate the plan for appropriate outcomes.

**Performance Element:**  Implement treatment plan.

**Measurement Criteria:**  Evaluate priorities in order to organize work.

**Measurement Criteria:**  Use equipment and instruments according to the manufacturer’s guidelines and accepted safety practice.

**Measurement Criteria:**  Document actions according to facility protocol and regulatory guidelines.

Pathway Topic:  **Monitor Client Status**

**Pathway KS Statement:**  Therapeutic services professionals will monitor and assess patients’ health status, and develop appropriate therapeutic response based on facility protocol.

**Performance Element:**  Monitor Client.

**Measurement Criteria:**  Analyze and assess patient response.

**Measurement Criteria:**  Assess need for follow up and changes to treatment plan.

**Measurement Criteria:**  Respond to patient health changes as prescribed by facility protocol.

**Measurement Criteria:**  Evaluate patient response to administered treatments and procedures.

Pathway Topic:  **Evaluate Patient Status**

**Pathway KS Statement:**  Therapeutic services professionals will evaluate patient needs, strengths and problems in order to determine if treatment goals are being reached.

**Performance Element:**  Evaluation.

**Measurement Criteria:**  Choose appropriate evaluation tools to assess patient response to treatment plan.

**Measurement Criteria:**  Analyze information gathered.

**Measurement Criteria:**  Revise or create modifications to treatment plan based on patient response.
PATHWAY: Diagnostic Services

Pathway Topic: Multidisciplinary Communication

Pathway KS Statement: Diagnostic services professionals will communicate information within a healthcare environment. They will convey this information to the appropriate departments and other professionals in a timely manner.

- Measurement Criteria: Adjust communication to other’s ability to understand.
- Measurement Criteria: Apply active listening skills using reflection, restatement, and clarification.
- Measurement Criteria: Demonstrate courtesy to others, including self introduction.
- Measurement Criteria: Interpret verbal and nonverbal behaviors to augment communication within scope of practice.
- Measurement Criteria: Demonstrate interviewing skills.

Performance Element: Apply Written Communication Skills.
- Measurement Criteria: Choose correct syntax and grammar appropriate to patient.
- Measurement Criteria: Report relevant information in a timely manner.
- Measurement Criteria: Distinguish between subjective and objective information when reporting.
- Measurement Criteria: Analyze communication for appropriate response and provide feedback.
- Measurement Criteria: Organize, write and compile technical information and summaries.
- Measurement Criteria: Use medical terminology in order to interpret, transcribe and communicate information, data and observations.

Pathway Topic: Assessment

Pathway KS Statement: Diagnostic services professionals will be proficient in the processes to assess and report health status of the patient.

Performance Element: Assess patient’s health status.
- Measurement Criteria: Analyze available information to assess patient viability.
- Measurement Criteria: Complete procedures for attaining information necessary that is not readily available.
- Measurement Criteria: Evaluate patient and other client response to treatment and/or procedure.

Pathway Topic: Move Patient

Pathway KS Statement: Diagnostic services professionals will apply the principles of body mechanics for positioning, transferring, and transporting of patients. These activities will be performed efficiently without injury to the patient or self.

Performance Element: Apply techniques for patient safety.
- Measurement Criteria: Assess the patient status.
- Measurement Criteria: Evaluate potential hazards to patient.
Pathway Topic: Move Patient

**Measurement Criteria:** Choose and apply appropriate transport methods.

**Measurement Criteria:** Choose and apply appropriate transfer methods.

**Measurement Criteria:** Modify positioning to accommodate patient status.

**Measurement Criteria:** Choose and practice effective and appropriate infection control procedures.

**Performance Element:** Apply Techniques for Personal Safety.

**Measurement Criteria:** Utilize principles of standard precautions.

**Measurement Criteria:** Apply principles of body mechanics and ergonomics.

**Measurement Criteria:** Prevent injury by using proper safety equipment and techniques.

**Measurement Criteria:** Choose engineering controls as appropriate.

**Performance Element:** Use Equipment Safely.

**Measurement Criteria:** Evaluate equipment for possible hazards.

**Measurement Criteria:** Choose appropriate equipment for transportation.

**Measurement Criteria:** Choose appropriate equipment for transfer.

**Measurement Criteria:** Adjust equipment and modify techniques to accommodate patient status.

**Measurement Criteria:** Practice preventive measures for disease transmission during equipment use.

Pathway Topic: Patient Interaction

**Pathway KS Statement:** Diagnostic services professionals will accurately and effectively explain procedures and goals to the patient. A variety of strategies will be used to respond to questions and concerns of the patient.

