



Program Para-medical Professions

Specialization	Sterilization
Course Number	21115121
Course Title	Microbiology 1
Credit Hours	(3)
Theoretical Hours	(3)
Practical Hours	(0)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Brief Course Description:

The course introduces the students into the whatness of microbiology with an emphases put on the general classifications of microbiology, bacteriology and the control of microbial growth. It also deals, with host parasite relationship, virology mycology principles of disease and epidemiology. Moreover, it deals with the mechanism of pathogenicity (Pathogenic Bacteria, Antimicrobial drugs, nosocomial infections), and the management of the collection, transportation, preservation and disposal of samples Finally, it shows how the results are reported and recorded

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Principles of disease and epidemiology.
2. Mechanism of Pathogenicity
3. How to do the collection, Preservation and Transportation of Samples.
4. Know Antimicrobial drugs
5. To differentiate Pathogenic Bacteria
6. Preparation and Staining
7. The types of infections
8. Types of Viral Infections





Detailed Course Description:

Time Needed	Unit Name	Unit Content	Unit Number
1.	Microbiology	<ul style="list-style-type: none"> ▪ Microbiology <ul style="list-style-type: none"> – Definition. – History. – Micro – organisms and human body. ▪ General Classifications of Microbiology. <ul style="list-style-type: none"> – Bacteriology. – Virology. – Mycology. – Parasitology. 	
2.	Bacteriology	<ul style="list-style-type: none"> ▪ Bacteriology: <ul style="list-style-type: none"> – Size and Sharpe. – Structure – Bacterial species – Bacterial toxins. – Reproduction / curve. – Bacterial growth – Bacterial culture media: <ul style="list-style-type: none"> – Definition – Type. ▪ Control of Bacterial growth <ul style="list-style-type: none"> – Temperature. – Kind of bacteria. – Environment – Physical state of bacteria. – Physical methods of bacterial control. – Chemical methods of bacterial control. ▪ Host parasite relationship: <ul style="list-style-type: none"> – Symbiotic relationships. – Normal microbial flora of human body. – Bacterial Pathogenicity and virulence. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



3.	Virology	<ul style="list-style-type: none"> ▪ Size and shapes. ▪ Structure. ▪ Multiplication and cultivation. ▪ Virus – host cell interaction. ▪ Interferon. ▪ Oncoviruses. ▪ Bacteriophages. 	
4.	Mycology	<ul style="list-style-type: none"> ▪ Structure of Fungus. ▪ Habitat. ▪ Reproduction. ▪ Fungal infections (mycosis). <ul style="list-style-type: none"> – Superficial. – Cutaneous – Deep 	
5.	Parasitology	<ul style="list-style-type: none"> ▪ Introduction. ▪ Classification. <ul style="list-style-type: none"> – Protista / shape, structure, life cycle, mode of transmission& source of infection. – Helminthes/shape, structure, life cycle mode of transmission, source of infection. ▪ Medical Parasites: <ul style="list-style-type: none"> – Protozoa: Shapes, structure, life cycle, Diagnosis, control. <ul style="list-style-type: none"> – Human Protozoan – Entamaeba. – Giardia – Leishmania. – Toxoplasma. – Leishmania. – Trichomana. – Plasmodium. – Helminthes: Shapes, structures, life cycle, Diagnosis, control. <ul style="list-style-type: none"> – Nematodes. – Ascaris. – Enterabous. – Trichuris. – Trichuris. – Cestodes: 	

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		<ul style="list-style-type: none"> - Taenias. - Echinococcy. - Hymenolepis - Trematodes: - Schistosoma. 	
6.	Infection	<ul style="list-style-type: none"> ▪ Source of infection. ▪ Mode of transmission. ▪ Prevention and control. 	
7.	Immunity	<ul style="list-style-type: none"> ▪ Non specific defenses of the host. <ul style="list-style-type: none"> - Skin and mucous membrane. - Phagocytosis. - Inflammation - Fever. - Antimicrobial substances “Interferon, complement and properdine. ▪ Specific defenses of the host. <ul style="list-style-type: none"> - kinds of immunity - Antigens and antibodies. - Mechanism of antibody formation. - Cellular immunity. ▪ hypersensitivity ▪ Vaccines <ul style="list-style-type: none"> - Definition - Types - EPI. 	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects Discussions and lecture Presentations		10%	--/--/----

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Teaching Methodology:

Lectures. Group discussion. Videos. Live patterns & samples. Practical applications. Field Visits (Industries).

Text Books & References:

References:

1. Microbiology Richard Harvey, Pamela, Champe Bruce D. Fisher 2007 PP438
2. Burton's Microbiology Paul Engel Kirk, Gwendolyn Buroon 2007 390PP.
3. Microbiology, Geraral Tortora, Berdell Funke Christin Case 1000PP. 18JD 2007.
4. Medical Microbiology and Immunology Warren Levinson. 660PP. 2006
5. Microbiology Prescott Harley Kline Sixth edition 2005 Published by MC Graw. Hill Martin J. Lang.
6. Microbiology PRESCOTT HARLEY KLINE Sixth edition 2005
7. Published by MC Graw. Hill Martin J. Lang.
8. Medical Microbiology .Geo. F Brooks Janet s. Butel Stephen A. Morse, 20th edition 2004
9. Microbiology for the Health Sciences Gwendolyn R.W Burton Paul G.Englkirk. .2004 Lippincott Williams & Wilkins.
10. Medical Microbiology Cedric Mims, Hazel M Dockrem Richard V Goering. Ivan Ritt, Derek. Wakein, Mark Zuckerman 660PP 15JD.
11. Medical Microbiology. David Greenwood Richard. Slack, John Peutherer – 2002 708 PP.
12. MEDICAL. MICROBIOLOGY ODY. 16f, Churchill Living, Greenwood, 2002 Microbiology and Infection Ingles 1998 PP 256.
13. Medical Microbiology, Tom Elliott Mark Hastings, Ulrich esselberger, 350 P.P 1997.
14. Microbiology for the health sciences, by Burton & Engel Kirk, 6th edd. Lippincott Williams & Wilkins.
15. Microbiology – An Introduction: Torkora, hunke, case, Benjamin cummings 8th. edd (ISBN/0 – 8053-7613-5).
16. Jawetz, Melnick, and Adelbergis, Medical Microbiology. Geo. F. Brooks, Janet. Butel. Stephen 21st edd, lang medical books.
17. Internet microbiology teaching resources

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Program Para-medical Professions

Specialization	Sterilization
Course Number	21115123
Course Title	Microbiology 2
Credit Hours	(3)
Theoretical Hours	(3)
Practical Hours	(0)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Brief Course Description:

The course deals with the Principles of disease and epidemiology and the Mechanism of Pathogenicity and it also deals with the management of the collection, Transportation Preservation and Disposal of samples and how the results are reported and recorded. it also introduces the students to Pathogenic Bacteria , Antimicrobial drugs, Nosocomial infections, Nosocomial infections and the Viral Infections.

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Principles of disease and epidemiology.
2. Mechanism of Pathogenicity.
3. How to do the collection, Preservation and Transportation of Samples.
4. Know Antimicrobial drugs.
5. To differentiate Pathogenic Bacteria.
6. Preparation and Staining.
7. The types of infections.
8. Types of Viral Infections.





Detailed Course Description:

Time Needed	Unit Content	Unit Name	Unit Number
1.	Introduction to medical Microbiology	<ul style="list-style-type: none"> ▪ Principles of disease and epidemiology. ▪ Pathology. ▪ Infection. ▪ Disease. ▪ Normal flora. ▪ Causes of disease. ▪ Spread of infection. ▪ Kinds of diseases. ▪ Epidemiological definitions. ▪ Mechanism of Pathogenicity. ▪ Portals of entry and exit. ▪ Pathogenic properties of bacteria. 	
2.	Microbiology	<ul style="list-style-type: none"> ▪ Specimens: ▪ Collection. ▪ Transportation. ▪ Preservation. ▪ Reporting and recording. ▪ Disposal. 	
3.	Pathogenic Bacteria	<ul style="list-style-type: none"> ▪ Gram positive bacteria ▪ Gram positive cocci “staph, strept”. ▪ Gram positive bacilli “bacillus, clostridium”. ▪ Gram positive listeria, Corynebacterium Diphtheria. ▪ Gram negative bacteria ▪ Gram negative cocci – neisseria. ▪ Gram negative bacilli: Eicoli, klebsiella, Citrobacter, Entero, Shigella, Vibrio. Cholera, Pseudomonas. ▪ Gram negative coccobacilli: ▪ Haemophilus. 	

