Level 1
Second- Term

Course	Basics of Genetic science
Code Number	Gen 101
Credit Hours	2
Prerequisite Course	-
Course status	Compulsory course

1) General instructional objectives (GIO)

1- Definition of the Genetics science history of its development, subdivisions and applications.
2- Knowledge of mendelian genetics.
3- Description the variation of mendelian ratios.
4- Understanding the Quantitative genetics.
5- Knowledge gene linkage and genetic maps.
6- Identification of the non-Mendelian genetics and solving problems.
7- Knowledge of the chromosome aberrations.

2) Scientific Contents

Genes as units of biological information (DNA, genes, transcription of DNA to RNA, types of RNA molecule, the genetic code, protein synthesis, control gene expression), Genes as units of inheritance (DNA replication, inheritance of genes during eukaryotic cell division, inheritance of genes in bacteria, inheritance of genes during virus infection cycles, inheritance of DNA molecules during eukaryotic sexual reproduction, inheritance of genes during eukaryotic sexual reproduction, mutation and DNA repair, inheritance of genes in populations), genetics in our modern world (genes in differentiation and development, the human genome, genes and medicine, DNA in forensics and studies of human history, genes in industry and agriculture, the ethical issues raised by modern genetics.

3) Teaching and learning methods

1- Lectures
2- Practical lessons
3- Self learning
4- Cooperative learning

4) – Student Assessment Methods

1- Written examination
2- Practical examination
3- Mid – Term
4- Sheet examination
5- Oral examination

5) References

1- Anthony J. F. Griffiths, Susan R. Wessler, Richard C. Lewontin, Sean B. Carroll (2007). Introduction to Genetic Analysis. W. H. Freeman and Company. 800 pages.

Course	Histology
Code Number	Md105
Credit Hours	3
Prerequisite Course	-
Course status	Compulsory course

1) General instructional objectives (GIO)

Students should have acquired the

1- Methods of studying tissues

2- Mention and describe the different types of tissues.

3- Mention and describe the specific characteristic of cell components in relation to the functions of each component.

4- Understanding the scientific foundation of tissue preparation and be able to apply that understanding to the carry out of the subjects such as making films, spreads and counting.

5- Knowledge of the structure and function of the body and its major organ systems and of the molecular and cellular mechanisms.

2) Scientific Contents

Introduction to general histology, histological techniques, general morphology in relation to functions of cells and tissues, epithelial and connective tissues, integumentary system and sense organs, digestive system, endocrine system, immune system.

3) Teaching and learning methods

1- Lectures

2- Practical lessons

3- Self learning

4- Cooperative learning

4) – Student Assessment Methods

1- Written examination

2- Practical examination

3- Mid – Term

4- Sheet examination

5- Oral examination

5) References

1- Gartner, L.P. and Hiatt, J. L. (2011). Concise histology. Saunders. 670 pages

Course	Human physiology
Code Number	Md106
Credit Hours	3
Prerequisite Course	-
Course status	Compulsory course

1) General instructional objectives (GIO)

Students should have acquired the

1- Knowledge about and recognize the normal structure and function of the body and major systems.

2- Appropriate functional background of cells, tissues, organs & systems.

3- Description of the integration of physiological functions, which characterize the performance of the human body as a whole in health.

4- Knowledge the physiological principles underlying diseases states that aids in interpretation of symptoms.

2) Scientific Contents

Cell physiology, physiology of, digestive, circulatory, respiratory system, blood and body fluids.

3) Teaching and learning methods

1- Lectures

2- Practical lessons

3- Self learning

4- Cooperative learning

4) – Student Assessment Methods

1- Written examination

2- Practical examination

3- Mid – Term

4- Sheet examination

5- Oral examination

5) References

1- Sherwood, L. (2003).Human Physiology: From cells to Systems. Brooks Cole. 830 pages.

Course	**Essentials of Nutrition Science**
Code Number	**Fdt101**
Credit Hours	**2**
Prerequisite Course	**-**
Course status	**Compulsory course**

1) General instructional objectives (GIO)

Students should have acquired the

1- List basic food groups and nutritional classifications

2- Factors that influence food habits

3- Understanding digestive tract function and metabolism

4- Knowledge of nutritional needs for health and fitness

5- Knowledge of altered health states.

2) Scientific Contents

The structures of the digestive tract and digestive process, The need for water, the need for energy, The need for carbohydrate and fat, The need for protein, the need for micronutrients-minerals and vitamins, Nutrient sensing in the hypothalamus, Ghrelin-the appetite-stimulating hormone, Long –term control of food intake and energy expenditure- the hormone leptin, Appetite Why do people eat what they do? Disorders of appetite: anorexia, nervosa and bulimia nervosa, Brief introduction to the digestion and absorption of carbohydrates, lipids and proteins.

3) Teaching and learning methods

1- Lectures

2- Practical lessons

3- Self learning

4- Cooperative learning

4) – Student Assessment Methods

1- Written examination

2- Practical examination

3- Mid – Term

4- Sheet examination

5- Oral examination

5) References

1- Gibney M.J., Lanham-New, S.A., Cassidy, A. Vorster, H.(2009). Introduction to

Human Nutrition. Wiley-Blackwell. 420 pages.