**Performance Element:** Explain Procedures and Goals.

**Measurement Criteria:** Assess ability of patient to comprehend.

**Measurement Criteria:** Adjust and modify based on assessment.

**Measurement Criteria:** Verify patient understanding.

**Performance Element:** Apply Interaction Strategies.

**Measurement Criteria:** Apply active listening skills using reflection, restatement, and clarification techniques.

**Measurement Criteria:** Address patient concerns in a positive manner.

Pathway Topic: Preparation

**Pathway KS Statement:** Diagnostic services professionals will appropriately respond to requests for procedures, interpret the requests, and plan implementation of services as well as preparation for specific procedures.

**Performance Element:** Process Procedural Requests.

**Measurement Criteria:** Comprehend concept of scope of practice.

**Measurement Criteria:** Evaluate procedure requested for appropriateness.

**Measurement Criteria:** Coordinate interdisciplinary services if necessary.

**Performance Element:** Implement Services.

**Measurement Criteria:** Complete plan for implementation of services requested.

**Measurement Criteria:** Initiate services based on plan.
Pathway Topic: Preparation

Performance Element: Protocol Preparation.

Measurement Criteria: Choose appropriate protocol based on patient assessment and request.

Measurement Criteria: Choose protocol based on resources.

Performance Element: Prepare Patient.


Measurement Criteria: Obtain patient informed consent if applicable.

Pathway Topic: Procedure Implementation

Pathway KS Statement: Diagnostic services professionals interpret any given procedure, are knowledgeable of the purpose for each procedure and perform the specific procedure to create diagnostic results.

Performance Element: Procedure Performance.

Measurement Criteria: Cognizant of their scope of practice.

Measurement Criteria: Perform procedure competently within their scope of practice.

Measurement Criteria: Perform procedure according to protocol.

Measurement Criteria: Modify procedure as required within constraints of patient and personal safety.

Pathway Topic: Evaluation and Reporting

Pathway KS Statement: Diagnostic services professionals will apply the principles of quality assurance/performance improvement as applied to the specific disciplines as well as reporting in a timely manner, utilizing appropriate communication channels.


Measurement Criteria: Assess the quality of results.

Measurement Criteria: Analyze, construct and apply appropriate corrective measures/actions.

Performance Element: Personal Evaluation.

Measurement Criteria: Evaluate quality of results.

Measurement Criteria: Assess problem-solving skills.

Measurement Criteria: Evaluate timeliness and productivity.

Performance Element: Equipment.

Measurement Criteria: Evaluate quality of results.

Measurement Criteria: Analyze, construct and apply appropriate corrective measures.

Performance Element: Quality Assurance/Performance Improvement.

Measurement Criteria: Choose appropriate evaluation methods.

Measurement Criteria: Evaluate and apply appropriate tools.

Performance Element: Reporting Methods.

Measurement Criteria: Use written, oral and electronic communication skills to produce reports.

Measurement Criteria: Deliver reports to all appropriate parties.
Pathway Topic: Evaluation and Reporting

*Measurement Criteria:* Develop and utilize protocols that verify the parties involved receive all necessary information.
PATHWAY: Health Informatics

Pathway Topic: Communication and Confidentiality

Pathway KS Statement: Health informatics professionals will communicate health/medical information accurately and within legal/regulatory guidelines established by the facility holding to the strictest standards of confidentiality.

Performance Element: Communication.

Measurement Criteria: Manage the accuracy, effectiveness, and timeliness of the transfer of information.

Measurement Criteria: Evaluate how legal and regulatory requirements apply to the transfer of information.