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		<ul style="list-style-type: none"> ▪ Brucella. ▪ Bordetella. ▪ Spiral bacteria: treponema. ▪ Mycobacteria: Mycobacterium tuberculosis. ▪ Mycoplasma. ▪ Chlamydia. 	
4.	Antimicrobial drugs	<ul style="list-style-type: none"> ▪ Criteria of antimicrobial drugs. ▪ Action of antimicrobial drugs. ▪ Tests of microbial susceptibility to chemotherapeutic agents. ▪ Drug resource. 	
5.	Nosocomial Infections	<ul style="list-style-type: none"> ▪ Definition. ▪ Most common micro-organisms. ▪ Predisposing factors. ▪ Medical device born disease. 	
6.	Virusus	<ul style="list-style-type: none"> ▪ Types Of Viral Infections: ▪ Latent viral infection. ▪ Acute viral infection. ▪ Chronic. ▪ Oncoviruses. ▪ Viral Disases ▪ Measles. ▪ Rubella. ▪ Cytomegalo virus. ▪ Rabies Viruses. ▪ Influenza viruses. ▪ Herpes Viruses. ▪ HIV "AIDS". ▪ Hepatitis "viruses". ▪ Mumps. ▪ Adeno virus. 	





Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects Discussions and lecture Presentations		10%	--/--/----

Teaching Methodology:

Lectures.Group discussion.Videos.Live patterns & samples.Practical applications.Field Visits (Industries).



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Text Books & References:

References:

1. Microbiology Richard Harvey, Pamela, Champe Bruce D. Fisher 2007 PP438
2. Burton's Microbiology Paul Engel Kirk, Gwendolyn Buroon 2007 390PP.
3. 3-Microbiology, Geraral Tortora, Berdell Funke Christin Case 1000PP. 18JD 2007.
4. 4-Medical Microbiology and Immunology Warren Levinson. 660PP. 2006
5. Microbiology Prescott Harley Kline Sixth edition 2005 Published by MC Graw. Hill Martin J. Lang.
6. Microbiology PRESCOTT HARLEY KLINE Sixth edition 2005
7. Published by MC Graw. Hill Martin J. Lang.
8. Medical Microbiology .Geo. F Brooks Janet s. Butel Stephen A. Morse, 20th edition 2004
9. Microbiology for the Health Sciences Gwendolyn R.W Burton Paul G.Englkirk. .2004 Lippincott Williams & Wilkins.
10. Medical Microbiology Cedric Mims, Hazel M Dockrem Richard V Goering. Ivan Ritt, Derek. Wakein, Mark Zuckerman 660PP 15JD.
11. Medical Microbiology. David Greenwood Richard. Slack, John Peutherer – 2002 708 PP.
12. MEDICAL. MICROBIOLOGY ODY. 16f, Churchill Living, Greenwood, 2002 Microbiology and Infection Ingles 1998 PP 256.
13. Medical Microbiology, Tom Elliott Mark Hastings, Ulrich esselberger, 350 P.P 1997.
14. Microbiology for the health sciences, by Burton & Engel Kirk, 6th edd. Lippincott Williams & Wilkins.
15. Microbiology – An Introduction: Torkora, hunke, case, Benjamin Cummings 8th. edd (ISBN/0 – 8053-7613-5).
16. Jawetz, Melnick, and Adelbergis, Medical Microbiology. Geo. F. Brooks, Janet. Butel. Stephen 21st edd, Lang medical books.
17. Internet microbiology teaching resources.



Program Para-medical Professions

Specialization	Sterilization
Course Number	21115224
Course Title	Microbiology/ Practical
Credit Hours	(2)
Theoretical Hours	(0)
Practical Hours	(6)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Brief Course Description:

The course deals with the laboratory safety measures, microscopy, preparation, staining and cultivation of bacteria .Concentration is put on the identification of bacteria and the effects of physical and chemical agents on bacteria. Moreover it deals with, fungal microscopy and culture and parasite identification.

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Personal safety protection.
2. How to deal with Laboratory waste disposal
3. Collection of Samples, Preservation and Transportation of Samples .
4. Culture& Identification
5. Preparing of Specimens
6. Reporting and Recording
7. Preparations and Staining
8. Effects of physical and chemical agents on bacteria
9. (Heat. Radiation Ultrasound Salting Filtration Disinfectants Antiseptics and Preservatives. Cooling).
10. Cultivation of Bacteria
11. Parasite identification





Detailed Course Description:

Time Needed	Unit Content	Unit Name	Unit Number
1.	Laboratory Safety	<ul style="list-style-type: none"> ▪ Procedures. ▪ Personal protection requirements. ▪ Biosafety levels. ▪ Safety equipments. ▪ Laboratory waste disposal. 	
2.	Microscopy	<ul style="list-style-type: none"> ▪ Use of different types of microscopes. ▪ Instruments “Components of microscope”. ▪ Collection of Samples Preservation and Transportation of Samples. ▪ Culture & Identification. ▪ Preparing of Specimens. ▪ Reporting and Recording. 	
3.	Preparation and Staining	<ul style="list-style-type: none"> ▪ Wet preparation. ▪ Gram stain. ▪ Acid Fast stain. ▪ Albert Stain. 	
4.	Cultivation of Bacteria	<ul style="list-style-type: none"> ▪ Cultivation of Bacteria ▪ Media Preparation. ▪ Loops. ▪ Cultivation of normal flora. ▪ Bunsen burner. ▪ Centrifuge. ▪ Automatic Dispenser. ▪ Identification of Bacteria: ▪ Shape and Appearance. ▪ Colony Count. ▪ Differentiation of Colony. 	
5.	Application of physical and chemical agents on	<ul style="list-style-type: none"> ▪ Heat. ▪ Radiation. 	

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	bacteria	<ul style="list-style-type: none"> ▪ Ultrasound. ▪ Salting ▪ Filtration. ▪ Disinfectants. ▪ Antiseptics and Preservatives. ▪ Cooling. 	
6.	Fungi Microscopy	<ul style="list-style-type: none"> ▪ Fungi Microscopy. ▪ Culture. 	
7.	Parasite Identification	<ul style="list-style-type: none"> ▪ Specimen collection. ▪ Microscopic. ▪ Entamaeba. ▪ Giardia. ▪ Plasmodium. ▪ Ascaris. ▪ Enterabous Vermicularis. ▪ Ancylostoma. ▪ Taenia. ▪ Hymenolepis. ▪ Schistosoma. 	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam Practical	20%	--/--/----
	Second Exam Practical	20%	--/--/----
	Final Exam Practical	50%	--/--/----
Homeworks and Projects		10%	--/--/----
Discussions and lecture Presentations			

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Teaching Methodology:

Lectures. Group discussion. Videos. Live patterns & samples. Practical applications. Field Visits (Industries)

Text Books & References:

References:

1. Microbiology Richard Harvey, Pamela, Champe Bruce D. Fisher 2007 PP438
2. Burton's Microbiology Paul Engel Kirk, Gwendolyn Buroon 2007 390PP.
3. Microbiology, Geraral Tortora, Berdell Funke Christin Case 1000PP. 18JD 2007.
4. Medical Microbiology and Immunology Warren Levinson. 660PP. 2006
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6. Microbiology PRESCOTT HARLEY KLINE Sixth edition 2005
7. Published by MC Graw. Hill Martin J. Lang.
8. Medical Microbiology .Geo. F Brooks Janet s. Butel Stephen A. Morse, 20th edition 2004
9. Microbiology for the Health Sciences Gwendolyn R. W Burton paul G.Englkirk. .2004 Lippincott Williams & Wilkins.
10. Medical Microbiology Cedric Mims, Hazel M Dockrem Richard V Goering. Ivan Ritt, Derek. Wakein, Mark Zuckerman 660PP 15JD.
11. Medical Microbiology. David Greenwood Richard. Slack, John Peutherer – 2002 708 PP.
12. MEDICAL. MICROBIOLOGY ODY. 16f, Churchill Living, Greenwood, 2002 Microbiology and Infection Ingles 1998 PP 256.
13. Medical Microbiology, Tom Elliott Mark Hastings, Ulrich esselberger, 350 P.P 1997.