Course	Biochemistry
Code Number	Chm103
Credit Hours	3
Prerequisite Course	-
Course status	Compulsory course

1) General instructional objectives (GIO)

Students should have acquired the

1- Description the structure and properties of caribohydrates, lipids and proteins of biological important
2- Knowledge of the metabolism of carbohydrate, lipid and protein
3- Knowledge of the structure of heme and proteins of the extra-cellular matrix
4- Awareness the processes of replication, transcription and translation
5- Identification recombinant DNA biotechniques and their clinical implications.
6- Acquaintance of the components, regulation and abnormalities of cell cycle together with the causes and different kinds of DNA mutation and repain, telomere and telomerase enzyme

2) Scientific Contents

Structural features of carbohydrates, Simple carbohydrates (monosaccharides and disaccharides), Complex carbohydrates (oligosaccharides and polysaccharides), Structure and biological importance of lipids, fatty acids, triacylglycerols, Sterols and Steroids, Phospholipids, Glycolipids, Cholesterol, Lipoprotein, charcterististics of dietary and functional fibers, Cellulose, Hemicellulose, Pectins, Lignin, Gums, Beta-glucans III, Fructan-inulin, Oligofructose, fructooligosaccharides, Resistant Starch III, Chitin and Chitosan, Polydextrose and Polyols, Psyllium, Resistant dextrins, Protein structure and organization, Amino acid classification, Sources of protein, Water-soluble vitamins, Fat-soluble vitamins, Macrominerals, Microminerals, Ultratrace elements.

3) Teaching and learning methods

1- Lectures
2- Practical lessons
3- Self learning
4- Cooperative learning

4) – Student Assessment Methods

1- Written examination
2- Practical examination
3- Mid – Term
4- Sheet examination
5- Oral examination

5) References

1- Jain, J.L., Jain, N. and Jain, S. (2007). Elementary Biochemistry. Paperback. 588 pages.

Course	Parasitology
Code Number	Md107
Credit Hours	2
Prerequisite Course	-
Course status	Compulsory course

1) General instructional objectives (GIO)

Students should have acquired the

1- Knowledge about endemic parasites, national parasitic problems and common parasites worldwide.
2- Knowledge of concerning biological, epidemiological and ecological aspects of parasites causing diseases to humans.
3- Understanding the pathogenesis, clinical presentations and complications of parasitic infections.
4- Knowledge of basic diagnostic features, general outline of treatment and prevention and control of these disease.

2) Scientific Contents

Arthropods, protozoa, trematodes, cestodes, nematodes, parasitic immunity.

3) Teaching and learning methods

1- Lectures
2- Practical lessons
3- Self learning
4- Cooperative learning
5- Case studies
6- Office hours (tutorial)

4) – Student Assessment Methods

1- Written examination
2- Practical examination
3- Mid – Term
4- Sheet examination
5- Oral examination

5) References

Chatterjee, K. D. (2012). Parasitology (Protozoology and Helminthology). CBS Publishers & Distributors. 254 pages.

برنامج نظم التغذية
Dietetic Program

Course	Application of computer science in Nutrition
Code Number	**Unv103**
Credit Hours	**2**
Prerequisite Course	**-**
Course status	**Compulsory course**

١) تعريف موجز بالمقرر:
يتضمّنُ المقرر دراسةَ البرامج الإحصائية التي يمكن استخدامها في تحليل البيانات في مجال التغذية والتعرف علي كيفية إدخال البيانات وتصنيفها بالإضافة لذلك استخدام برامج تحليل الأغذية والبرامج الأحصائية.

٢) أهداف المقرر:
بعد انتهاء هذا المقرر من المتوقع أن يتمكن الطالب من:
١. التعرف علي البرامج الإحصائية التي يمكن استخدامها في تحليل البيانات في مجال التغذية.
٢. الالمامُ بكيفية إدخال البيانات وتصنيفها.
٣. استخدام برامج تحليل الأغذية والبرامج الإحصائية

٣) المحتوي العلمي للمقرر:
التعرف بالبرامج الإحصائية التي يمكن استخدامها وخاصة Spss في تحليل البيانات في مجال التغذية العلاجية، كيفية إدخال البيانات، كيفية تصنيف البيانات، استخدام البرامج الإحصائية في تصميم وتحليل التجارب، استخدام البرامج الإحصائية في التحليل الإحصائي المناسب لمجال التغذية، استخدام برامج تحليل الأغذية في تحليل الأغذية إلي مكونتها من العناصر الغذائية المختلفة، استخدام البرامج الإحصائية في تقييم الحالة الغذائية من خلال كفاءة الغذاء والمقاييس الجسمية.

٤) وسائل التقويم:
١. امتحان تحريري يشمل أسئلة الاختيار من متعدد.
٢. تقييم مدى مساهمة الطالب فى أداء المجموعة.
٣. امتحان شفوي
٤. امتحان عملي في الجزء التطبيقي

٥) أساليب تدريس المقرر:
a. محاضرات.
b. حلقة مُناقشة مجموعةٍ صغيرةٍ للعْصفُ الذهنى.
c. التكليف بمهام القراءة والاطلاع لاستكمال المعلومات

٦) المراجع:
١- لضحيان وحسن، سعود بن ضحيان، عزت عبد الحميد (٢٠٠٢) معالجة البيانات باستخدام برنامج spss - الرياض – مكتبة الملك فهد الوطنية.
٢- أبو علام، رجاء محمود (٢٠٠٣) التحليل الإحصائي للبيانات باستخدام برنامج spss، دار النشر للجامعات، مصر.