Measurement Criteria: Distinguish who in the organization needs information and when they need it.

Performance Element: Confidentiality.

Measurement Criteria: Manage recorded information and other documents within protocols that ensure confidentiality and privacy.

Measurement Criteria: Communicate information ensuring confidentiality of content is maintained.

Measurement Criteria: Communicate information on a need to know basis for optimum patient outcomes.

Pathway Topic: Analysis

Pathway KS Statement: Health informatics professionals will know the quantitative and qualitative requirements for information. They will analyze the information for designated purposes.

Performance Element: Analysis.

Measurement Criteria: Synthesize information to determine the best course of action.

Measurement Criteria: Assess health information required by patients, staff, and the community.

Measurement Criteria: Assemble all necessary data components for successful completion of tasks.

Measurement Criteria: Appraise the accuracy and completeness of data.

Measurement Criteria: Assess whether information is reported and disseminated within legal, ethical and regulatory guidelines.

Pathway Topic: Abstracting and Coding

Pathway KS Statement: Health informatics professionals will read and interpret and extract information from medical documents, applying knowledge of medical terminology and codes.

Performance Element: Abstracting and Coding.

Measurement Criteria: Assemble appropriate, accurate information, including proper codes to record charges for reimbursement.

Measurement Criteria: Apply accurate medical terminology.

Measurement Criteria: Analyze and determine the need for requesting further clarification when transcribing/transfering information that may be unclear.

Measurement Criteria: Assess and apply information for regulatory and legal
Pathway Topic: Abstracting and Coding

Pathway Topic: Information Systems

Pathway KS Statement: Health informatics professionals will understand the resources, routes and flow of information within the health care system. They will participate in the design and implementation of effective information systems or processes.

Performance Element: Information Systems.

Measurement Criteria: Integrate the information systems utilized by the organization.

Measurement Criteria: Assess how systems interact to facilitate the timely and accurate flow.

Measurement Criteria: Organize information within the parameters of the information systems.

Measurement Criteria: Integrate information for timely, accurate dissemination.

Measurement Criteria: Evaluate effectiveness of systems.

Pathway Topic: Documentation and Storage

Pathway KS Statement: Health informatics professionals will understand the content and diverse uses of health information. They will accurately document, communicate and maintain appropriate information using legal and regulatory guidelines.

Performance Element: Documentation.


Measurement Criteria: Interpret information that has been collected.

Measurement Criteria: Differentiate the purposes and audiences for whom the information is collected.

Measurement Criteria: Prepare accurate documentation for various audiences within legal and regulatory requirements, as requested.

Measurement Criteria: Disseminate information to various audiences using systems and guidelines within the facility.

Measurement Criteria: Establish and maintain a records storage system within legal requirements and protocols.

Measurement Criteria: Assess and recommend procedures for improvement as necessary.

Pathway Topic: Operations

Pathway KS Statement: Health informatics professionals will know the systems operations used to capture, retrieve, and maintain information from internal and external sources. They will utilize internal and external information and resources accurately and efficiently.

Performance Element: Operations.

Measurement Criteria: Analyze the internal and external sources of information and resources available.

Measurement Criteria: Project outcomes as interconnected components of a modified health care system.

Measurement Criteria: Select the systems and sources of information necessary for the
Pathway Topic: Operations

successful completion of the task.

**Measurement Criteria:** Participate in the design of operational systems and processes.

**Measurement Criteria:** Evaluate operational systems and processes for areas of improvement as necessary.
PATHWAY:  Support Services

Pathway Topic:  Operations

Pathway KS Statement:  Support services professionals will review, assess, differentiate, and enhance the responsibilities of their roles. They will perform their tasks safely following established internal and external guidelines.

Performance Element:  Administration.

Measurement Criteria:  Develop/implement departmental mission statement, goals, objectives, and strategic plan.

Measurement Criteria:  Develop/implement departmental policies, procedures, processes and modify as needed.

Measurement Criteria:  Coordinate departmental activities with other departments, outside agencies and contractors, including event planning and logistics.

Measurement Criteria:  Develop/implement new and existing services specific to the working environment and responsibilities.