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Program Para-medical Professions

Specialization	Sterilization
Course Number	21115231
Course Title	Epidemiology
Credit Hours	(3)
Theoretical Hours	(3)
Practical Hours	(0)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Brief Course Description:

The course deals with the definition of epidemiology .Then, it deals with Epidemiologic orientation to health and disease. Concentration is put on Epidemiological aspects of communicable diseases and Epidemiological surveillance and Screens for diseases

Course Objectives:

Upon the completion of the course, the student will be able to:

- 1-What does Epidemiology mean?
- 2-Types and Sources of health data
- 3-Epidemiologic orientation to health and disease
- 4-Epidemiologic studies Epidemiologic aspects of communicable diseases
- 5- Epidemiological surveillance and Screens for diseases:





Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	Introduction to Epidemiology	Definition General information	
	General Principles of Epidemiology	Epidemiology Infectious disease process Epidemiology concepts Tools of the trade Epidemiology Variables Concepts of cause	
2.	Epidemiologic Orientation to Health and Disease:	<ul style="list-style-type: none"> ▪ Health and disease. ▪ Natural history of disease. Epidemiology Triangle: <ul style="list-style-type: none"> -Agent, - Host - Environment. Investigation of an epidemic Diseases distribution. Prevention: <ul style="list-style-type: none"> -levels of Prevention 	
3.	Epidemiologic studies:	1-Observational studies <ul style="list-style-type: none"> - descriptive studies - analytical studies 2-Experimental studies. 3-Interventional studies	

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4.	Epidemiology of communicable diseases	<ul style="list-style-type: none">▪ A-Terminology and components of communicable diseases.▪ B-Mode of transmission.▪ C-Principles of communicable disease control.▪ D-principles of non – communicable disease prevention.	
5.	8- Epidemiology of non-communicable diseases	-Definition: Principles of non – communicable disease control -Risk factors -Prevention -Control	
6.	Epidemiological surveillance and Screens for diseases :	<ul style="list-style-type: none">▪ Definition.▪ Method▪ Purpose.▪ Types of screens Tests▪ Case- finding▪ Diseases suitable for screening	



Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects Discussions and lecture Presentations		10%	--/--/----

Teaching Methodology:

Lectures, handouts , Audiovisuals aids

Text Books & References:

References:

- 1-[Ray M. erril & M Thomas C. Timmreck](#) Introduction to Epidemiology (Paperback)Publisher: Jones & Bartlett Pub; 4 edition (February 1, 2006)
- 2--L/N Epidemiology/ Public Health Med. 51, BLACK WT LL, Farmer,2004.
- 3-[Friis; Thomas A](#) Epidemiology for Public Health Practice, Third Edition (Paperback)Publishe Jones & Bartlett Publishers; 3 edition (October 1, 2003)
- 3--Giesecke, Johan, Modern Infectious Disease Epidemiology, (2001).



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Program Para-medical Professions

Specialization	Sterilization
Course Number	21103127
Course Title	Biostatistics
Credit Hours	(3)
Theoretical Hours	(3)
Practical Hours	(0)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

وصف المادة الدراسية:

❖ يتناول هذا المساق العملية الإحصائية من حيث جمع البيانات وعرضها مع التركيز على مقاييس النزعة المركزية للبيانات المبوبة وغير المبوبة ومقاييس التشتت ومحنى التوزيع الطبيعي، والإحصاء التحليلي من حيث الفرضيات قبولها ورفضها والدلائل الإحصائية ومستوياتها و الارتباط وأشكالها وتربيع كاي واستعملاته ودلالته والتركيز على الإحصاءات الحيوية من حيث النسب والمعدلات والتعداد السكاني ومقاييس الخصوبة والمراضه والوفيات ومعدلاتها ومفهوم توقع الحياة.

أهداف المادة الدراسية:

بعد دراسة هذه المادة يتوقع من الطالب أن يكون قادراً على تحقيق الأهداف التالية:

1. مبادئ علم الإحصاء الأساسية وتطبيقاته في الأمور الصحية .
2. أهمية الإحصاء واستخداماته في المجالات الصحية والطبية.
3. مصادر المعلومات وجمعه أو تصنيفها وعرضها بالأسلوب المناسب.
4. حساب مقاييس النزعة المركزية ومقاييس التشتت واستعملاتها.
5. حساب المقاييس السكانية والخصوبة المراضة والوفاة.
6. بعض الاستنتاجات الإحصائية ذات الدلالة الإحصائية في مجالات الإحصاء التحليلي.



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

الوصف العام:

الزمن	محتويات الوحدة	اسم الوحدة	رقم الوحدة
	<ul style="list-style-type: none"> ▪ تعريف الإحصاء، مراحل العملية الإحصائية، أقسام الإحصاء ▪ استعمال الإحصاء في المجالات الصحية والطبية ▪ مصادر المعلومات، البيانات تعريفها وتصنيفاتها، المجتمع الإحصائي، العينة؛ أسباب اختيارها وطرق اختيار العينة ▪ المسح الشامل، الإستبانة؛ استعمالها ومكوناتها 	المقدمة	1
	<ul style="list-style-type: none"> ▪ العملية الإحصائية: جمع البيانات وعرضها؛ جدوليا وبيانيا ورقميا ▪ الجداول البسيطة، الأعمدة والمستطيلات، الخط المنكسر، الخط المنحني، الدائرة، الصور، الخريطة الوبائية ▪ التوزيعات التكرارية: بناء جدول التوزيع التكراري؛ التكرارات، التكرارات النسبية والمئوية، التكرار المتجمع، النسبي والمئوي، أقل من وأكثر من ▪ عرض التوزيعات التكرارية بيانيا؛ المدرج التكراري، المضلع التكراري، المنحنى التكرارين، المضلعات التكرارية التجميعية ▪ أشكال التوزيعات التكرارية 	العملية الإحصائية	2
	<ul style="list-style-type: none"> ▪ مقاييس النزعة المركزية للبيانات غير المبوبة والمبوبة؛ ▪ الوسط الحسابي، الوسط المرجح، الوسط الهندسي، الوسيط، المنوال، استخراجها حسابها وبيانيا ▪ خصائص مقاييس النزعة المركزية وصفاتها 	مقاييس النزعة المركزية للبيانات غير المبوبة والمبوبة	3
	<ul style="list-style-type: none"> ▪ المدى ▪ الانحراف المتوسط ▪ الانحراف المتوسط المطلق 	مقاييس التشتت للبيانات غير المبوبة والمبوبة	4

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

	<ul style="list-style-type: none"> ▪ التباين ▪ الانحراف المعياري ▪ معامل الاختلاف (التباين) 		
	<ul style="list-style-type: none"> ▪ خصائصه واستعمالاته وأهميته في الإحصاء والأبحاث 	منحنى التوزيع الطبيعي	5
	<ul style="list-style-type: none"> ▪ الفرضيات: فرضية العدم (الصفريّة) والفرضية البديلة ▪ قبول الفرضية ورفضها ▪ الدلالة الإحصائية ومستوياتها ▪ الارتباط، أشكاله، معامل الارتباط ▪ تربيع كأي، استعمالاته ودلالاته 	مقدمة في الإحصاء التحليلي	6
	<ul style="list-style-type: none"> ▪ النسب والمعدلات وتصنيفاتها: الخام والنوعية والمعيرة (المعدلة) ▪ التعداد السكاني العام، الهرم السكاني، محتوياته وأشكاله. تقدير عدد السكان ▪ مقاييس الخصوبة ▪ مقاييس المراضة: معدلات حدوث المرض وانتشاره ▪ مقاييس الوفيات: الوفيات الخام، وفيات الطفولة، وفيات الأمومة ▪ معدلات الوفاة النوعية حسب الجنس والسن وسبب الوفاة ▪ مفهوم توقع الحياة 	الإحصاء الحيوي	7



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

طرق التقييم المستخدمة :

التاريخ	نسبة الامتحان من العلامة الكلية	الامتحانات
/ / : التاريخ	%20	الامتحان الأول
/ / : التاريخ	%20	الامتحان الثاني
/ / : التاريخ	%10	أعمال الفصل
/ / : التاريخ	%50	الامتحانات النهائية

الكتب و المراجع :

1. د. الشلبي، رياض ود. كنعان، غسان ود. الرواش، محمد، وأستاذ سعيان، أحمد، تطبيقات في الحاسوب والإحصاء جامعة اليرموك 2005.
2. د. حميدان، عدنان وأغا، عمار، الإحصاء الحيوي، دمشق، جامعة دمشق 2004م.
3. خياط، سهيل، مبادئ في الإحصاء الحيوي، دمشق، جامعة البعث 2004م.
4. رشيد، محمد، الإحصاء الوصفي والتطبيقي الحيوي - عمان، دار صفاء م 2003.
5. د. جيلاني، جيلاطو، الإحصاء الوصفي تطبيقات عملية، عمان، دار المناهج 2003م.
6. الدكتور الزعبي، محمد حسن، مدخل إلى طب المجتمع، مطبعة الأمن العام، عمان (2000).

