<table>
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### 2. Breadth & Depth of Understanding in a Particular Scientific Discipline

- Apply the core concepts of mathematics, physics, chemistry and biology to **Bio-Medical Science**.
- Demonstrate knowledge of the ethical, economic, commercial and social implications of scientific discovery and technological innovation.
- Interpret current scientific concepts and gaps in knowledge (and methods) in light of the historical development of **Bio-Medical Science**.
- Apply an integrated and broad foundation in life sciences and technology to problems related to medicine.
- Demonstrate knowledge of health and disease through the study of molecules, cells and whole organisms.
- Understand the influence of evidence-based medicine, ethics, biases, medical technologies and the environment on health.

### 3. Scientific Technology & Techniques in a Scientific Discipline

- Apply contemporary research methods, skills and techniques to conduct independent inquiry in **Bio-Medical Science**.
- Identify, review and advance our understanding of scientific endeavour through literature searches, research or other independent study in health science disciplines.
- Critically analyze biomedical research and clinical practice literature and develop an appreciation for the limits of scientific knowledge.
- Demonstrate an understanding of the application of research and medical technologies to disease prevention and treatment in every-day life.

### 2. Breadth & Depth of Understanding in a Particular Scientific Discipline

- Apply the core concepts of mathematics, physics, chemistry and biology to **Human Kinetics**.
- Demonstrate knowledge of the ethical, economic, commercial and social implications of scientific discovery and technological innovation.
- Interpret current scientific concepts and gaps in knowledge (and methods) in light of the historical development of **Human Kinetics**.
- Apply an integrated and broad foundation in life sciences and technology to problems in human movement, physical activity, exercise and health.
- Demonstrate knowledge of the impact of human movement, physical activity and exercise on health and performance, and provide mechanistic explanations for associated biological events at the molecular, cellular and whole organism levels of organization.
- Demonstrate an understanding of the science of prospective health; the pivotal role of individual exogenous and exer-epigenetic analyses and the critical role of evidence-based, lifestyle medicine in the effective application of the prospective health approach to healthcare.
- Define and analyze the interactions of nutrition and exercise on the metabolic control of health and disease.

### 3. Scientific Technology & Techniques in a Scientific Discipline

- Apply contemporary research methods, skills and techniques to conduct independent inquiry in **Human Kinetics**.
- Critically analyze experimental design, data analysis and interpretation in human movement, physical activity and exercise science research.
- Demonstrate an understanding of how to measure and record cardiorespiratory, kinematic, and neuromechanical data in humans.
- Design, execute, analyze and interpret results from a human clinical trial using physical activity or exercise as the experimental intervention.

### 2. Breadth & Depth of Understanding in a Particular Scientific Discipline

- Apply the core concepts of mathematics, physics, chemistry and biology to **Nutritional and Nutraceutical Sciences**.
- Demonstrate knowledge of the ethical, economic, commercial and social implications of scientific discovery and technological innovation.
- Interpret current scientific concepts and gaps in knowledge (and methods) in light of the historical development of **Nutritional and Nutraceutical Sciences**.
- Apply an integrated and broad foundation in life sciences and technology to problems in human nutrition, nutri-pharmacology, nutri-toxicology and health.
- Demonstrate knowledge of the impact of human nutrition, nutri-pharmacology and nutri-toxicology on health and performance, and provide mechanistic explanations for associated biological events at the molecular, cellular and whole organism levels of organization.
- Demonstrate an understanding of the science of prospective health; the pivotal role of individual nutrigenomic and nutri-epigenetic analyses and the critical role of evidence-based, lifestyle medicine in the effective application of this prospective health approach to healthcare.
- Define and analyze the interactions of nutrition and exercise on the metabolic control of health and disease.

### 3. Scientific Technology & Techniques in a Scientific Discipline

- Apply contemporary research methods, skills and techniques to conduct independent inquiry in **Nutritional and Nutraceutical Sciences**.
- Critically analyze experimental design, data analysis and interpretation in human nutrition, nutri-pharmacology and nutri-toxicology research.
- Formulate and develop a functional food or nutraceutical product.
- Design, execute, and analyze and interpret results from a human clinical trial using a functional food or nutraceutical as the experimental intervention.