Measurement Criteria:  Design and recommend implementation of an employee recognition program.

Performance Element:  Quality Measurement and Improvement.

Measurement Criteria:  Monitor patient and organizational expectations through satisfaction survey and measurement tools to assure adequacy of products and services and performance improvement as necessary.

Measurement Criteria:  Participate and provide support standardization, consolidation and/or re-engineering processes.

Measurement Criteria:  Evaluate cost effectiveness of alternative methodologies.

Measurement Criteria:  Perform quality management activities.

Performance Element:  Compliance.

Measurement Criteria:  Adhere to a code of ethics to ensure corporate compliance.

Measurement Criteria:  Ensure compliance with legal, regulatory, and accreditation standards or codes.

Measurement Criteria:  Coordinate with environmental health agency to administer the hazardous materials management program.


Measurement Criteria:  Inspect buildings/facilities and grounds to ensure compliance with standards, regulations, and codes.

Measurement Criteria:  Check work of staff to ensure compliance with applicable safety and building regulations.

Pathway Topic:  Aseptic Procedures

Pathway KS Statement:  Support services professionals will adopt work practices that maintain a clean and healthy environment. They will demonstrate best practices to reduce or eliminate pathogenic organisms.

Performance Element:  Cleaning and Decontamination.

Measurement Criteria:  Demonstrate various decontamination techniques and
Pathway Topic: Aseptic Procedures

Measurement Criteria: Demonstrate knowledge of standards precaution guidelines.
Measurement Criteria: Select procedures and precautions to be followed when using chemicals.
Measurement Criteria: Demonstrate techniques for mechanical and manual cleaning procedures.
Measurement Criteria: Evaluate potential causes and methods of transmitting infection (e.g., contact, airborne, blood-borne, common vehicle, vector-borne).
Measurement Criteria: Integrate infection control standards with relevant activities and procedures.


Measurement Criteria: Develop, implement, and monitor hazardous waste disposal and recycling policies and procedures in accordance with regulatory requirements.
Measurement Criteria: 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.
Measurement Criteria: Develop systems and procedures that minimize customer cost of ordering, storing, and using supplies, services, and equipment.
Measurement Criteria: Ensure that regulated waste is safely handled, packaged, stored and disposed of in accordance with federal, state, and local regulations and maintain appropriate documentation.

Performance Element: Materials Handling and Storage.

Measurement Criteria: Demonstrate process and environmental requirements for proper handling and storage of sterile and non-sterile items.
Measurement Criteria: Demonstrate appropriate inventory control and distribution systems.
Measurement Criteria: Describe and implement a program to purchase materials, supplies and capital equipment within allocated resources.
Measurement Criteria: Evaluate effectiveness optimal material flow and layout.
Measurement Criteria: Recommend policies and procedures to monitor distribution, consumption and pilferage of materials.

Pathway Topic: Resource Management

Pathway KS Statement: Support services professionals will make appropriate decisions to maximize the use of available resources for both purchase and maintenance of equipment and materials.

Performance Element: Finance.

Measurement Criteria: Participate and evaluate purchasing processes and agreements.
Measurement Criteria: Evaluate audit activities, including the review of discrepancies, purchase orders, and invoices.
Measurement Criteria: Assess cost benefits that support best product
Pathway Topic: Resource Management

Measurement Criteria: Explain competitive pricing, terms, and service levels.

Measurement Criteria: Identify opportunities for reduction in resource consumption.

Measurement Criteria: Develop inventory reduction targets and process to achieve targets.

Performance Element: Acquisition and Distribution.

Measurement Criteria: Assess and implement purchasing and procurement techniques that improve the overall supply chain.

Measurement Criteria: Analyze timely order placement, supplier performance, and continuously review for effectiveness.

Measurement Criteria: Assess a supplier performance standards program.

Measurement Criteria: Organize catalogs, price lists, inventory records, purchase order files, and product/supplier files, ensuring that they are updated and current.

Measurement Criteria: Assess and offer recommendations to departments requiring assistance in resource allocation.

Measurement Criteria: Assess the integration of resource functions.