References:

- 1-Medical Statistics, Aviva, Petrie, Caroline Sabin. 2007. PP158
- 2-Biostatistics, John Wiley, Dunial, 2005
- 3-Biostatistics An Introduction Glover and Mitchell 2002

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Program Para-medical Professions

Specialization	Common
Course Number	21113101
Course Title	First Aids
Credit Hours	(3)
Theoretical Hours	(2)
Practical Hours	(3)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Brief Course Description:

This course is designed to introduce the student into emergency medical care providing him with the knowledge and skills that make him able to do patient assessment and choose first Aid priorities and the more suitable instruments which allow him to manage Airway Obstruction, shock and bleeding, soft-Tissue injuries (wounds), soft tissue Injuries (Burns) trauma and fractures, medical emergency (Allergies Reaction) and medical emergency (Poisoning) and, environmental emergency, and altered mental status, It also introduces him to the skills needed for doing CPR.

Course Objectives:

Upon the completion of the course, the student will be able to:

1. The general rules, ethics and basis of First Aid:
2. How to examine and assess the causality safely and effectively.
3. How to deal with common first Aid Emergency.
4. How to assess many varying emergency situations to determine what patient care is needed and to provide the necessary care.
5. How / CPR is done safely.





Detailed Course Description:

Time Needed	Unit name	Unit Content	Time Needed
1.	Introduction	<ul style="list-style-type: none"> ▪ Introduction to emergency medical care. ▪ Definition of first aid. ▪ Equipment and supplies. ▪ Medical, legal and ethical. 	2 lect-theory
2.	Patient assessment	<ul style="list-style-type: none"> ▪ Primary survey. ▪ Secondary survey for patient (trauma). ▪ Baseline vital signs. 	1 lect-2hours practical
3.	The air way	<ul style="list-style-type: none"> ▪ Oxygen sources. ▪ Equipment for oxygen delivery. ▪ Masks. ▪ Airway accessories. ▪ Suction 	2 lect
4.	Shock and bleeding	<ul style="list-style-type: none"> ▪ Definition. ▪ Assessing shock. ▪ Causes, classification. ▪ Emergency care for shock. ▪ Types of bleeding. ▪ Emergency care for bleeding. ▪ Bleeding from (ears, nose, and mouth) and emergency care. 	
5.	Soft – Tissue Injuries (wounds)	<ul style="list-style-type: none"> ▪ Definition. ▪ Closed injuries. ▪ Open injuries. ▪ Emergency for soft-tissue injuries(dressing and bandages 	
6.	Soft tissue injuries (burns)	<ul style="list-style-type: none"> ▪ Definition. Classification, and Causes ▪ Severity of Burns. ▪ Emergency medical Care for Burn Patients. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

7.	Trauma And Fractures	<ul style="list-style-type: none"> ▪ Fractures and Dislocation, Causes and Diagnosis. ▪ Emergency Care for patients with Fractures. ▪ Splinting, Principles of splinting, Equipments. ▪ Spinal cord injury Assessment Signs and Symptoms, Emergency Medical Care of the Spine – Injured Patient. 	
8.	Medical Emergency (poisoning)	<ul style="list-style-type: none"> ▪ Assessment of allergies Reactions. ▪ Cause, signs and symptoms. ▪ Emergency medial care for patients with Allergies Reaction. 	
9.	Medical Emergency (poisoning)	<ul style="list-style-type: none"> ▪ History of poisoning. ▪ Types and signs and symptoms. ▪ Use of activated charcoal. 	
10.	Environmental Emergency	<ul style="list-style-type: none"> ▪ Heat stroke, Heat Exhaustion, Heat cramps (Definition, Diagnosis, and Management). ▪ Hypothermia (Signs and Symptoms, Emergency care) ▪ Drowning. 	
11.	Altered Mental Status	<ul style="list-style-type: none"> ▪ Diabetic Emergency. ▪ Seizures. ▪ Emergency care of patients with Altered Mental status. 	
12.	Airway Obstruction	<ul style="list-style-type: none"> ▪ Choking – Heimlich Maneuver (Adults, Children) ▪ Choking. 	
13.	CPR	<ul style="list-style-type: none"> ▪ CPR (Adults, Children) ▪ CPR (Infants) 	
14.	First Aid priorities	<ul style="list-style-type: none"> ▪ Case classification & triage 	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam 35% Theory & 15% Practical	50%	--/--/----
	Practical Exam	10%	--/--/----

Teaching Methodology:

Lectures

Text Books & References:

References:

1. First Aid. Taking Action MCGRAWII, NSC, 2007.
2. First Aid. CPR And AED, JONES AND BARTLETT, Thygerson, 2005.
3. First Aid. CPR, And AED Essentials. 41, AMERICAN COLLEGE OF. EMERG. Phy, 2005.
4. Airway Management Paramedic, Jones And Bartlett, Margolis, 2004
5. First Aid Manual, DK PUB, 2002.
6. د. قطاش، رشيدى حمدان وقطاش، أحمد حمدان وحسن، نوال، الاسعافات الاولية – الطبعة الأولى، مؤسسة الوراق للتوزيع والنشر، 2004م
7. د. الصفدي، عصام، الإسعافات الأولية، الأردن – الطبعة الأولى، دار اليازوري العلمية للنشر، 2001م.
8. د. فريجات، حكمت عبد الكريم والحمود، محمد طه ود. أبو الرب، صلاح، أسس الإسعاف الأولي والفوري، 1991.

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Program Para-medical Professions

Specialization	Sterilization
Course Number	21115241
Course Title	Infection Control
Credit Hours	3
Theoretical Hours	2
Practical Hours	3



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Brief Course Description:

This course is designed to provide the student with knowledge needed to introduce him/her to concepts (Importance) and purpose of infection control, disease transmission cycle. It also deals with the transmission of infection in the health care setting. Moreover, it concentrates on the importance of infection prevention practices and safe handling of disposal of clinical wastes and sharps decontaminating equipment . Finally ,it deals with the role of housekeeping in infection prevention.

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Understand terms and facts about the infectious process and nosocomial infection.
2. Provide explanation related to special problems and selected infectious diseases.
3. Identify Laboratory data indicating the presence of infection.
4. Understand essential facts about interventions that prevent and control infections.
5. Provide medical wastes management and guidelines for employees who handle, manage, and transport storage and disposal waste.
6. Identify basic responsibilities of the central committee for control of hospital infections.
7. Provide explanation about surveillance of infection in hospitals.





Detailed Course Description:

Time Needed	Unit Name	Unit Content	Unit Number
1.	Impotence and purpose of infection control	<ul style="list-style-type: none"> ▪ Introduction. ▪ Overview of Infectious Diseases. ▪ Who Is At Risk Of Infection? ▪ The Disease – Transmission Cycle. ▪ Transmission of Infection in the health care Setting. ▪ Importance Following Infection Prevention Practices. ▪ Misconceptions about Infection Transmission. 	
2.		<ul style="list-style-type: none"> ▪ Terms Definition. ▪ Six links in chain of infection and Measures that break each link in the chain. ▪ Four stages of an infectious process. ▪ Causal factors of nosocomial infection. ▪ People at risk of acquiring infection. 	
3.		<ul style="list-style-type: none"> ▪ Viral Hepatitis (A, B, C, D, E). ▪ Infection in the Immunocompromised Host (HIV). ▪ Respiratory tract infection (Tuberculosis, Pneumonia). ▪ Guidelines related to the special Problem of renal units. ▪ Guidelines for infection prevention and control in flexible endoscopy. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



4.		<ul style="list-style-type: none"> ▪ Guidelines about storage and transporting of specimens. ▪ Handling of clinical specimens. 	
5.	<p style="text-align: center;">Antiseptics And disinfectants And Aseptic Techniques</p>	<ul style="list-style-type: none"> ▪ Concepts and definitions of medical and surgical asepsis. ▪ Interventions to prevent infections. ▪ Interventions to protect body Defences and personal protective equipments. ▪ Essentials of hand washing and use of gloves. ▪ Overview of antiseptics and disinfectants. ▪ Types of protective asepsis (Isolation) precautions. ▪ Precautions taken in each type of Protective Asepsis. ▪ Precautions taken in each type of protective asepsis. 	
6.	<p style="text-align: center;">Safe Handling And disposal Of Clinical Wastes And Sharps</p>	<ul style="list-style-type: none"> ▪ Introduction. ▪ Disposal and decontamination of needles and other sharps. ▪ Management of injuries from needles and other sharps. ▪ Importance of proper waste disposal. ▪ Sorting, handling, internal storage, and disposal of medical waste. ▪ Disposal, liquid medical waste and hazardous chemical waste. ▪ Building a drum incinerator and a buried site. 	



7.	Decontaminating Equipment	<ul style="list-style-type: none">▪ Introduction.▪ Steps of processing instruments and other items.▪ Proper order of the steps of processing.▪ Organizing an area for processing Instruments and other Items.	
8.	House Keeping	<ul style="list-style-type: none">▪ Introduction.▪ Role Of housekeeping in infection prevention.▪ General housekeeping guidelines.▪ Housekeeping Activities In client – care and non – client care areas.▪ Cleaning up spills.	





Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects Discussions and lecture Presentations		10%	--/--/----

Teaching Methodology:

Lectures. Group discussion. Videos. Live patterns & samples. Practical applications. Field Visits (Industries).

Text Books & References:

References:

1. Rutherford, Colleen J., Differentiating Surgical Instruments, Spiral Binding, 2005
2. L/N Epidemiology/ Public Health Med. 51, BLACK WT LL, Farmer, 2004
3. Manual of Infection Control. Greenwig, Damain, 2003.
4. Rusell, Barbara S., Infection Control and OSHA Essential, Health Studies Institute, 2002
5. Infection Control in Clinical Practice, Lippincot, Wilson, 2001
6. Infection control in clinical practice Jennie Wilson 2001 294pp 10JD



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Program Para-medical Professions	
Specialization	Sterilization
Course Number	21115261
Course Title	Medical Equipment and instruments
Credit Hours	(3)
Theoretical Hours	(2)
Practical Hours	(3)



Brief Course Description:

The course is designed to provide the students with the basic technical knowledge needed for him/her to deal in a safe way with machines & apparatuses used in the C.S.S.D perform simple checks maintenances and know when to ask for technical help when needed. Know various kinds of surgical instruments & proper way of dealing with them

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Know all machines & apparatuses used in the C.S.S.D. & their operation.
2. Know how to perform daily checks on these machines and ask for preventive and periodic checks.
3. Know all kinds of surgical instruments used in surgery by name, know the damages caused by chemicals & other factors to these instruments & know the proper ways of preventing such damages.
4. Know how to estimate the needs of the department from surgical instruments an sterilization materials on weekly & annual basis, for proper department supplies teaching methodology.





Detailed Course Description:

Time Needed	Unit Name	Unit Content	Unit Number
1.	Introduction to machines, apparatuses used in C.S.S.D & surgical instruments that are processed in the department	<ul style="list-style-type: none"> ▪ Machines used in cleaning process. ▪ Different Kinds Of Sterilizer. ▪ Monitoring Machines. ▪ Categories of surgical instruments. 	
2.	Design & operation of machines & apparatuses used in C.S.S.D and their daily, preventive & periodic checks	<ul style="list-style-type: none"> ▪ Steam sterilizers. ▪ Hot air sterilizers. ▪ ETO sterilizers. ▪ Formaldehyde sterilizers. ▪ Plasma gas sterilizers. ▪ Mechanical washing machines. ▪ Pre-Flusher machines. ▪ Ultrasonic cleaning machines, ▪ Heat sealing machines. ▪ Biological test incubators. 	
3.	Types of surgical instruments used in various kinds surgical procedures	<ul style="list-style-type: none"> ▪ General surgery instruments. ▪ Orthopaedic surgery instruments. ▪ Gynaecology & obstetric instruments. ▪ Neurosurgery instruments. ▪ Eye, ear, nose & throat instruments. ▪ Oral surgery instruments. 	
4.	Checks & care of surgical instruments	<ul style="list-style-type: none"> ▪ Cleanness. ▪ Integrity. ▪ Function ability. 	
5.	Surface Changes Of Surgical Instruments,	<ul style="list-style-type: none"> ▪ Metal deposits ▪ Organic residues. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

	Causes, Treatment & Prevention	<ul style="list-style-type: none">▪ Spotting caused by time.▪ Silicates & other compounds.▪ Black discoloration.▪ Metal corrosion:▪ Pitting corrosion.▪ Fritting corrosion.▪ Stress corrosion cracking.▪ Surface corrosion.▪ Contact corrosion.▪ Crevice corrosion.▪ Plastic & rubber aging.▪ Plastic & rubber swelling.▪ Plastic stress cracks.	
6.	Inventory & Supplies in C.S.S.D department.	<ul style="list-style-type: none">▪ Materials needed on weekly basis & ordering process.▪ Estimation & ordering annual needs of sterilization materials.▪ Estimation & ordering Annual needs of surgical instruments.▪ Procedures for replacing damaged instruments.	





Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
	Practical Exam	10%	--/--/----

Teaching Methodology:

Lectures. Group discussion. Videos. Live patterns & samples. Practical applications.

Text Books & References:

References:

1. Brophy, T., & Srodon, P.D. & Briggs, C. & Barry, P. & Streatham, J. & Birch, M.J., Quality Of Surgical Instruments, The Royal College Of Surgeons Of England, 2006
2. Instrumentation for operating Room. 6E, Mosby, Tighe 2003.
3. Instrumentation for the operating room Shirley Tighe. 2003
4. William Clowes (1999). Microbiology for Nurses. Sixth Edition. William Clowes Ltd. London.
5. William Dornette (1991). Central service Technical Manual. Forth Edition. International Association of Hospitals. U.S.A.
6. Lowbury, G.A (1989). Control Of Hospital infections. Second Edition. British Library cataloguing in publication Data
7. WB Hugo & A.D. Russell. Pharmaceutical Microbiology 4th edition (1987).



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Program Para-medical Professions

Specialization	Sterilization
Course Number	21115151
Course Title	Sterilization 1
Credit Hours	(3)
Theoretical Hours	(3)
Practical Hours	(0)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Brief Course Description:

This course is designed to provide the student with knowledge & technical skills related to various methods of sterilization to enable him/her to use & choose the proper method of sterilization for each material & instrument undergo for sterilization, assuring sterilization quality, proper handling & storage of sterilized materials,

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Understand the concept of sterilization & sterilization cycle.
2. Describe the design of C.S.S.D and know the criteria of each work area in the department.
3. Know how to deal with contaminated materials & instruments, also to deal with medical waste included in used materials.
4. Know the cleaning process, methods of cleaning & chemicals used in the cleaning process.
5. Know the methods of disinfection, levels of disinfection & chemicals used in disinfection process.
6. Deal with instruments that need special care.
7. Understand the importance of packaging of sterile materials & know the materials used in packaging & know the wrapping techniques.
8. Understand the importance of personal protection & know the materials used for this purpose



Detailed Course Description:

Time Needed	Unit Content	Unit Name	Unit Number
1.	Introduction To Sterilization	<ul style="list-style-type: none"> ▪ Sterilization Concept. ▪ Sterilization Cycle. ▪ History & development of sterilization Science. ▪ Design & Work Areas Of C.S.S.D. 	
2.	Decontamination	<ul style="list-style-type: none"> ▪ Contamination. ▪ Decontamination. ▪ Collection, Transportation & Reception of Contaminated Instruments. ▪ Contaminated instruments & medical equipments: ▪ Anesthesia instruments. ▪ Respiratory equipments. ▪ Surgical instruments. ▪ Suction equipments. ▪ Prevention of cross infection. 	
3.	Cleaning	<ul style="list-style-type: none"> ▪ Concept & importance of cleaning. ▪ Dealing with medical waste accompanying used instruments. ▪ Sorting & Soaking. ▪ Cleaning Methods: ▪ Manual. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