Measurement Criteria: Evaluate distribution strategies and systems to ensure optimal materials flow.

Measurement Criteria: Maintain adequate quantities of supplies, equipment, instruments and medical devices.

Performance Element: Equipment and Maintenance.

Measurement Criteria: Participate in capital purchasing processes.

Measurement Criteria: Assess procedures and processes for the selection, acquisition, distribution, and maintenance of equipment.

Measurement Criteria: Apply written instructions for the equipment manufactures operations manual, departmental policies and procedures.

Measurement Criteria: Design a preventive maintenance (PM) process for buildings, equipment, parts, supplied, and utilities as appropriate.

Measurement Criteria: Participate in equipment and systems training programs for maintenance staff and user groups.

Performance Element: Staffing and Productivity.

Measurement Criteria: Participate in a comprehensive training and education program, covering such aspects as safety, infection control, hazardous materials, and new equipment use.

Measurement Criteria: Analyze labor distribution for projects and operations.

Measurement Criteria: Review and evaluate reporting mechanisms for departmental functions.

Pathway Topic: Aesthetics

Pathway KS Statement: Support services professionals will promote the establishment, maintenance, and improvement of the facility environment. They will assist in the development and implementation of facility standards.

Performance Element: Physical Environment and Presentation.

Measurement Criteria: Coordinate with other departments to select facility finishes
Pathway Topic: Aesthetics

and furnishings within appropriate safety codes.

Measurement Criteria: Participate in the development of design and construction plans.

Measurement Criteria: Analyze the therapeutic and functional aspects of color décor and furnishing.

Measurement Criteria: Provide facility accessibility through appropriate wayfinding and maintaining a clutter free environment.

Measurement Criteria: Evaluate repair status of facility and report recommendations as appropriate.

Measurement Criteria: Organize, deliver and present products and services in a quality manner.
PATHWAY: Biotechnology Research and Development

Pathway Topic: Contributions of Biotechnology to health and the human condition

Pathway KS Statement: Biotechnology R&D professionals will understand that the goal of biotechnology products is to improve the quality of life within legal and ethical protocols.

Performance Element: Identify contributions to quality of life.

Measurement Criteria: Propose an individual life or industrial enzyme that could be used for treating disease and contribute to the quality of life.

Measurement Criteria: Generate a list of environmental diseases or chronic conditions that have been or could be treated with biotechnology products.

Performance Element: Assess Legal and Ethical Considerations.

Measurement Criteria: Assess a current biotechnology-related ethical issue in the “news”, list the basic ethical considerations and how the issue may affect the quality of life.

Pathway KS Statement:

Pathway Topic: Academic Foundations

Pathway KS Statement: Biotechnology R&D professionals will be knowledgeable in the fundamentals of biochemistry, cell biology, genetics, mathematical concepts, microbiology, molecular biology, organic chemistry, and statistics.

Performance Element: Apply Mathematical concepts.

Measurement Criteria: Illustrate the concepts of percentages and ratios using a biotechnology application.


Measurement Criteria: Explain scientific notation.

Performance Element: Use Statistical data.

Measurement Criteria: Compare the standard deviation and the mean of data results from testing effectiveness of two biotechnology products.

Measurement Criteria: Graphically illustrate a set of biotech data such that a layman would understand it.

Performance Element: Understand Genetics.

Measurement Criteria: Describe the basic structure of a chromosome.

Measurement Criteria: Construct a karyotype with human chromosomes.

Measurement Criteria: Differentiate the genetic inheritance of a dominant homozygous trait (e.g. dwarfism) from a heterozygous disease (e.g., sickle cell anemia).

Performance Element: Apply principles of organic chemistry.

Measurement Criteria: Construct a molecule of a compound with 3 or more carbon atoms.

Measurement Criteria: Create an equation of two organic substrates leading to a
Pathway Topic: Academic Foundations

Measurement Criteria: Describe atomic number, atomic mass and orbitals.

Measurement Criteria: Contrast covalent, ionic and hydrogen bonding.

Performance Element: Apply principles of biochemistry.

Measurement Criteria: Diagram six chemical side groups that could be in a biotechnology product.