		<ul style="list-style-type: none"> ▪ Mechanical. ▪ Water: ▪ Types. ▪ Quality. ▪ Uses. ▪ Cleaning Factors: ▪ Chemical Factors. ▪ Mechanical Factors. ▪ Temperature. ▪ Time. ▪ Chemicals Used In Cleaning. ▪ Rinsing & Drying. ▪ Cleaning Quality Control. ▪ Personal protection. 	
4.	Cleaning & Care Of Instruments Need Special Treatment	<ul style="list-style-type: none"> ▪ Micro Surgical Instruments. ▪ Dental Instruments. ▪ Scopes. ▪ Rigid. ▪ Flexible. ▪ Surgical Motor Systems. ▪ Supple Instruments & respiratory equipments. 	
5.	Disinfection	<ul style="list-style-type: none"> ▪ Concept of disinfection. ▪ Methods of disinfection. ▪ Thermal. ▪ Chemical. ▪ Disinfection levels ▪ High Level Disinfection. ▪ Intermediate Level 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

		<p>Disinfection.</p> <ul style="list-style-type: none"> ▪ Low Level disinfection. ▪ Chemicals used in disinfection. 	
6.	Inspection	<ul style="list-style-type: none"> ▪ Inspection Environment ▪ Inspection Techniques. ▪ Repair & replacement of Damaged Instruments. 	
7.	Assembly & Packaging	<ul style="list-style-type: none"> ▪ Concept of Assembly. ▪ Process of Instruments Assembly. ▪ Principles of Packaging. ▪ Materials Used In Packaging. ▪ Packaging Process: ▪ Textile Packs construction. ▪ Surgical Instruments Packaging. ▪ Containerized packaging. ▪ Pouches Packaging. ▪ Wrapping Techniques: ▪ Envelop fold. ▪ Parcel fold. ▪ Accessories for packaging: ▪ Indicator Tapes & Internal Chemical Indicators. ▪ Trays & Baskets. ▪ Protection Materials. ▪ Heat Sealing Machines. ▪ Workstation For Packaging. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects Discussions and lecture Presentations		10%	--/--/----

Teaching Methodology:

Lectures. Group discussion. Videos. Live patterns & samples. Practical applications.

Text Books & References:

References:

1. McDonnell, Gerald E., Antisepsis, Disinfection, and Sterilization: Types, Action, and Resistance. Amer Society for Microbiology, 2007.
2. Brophy, T., & Srodon, P.D. & Briggs, C. & Barry, P. & Streatham, J. & Birch, M.J., Quality Of Surgical Instruments, The Royal College Of Surgeons Of England, 2006.
3. Micking, G.J. & Ronco, C., Disinfection by sodium Hypochlorite: Dialysis Applications, Kanger Pub., 2006.
4. Huys, Jan, Sterilization of Medical Supplies By steam, Volume 1 General revised Edition, Heart Consultancy, Renkum, The Netherlands, 2004.
5. A D Russell, W B Hugo, G A J Ayliffe, Adam P Frasier, Pater A Lambert; J-Y maillard; Net library, INC. Principles And Practice Of Disinfection, Preservation And Sterilization, Malden, Mass.: Blackwell Pub, 2004.
6. Training Manual for Health Care Central Services Technician. Forth edition Copyright 2001.
7. Sterilization Validation And Routine Operation Handbook: ethylene Oxide (loose Leaf), CRC 1999
8. Anne F., Sterilization of Medical Devices, 1998

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Program Para-medical Professions	
Specialization	Sterilization
Course Number	21115252
Course Title	Sterilization 1/ Practical
Credit Hours	(2)
Theoretical Hours	(0)
Practical Hours	(6)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Brief Course Description:

This course is designed to provide the student with technical skills needed To enable him /her to perform all C.S.S.D. duties using proper machines, proper methods & proper techniques, maintaining high standards of ethics, safety and cleanliness, emphasizing on the end result of the sterilization process, to provide safe instruments for proper patient use.

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Adhere to the rules of people flow & work flow in the department.
2. Perform the daily needed checks on machines used in the department.
3. Collect, transport, receive used instruments from operation theater & other departments.
4. Perform decontamination, cleaning, disinfection, processing (inspection, Assembly & packaging) maintaining high standards of cleanliness and safety.



Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	Design & Work areas Of C.S.S.D.	<ul style="list-style-type: none"> ▪ People flow, work flow & air flow in C.S.S.D department. ▪ Location of sterilizers & other machines. ▪ Preparation of work areas for daily work. ▪ Daily checks on machines & apparatuses used in the department, before and after use. 	
2.	Decontamination	<ul style="list-style-type: none"> ▪ Collection, transportation & reception of used instruments from Operation Theatre & other departments. ▪ Decontamination facilities: materials & equipments. ▪ Decontamination process: <ul style="list-style-type: none"> ▪ Surgical instruments decontamination. ▪ Respiratory equipments decontamination. ▪ Anaesthesia instruments decontamination. ▪ Cart decontamination. 	



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

3.	Cleaning	<ul style="list-style-type: none"> ▪ Management of medical waste accompanying used instruments. ▪ Disassembly of surgical instruments. ▪ Initial cleaning : ▪ Manual cleaning. ▪ Mechanical (using pre flushers). ▪ Sorting of instruments. ▪ Manual cleaning: ▪ Preparation of used instruments for cleaning. ▪ Preparation of facilities & apparatuses needed. ▪ The use of cleaning agents (chemical & enzymatic). ▪ Mechanical cleaning : ▪ Machine preparation for use. ▪ Cleaning agents & disinfectants. ▪ Instruments preparation for cleaning. ▪ Machine loading. ▪ Machine operation: cleaning & disinfection cycles. ▪ Machine unloading. ▪ Rinsing: ▪ Manual. ▪ Mechanical. ▪ Drying: ▪ Manual. ▪ Mechanical. ▪ Personal protection : ▪ Equipments. ▪ Measures. ▪ In process quality control : 	
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		<ul style="list-style-type: none"> ▪ Visual inspection. ▪ Specialized tests. 	
4.	Cleaning Of Instruments Need Special Care	<ul style="list-style-type: none"> ▪ Thermal Disinfection (Mechanical). ▪ Dental instruments. ▪ Scopes : ▪ Flexible endoscopes. ▪ Rigid endoscopes. ▪ Surgical motor systems. ▪ Supple instruments & respiratory equipments. 	
5.	Disinfection	<ul style="list-style-type: none"> ▪ Microsurgical instrument. ▪ Liquid chemical disinfection: ▪ Facilities: Materials & equipments. ▪ Disinfectants. ▪ Process. ▪ Machine disinfection (using washer disinfectors) : ▪ Thermal disinfection. ▪ Chemo thermal disinfection. 	
6.	Inspection	<ul style="list-style-type: none"> ▪ Inspection process. ▪ Dryness. ▪ Cleanness. ▪ Integrity. ▪ Function ability. ▪ Lubrication. ▪ 6-2 Repair & replacement of damaged instruments. 	

7.	Assembly & packaging	<ul style="list-style-type: none"> ▪ Area Preparation: ▪ Cleanness ▪ Packaging Materials & Accessories. ▪ Surgical Instruments Process: ▪ Packaging Process: ▪ Textiles Packs construction. ▪ Surgical instruments Packaging. ▪ Containerized packaging. ▪ Pouches packaging. ▪ Packaging Techniques. ▪ Envelop Fold. ▪ Parcel fold. ▪ The use of packaging accessories: ▪ Protective materials. ▪ Chemical indicators & sterilization tape. ▪ Trays & baskets. ▪ Heat sealing machines. 	
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Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
	Practical Exam	10%	--/--/----

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Teaching Methodology:

Lectures. Group discussion. Videos. Live patterns & samples. Practical applications. Field Visits (industries).

Text Books & References:

References:

1. McDonnell, Gerald E., Antisepsis, Disinfection, and Sterilization: Types, Action, and Resistance. Amer Society for Microbiology, 2007.
2. Brophy, T., & Srodon, P.D. & Briggs, C. & Barry, P. & Streatham, J. & Birch, M.J., Quality Of Surgical Instruments, The Royal College Of Surgeons Of England, 2006.
3. Mishkin, G.J. & Ronco, C., Disinfection by sodium Hypochlorite: Dialysis Applications, Karger Pub., 2006.
4. Huys, Jan, Sterilization of Medical Supplies By steam, Volume 1 General revised Edition, Heart Consultancy, Renkum, The Netherlands, 2004.
5. A D Russell, W B Hugo, G A J Ayliffe, Adam P Frasier, Pater A Lambert; J-Y maillard; Net library, INC. Principles And Practice Of Disinfection, Preservation And Sterilization, Malden, Mass.: Blackwell Pub, 2004.
6. Training Manual for Health Care Central Services Technician. Forth edition Copyright 2001.
7. Sterilization Validation And Routine Operation Handbook: ethylene Oxide (loose Leaf), CRC 1999

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Program Para-medical Professions

Specialization	Sterilization
Course Number	21115253
Course Title	Sterilization (2)
Credit Hours	(3)
Theoretical Hours	(3)
Practical Hours	(0)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Brief Course Description:

This course is a continuation of sterilization 1 and designed to provide the student with knowledge & technical skills related to various methods of sterilization to enable him/her to use & chose the proper method of sterilization for each material & instrument undergo for sterilization, assuring sterilization quality, proper handling & storage of sterilized materials,

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Know the sterilization methods used in hospitals and industry & their applications.
2. Know the dangers related to certain sterilization methods & know the proper methods to protect himself & others against these dangers.
3. Know the conditions needed for proper storage of sterilized materials & know the principles of storage & distribution of sterile materials.
4. Know the importance of monitoring sterilization quality & methods used in monitoring sterilization quality.



Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1.	Introduction to sterilization & Methods Of Sterilization	<ul style="list-style-type: none"> ▪ Sterilization Methods Used In Medical Field. ▪ High temperature Sterilization: <ul style="list-style-type: none"> ▪ Steam (Wet Heat) Sterilization. ▪ Dry heat Sterilization. ▪ Low Temperature Sterilization. ▪ Ethylene Oxide Gas Sterilization. ▪ Formaldehyde Sterilization. ▪ Plasma Gas Sterilization Using Hydrogen Peroxide. ▪ Chemical Sterilization (Chemical). ▪ Design & Work Areas of C.S.S.D. ▪ Radiation Sterilization. ▪ Filtration Sterilization. 	
2.	Steam Sterilization	<ul style="list-style-type: none"> ▪ Steam as Sterilization agent ▪ Types Of Steam Sterilizers. ▪ Pre Vacuum. ▪ Gravity displacement. ▪ Flash ▪ Daily Check on Sterilisers.' ▪ Materials Sterilized By Steam. ▪ Advantages & Disadvantages. ▪ Sterilization process monitoring. 	
3.	Dry Heat Sterilization	<ul style="list-style-type: none"> ▪ Hot Air as Sterilizing Agent. ▪ Type of Hot Air Sterilizers: <ul style="list-style-type: none"> ▪ Gravity Convection Ovens. ▪ Mechanical convection ovens. ▪ Packaging Materials ▪ Materials Sterilized By Dry Heat. ▪ Advantages & disadvantages. ▪ Sterilization Process Monitoring. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

4.	Ethylene oxide gas sterilization	<ul style="list-style-type: none"> ▪ ETO As Sterilizing Agent. ▪ Types of ETO Sterilizers: ▪ Pure Gas Sterilizers. ▪ Mixed Gas Sterilizers. ▪ Materials Sterilized by ETO. ▪ Aeration of Sterilized Materials. ▪ Advantages & Disadvantages. ▪ Sterilization process monitoring. 	
5.	Formaldehyde Sterilization	<ul style="list-style-type: none"> ▪ Formaldehyde as Sterilizing Agent. ▪ Materials Sterilized By Formaldehyde. ▪ Advantages & Disadvantages. ▪ Sterilization Process Monitoring. 	
6.	Plasma Gas Sterilization	<ul style="list-style-type: none"> ▪ Plasma Gas as Sterilizing Agent. ▪ Plasma Sterilization Process. ▪ Wrapping Materials used for plasma Sterilization. ▪ Materials Sterilized by plasma. ▪ Advantages & Disadvantages. ▪ Sterilization Process Monitoring. 	
7.	Radiation Sterilization	<ul style="list-style-type: none"> ▪ Gamma Ray Sterilization. ▪ Electron Acceleration. ▪ Ultraviolet Irradiation. ▪ Advantages & Disadvantages of Radiation Sterilization. 	
8.	Filtration Sterilization	<ul style="list-style-type: none"> ▪ Filtration Sterilization of Liquids. ▪ Filtration Sterilization of Gases. 	
9.	Liquid Chemical Sterilization	<ul style="list-style-type: none"> ▪ Chemicals as Sterilizing Agents. ▪ Equipments That Can Be Sterilized By Chemicals. ▪ Chemical Sterilization Process. ▪ Chemicals Used In Chemical Sterilization. ▪ Advantages & Disadvantages of chemical Sterilization. ▪ Monitoring Of Chemical 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

		Sterilization Effectiveness.	
10.	Storage & Sterile Materials Distribution	<ul style="list-style-type: none"> ▪ Storing Non- Sterile Materials & Instruments. ▪ Storing Sterile Materials & Instruments. ▪ Sterile Materials Distribution Area. ▪ Distribution Systems ▪ Delivery Methods of Sterile Materials. ▪ Traceability Systems. 	
11.	In Process Sterilization Quality Control	<ul style="list-style-type: none"> ▪ Indicators Used In Monitoring Sterilization Quality. ▪ Mechanical. ▪ Chemical. ▪ Biological. ▪ Methods Used In Monitoring Sterilization Quality: ▪ Equipment Control. ▪ Exposure Control. ▪ Pack Control. ▪ Load Control. ▪ Random Swab Cultures from Sterilized Materials. ▪ Documentation Record Keeping. 	



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	--/--/----
Discussions and lecture Presentations			

Teaching Methodology:

Lectures. Group discussion. Videos. Live patterns & samples. Practical applications. Field Visits (Industries).



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Text Books & References:

Text Books:

References:

1. McDonnell, Gerald E., Antisepsis, Disinfection, and Sterilization: Types, Action, and Resistance. Amer Society For Microbiology, 2007
2. Brophy, T., & Srodon, P.D. & Briggs, C.& Barry, P. & Streatham, J. & Birch, M.J., Quality Of Surgical Instruments, The Royal College Of Surgeons Of England, 2006.
3. Mishkin, G.J. & Ronco, C., Disinfection by sodium Hypochlorite: Dialysis Applications, Karger Pub., 2006.
4. Huys, Jan, Sterilization Of Medical Supplies By Steam, Volume 1 General Theory – Second Revised Edition, Heart Consultancy, Renkum, The Netherlands, 2004
5. A D Russell, W B Hugo, G A J Ayliffe, Adam P Frasier, Pater A Lambert; J-Y maillard; Net library, INC. Principles And Practice Of Disinfection, Preservation And Sterilization, Malden, Mass.: Blackwell Pub, 2004.
6. Training Manual for Health Care Central Services Technician. Forth edition Copyright 2001.
7. Sterilization Validation And Routine Operation Handbook: ethylene Oxide (loose Leaf), CRC 1999.
8. Lowbury, G.A (1989). Control of Hospital infections. Second Edition. British Library cataloguing in publication Data.
9. WB Hugo & A.D. Russell. Pharmaceutical Microbiology 4th edition (1987).



Program	
Para-medical Professions	
Specialization	Sterilization
Course Number	21115254
Course Title	Sterilization 2/ Practical
Credit Hours	(2)
Theoretical Hours	(0)
Practical Hours	(6)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Brief Course Description:

This course is designed to provide the student with technical skills needed to enable him /her to perform all C.S.S.D. duties using proper machines, proper methods & proper techniques, maintaining high standards of ethics, safety and cleanliness, emphasizing on the end result of the sterilization process, to provide safe instruments for patient use.

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Perform sterilization process using proper sterilization method suitable for each material, maintaining high standards of cleanliness and safety.
2. Practice proper handling, storage & distribution of sterile materials & maintain their sterility.
3. Use mechanical, chemical & biological monitoring to ensure effectiveness of the sterilization process.
4. Keep records & document information necessary for proper running of the department.
5. Perform decontamination, cleaning, disinfection, processing (inspection, assembly & packaging), maintaining high standards of cleanliness and safety.