Measurement Criteria: Categorize all amino acids into essential and non-essential.

Measurement Criteria: Describe the relationship between biochemistry and biotechnology product development.

Measurement Criteria: Compare the underlying reasons why some molecules are hydrophilic and some are hydrophobic.

Performance Element: Apply principles of cell biology.

Measurement Criteria: Describe the basic structures and functions of cells and how this knowledge is used in biotechnology.

Measurement Criteria: Select cellular barriers to be overcome for a biotechnology product to work inside a cell.

Performance Element: Apply principles of molecular biology.

Measurement Criteria: Diagram the structure of the nucleic acid DNA.

Measurement Criteria: Demonstrate DNA replication graphically and its’ importance to biotechnology product development.

Measurement Criteria: Describe the central dogma of molecular biology and how understanding this process impacts biotechnology research and development.

Performance Element: Apply principles of microbiology.

Measurement Criteria: Analyze how microorganisms are used in mass producing recombinant proteins.

Measurement Criteria: Compare and contrast bacterial, fungal, and animal cells and how these similarities and differences affect biotechnology product development and production decisions.

Measurement Criteria: Compare and contrast the use of plasmids in bacterial transformation and the process of plasmid DNA isolation.

Pathway Topic: Understand Biotechnology Knowledge Areas and Techniques

Pathway KS Statement: Biotechnology R&D professionals will be introduced to recombinant DNA, genetic engineering, bioprocessing, monoclonal antibody production, nanotechnology, bioinformatics, genomics, proteomics and transcriptomics.

Performance Element: Identify techniques used in biotechnology.

Measurement Criteria: Describe the following techniques; recombinant DNA, genetic engineering, monoclonal antibody production, separation and purification of biotechnology products and bioprocessing.

Performance Element: Identify trends in the field of biotechnology.

Measurement Criteria: Predict how nanotechnology, bioinformatics, proteomics,
Pathway Topic: Understand Biotechnology Knowledge Areas and Techniques

Pathway Topic: Laboratory Protocols and Procedures

Pathway KS Statement: Biotechnology R&D professionals will understand the principles of solution preparation, sterile techniques, contamination control, & measurement and calibration of instruments. They will maintain a safe laboratory environment using biosafety protocols.

Performance Element: Use Procedures.

Measurement Criteria: Describe how molarity relates to solution preparation.

Measurement Criteria: Calculate the molarity of a given solution and measure the pH of this solution.

Measurement Criteria: Prepare a serial dilution of a microbial culture starting with 10^-3 going to 10^-8 and plate on to nutrient agar petri dishes. Determine the original concentration of the microbial culture.

Performance Element: Apply protocols.

Measurement Criteria: Describe the criticality of the requirements of sterile techniques.

Measurement Criteria: Respond to a hypothetical laboratory accident appropriately as a member of a laboratory team.

Pathway Topic: Product Development and Regulation

Pathway KS Statement: Biotechnology R&D professionals will know the process for product design and production and how their work contributes to the result.

Performance Element: Understand product development.

Measurement Criteria: Diagram the process involved in making one biotech product in an industrial setting.

Measurement Criteria: Analyze the role of pre-clinical and clinical trials in biotechnology product development.

Performance Element: Understand regulation.

Measurement Criteria: Examine the role of a Quality Assurance person in this process.

Measurement Criteria: Define cGMP and why it is important in biotech production.

Pathway Topic: Apply principles of bioethical conduct

Pathway KS Statement: Biotechnology R&D professionals will understand the larger ethical, moral and legal issues related to biotech research, product development and use in society.

Performance Element: Understand biotechnological implications on society.

Measurement Criteria: Differentiate between morality and ethics and the relationship of each to biotechnology health care product development.

Measurement Criteria: Discuss bioethical issues related to biogenetic products.

Measurement Criteria: Contrast personal, professional and organizational ethics.

Performance Element: Apply institutional protocols.
Pathway Topic:  Apply principles of bioethical conduct

*Measurement Criteria:* Comply with policies and requirements for documentation and record keeping.

*Measurement Criteria:* Comply with institutional ethical policies and procedures.