Detailed Course Description:

Unit Number	Unit Name	Unit Name	Time Needed
1.	Steam sterilization	<ul style="list-style-type: none"> ▪ Daily checks on sterilizers : ▪ Chamber cleanness. ▪ Drains. ▪ Bowie & Dick test. ▪ Leak test. ▪ Loading. ▪ Operation. ▪ Unloading. ▪ Troubleshooting. ▪ Release of sterilized materials. ▪ Storage of sterilized materials. 	
2.	Dry Heat Sterilization	<ul style="list-style-type: none"> ▪ Daily checks on hot air ovens: ▪ Chamber cleanness. ▪ Electrical function ability. ▪ Loading. ▪ Unloading. ▪ Troubleshooting. ▪ Release of sterilized materials. ▪ Storage of sterilized materials. 	
3.	Ethylene Oxide Gas Sterilization	<ul style="list-style-type: none"> ▪ Daily checks on sterilizers: ▪ Chamber cleanness. ▪ Distilled water chamber (humidification chamber). ▪ Drains. ▪ Compressed air. ▪ Loading. ▪ Operation. ▪ Unloading, using safety measures. ▪ Aeration of sterilized materials. ▪ Troubleshooting. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

		<ul style="list-style-type: none"> ▪ Release of sterilized materials. ▪ Storage of sterilized materials. 	
4.	Plasma Sterilization	Gas	<ul style="list-style-type: none"> ▪ Daily checks on sterilizers : ▪ Chamber cleanness. ▪ Hydrogen peroxide cassettes & containers for leakage. ▪ Special packaging materials. ▪ Loading. ▪ Operation. ▪ Unloading. ▪ Troubleshooting. ▪ Release of sterilized materials. ▪ Storage of sterilized materials.
5.	Liquid Chemical Sterilization		<ul style="list-style-type: none"> ▪ Medical equipments sterilized by liquid chemicals. ▪ Preparation of the cleaned medical equipments for sterilization. ▪ Facilities: equipments & materials. ▪ Chemical agents used in sterilization. ▪ Sterilization process, ▪ Sterilization assurance. ▪ Troubleshooting.
6.	Storage & Distribution Of sterile Materials		<ul style="list-style-type: none"> ▪ Environmental control of storage area : ▪ Daily damp cleaning of shelves & floors. ▪ Daily record of the temperature & humidity.

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

		<ul style="list-style-type: none"> ▪ Hand washing (sinks or hand rub dispensers). ▪ Stock arrangement : ▪ Methods: ▪ Functional. ▪ Alphabetical. ▪ Numerical. ▪ Rules. ▪ Stock rotation. ▪ maintaining sterility of the sterile materials : ▪ Shelf life. ▪ Dealing with materials on completion of sterilization process. ▪ Handling of sterile materials. ▪ Packaging integrity. ▪ Storage conditions. ▪ Distribution: ▪ Distribution systems. ▪ Delivery methods. ▪ 	
7.	In process sterilization quality control	<ul style="list-style-type: none"> ▪ Equipments monitoring: ▪ Mechanical indicators. ▪ Record of the cycle. ▪ Leak tests. ▪ Bowie & Dick test. ▪ Computerized cycle monitoring. ▪ Exposure monitoring : ▪ External chemical indicators (Sterilization tape). ▪ Internal chemical indicators. ▪ Load monitoring : ▪ Biological indicators. ▪ Random swab culturing from 	

		<p>sterilized materials.</p> <ul style="list-style-type: none"> ▪ Documentation & record keeping : ▪ Pack labelling. ▪ Traceability system. ▪ Record of biological & chemical tests results. ▪ Sterile store records. ▪ Equipments maintenance records. ▪ Incident records. ▪ Computerized record keeping. ▪ Recall system. 	
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Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
	Practical Exam	10%	--/--/----

Teaching Methodology:

Lectures. Group discussion. Videos. Live patterns & samples. Practical applications. Field visits (industries).



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008



Text Books & References:

References:

1. McDonnell, Gerald E., Antisepsis, Disinfection, and Sterilization: Types, Action, and Resistance. Amer Society For Microbiology, 2007
2. Brophy, T., & Srodon, P.D. & Briggs, C.& Barry, P. & Streatham, J. & Birch, M.J., Quality Of Surgical Instruments, The Royal College Of Surgeons Of England, 2006.
3. Mishkin, G.J. & Ronco, C., Disinfection by sodium Hypochlorite: Dialysis Applications, Karger Pub., 2006.
4. Huys, Jan, Sterilization Of Medical Supplies By Steam, Volume 1 General Theory – Second Revised Edition, Heart Consultancy, Renkum, The Netherlands, 2004
5. A D Russell, W B Hugo, G A J Ayliffe, Adam P Frasier, Pater A Lambert; J-Y maillard; Net library, INC. Principles And Practice Of Disinfection, Preservation And Sterilization, Malden, Mass.: Blackwell Pub, 2004.
6. WB Hugo & A.D. Russell. Pharmaceutical Microbiology 4th edition (1987).
7. Training Manual for Health Care Central Services Technician. Forth edition Copyright 2001.
8. Sterilization Validation And Routine Operation Handbook: ethylene Oxide (loose Leaf), CRC 1999.
9. Lowbury, G.A (1989). Control of Hospital infections. Second Edition. British Library cataloguing in publication Data



Program Para-medical Professions	
Specialization	Sterilization
Course Number	21115171
Course Title	Public Health
Credit Hours	(3)
Theoretical Hours	(3)
Practical Hours	(0)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Brief Course Description:

The course deals with the Definition of Public Health, taking into consideration the terms” Wellness, Illness and Disease” and Public Health Activities. It deals also with the Conception of Individual and Community Health, Primary Health Care, Secondary Health Care, and Tertiary Health Care / Rehabilitation. Moreover, it deals with National Health Care System, Health Sectors, Health Care Providers, Health Insurance, and the World Health Organization, (WHO) and Communicable Disease Control/ environmental Classification and levels of prevention and preventive measures in Public Health Law. Food Law .Finally it deals with the Health of high risk groups.

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Understand what Public Health means
2. Natural History of Disease
3. Concept of disease causation
4. Levels of Health Care
5. Levels of prevention
6. Health Screening
7. Communicable Disease Control/environmental Classification and preventive measures
8. Public Health Law
9. Health Care Delivering Systems in Jordan



Detailed Course Description:

Time Needed	Unit Name	Unit Content	Unit Number
1	Introduction to Public Health Concepts and Definitions	<ul style="list-style-type: none"> ▪ Definition of Health & Public Health. ▪ Public Health Activities. ▪ Comprehensive concept of individual and community health. ▪ Concept of Health, wellness, Illness and Disease causation ▪ Natural History of Disease. 	
2	Prevention of Disease	<ul style="list-style-type: none"> ▪ Levels of prevention ▪ Strategies activities, and interventions: ▪ Basic prevention. ▪ Primary Prevention. ▪ Secondary Prevention. ▪ Tertiary Prevention. 	
3	Health Screening:	<ul style="list-style-type: none"> ▪ Importance of early detection of disease “Significance”. ▪ B-Effectiveness of Early Intervention Treatment. ▪ C-Objectives of Health Screening. ▪ D-Diseases Candidate for Health Screening. 	
4	Communicable Disease Control /environmental Classification and preventive measures	<ul style="list-style-type: none"> ▪ Air Borne Diseases. ▪ Food/Water Borne Diseases. ▪ Direct Contract Diseases. ▪ Zoonotic Diseases. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

		<ul style="list-style-type: none"> ▪ Arthropods Borne Diseases 	
5	communicable diseases	<ul style="list-style-type: none"> ▪ Human communicable diseases. ▪ Principles of communicable diseases control 	
6	Health of high risk groups:	<ul style="list-style-type: none"> ▪ “Public health concerns, objective, advantages. ▪ Factors affecting health, health promotion measures, curable measure, environmental Measures” ▪ Mother Health. ▪ Child Health. ▪ School Health. ▪ Disables / Mental & Physical. ▪ Geriatric Health. ▪ Occupational Health. 	
7	Health Care Delivery Systems	<ul style="list-style-type: none"> ▪ National Health Care System. ▪ Health Sectors. ▪ Health Care Provides. ▪ World Health Organization, W.H.O 	
8	Health legislations	<ul style="list-style-type: none"> ▪ Public Health Law. ▪ Food Law. ▪ Medical waste. ▪ Drug Law. ▪ JFDA. ▪ Bylaws Related To Health 	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects Discussions and lecture Presentations		10%	

Teaching Methodology:

Laboratory

Text Books & References:

References:

1. Charney, William, Emerging Infections Disease & the threat to occupational health in U.S & Canada (Public administration & public policy -2006).
2. Starfield, Barbara, Primary care: Balancing Health needs, Services, and Technology (Sep 18, 2006).
3. O'Mara, Peggy, Vaccinations: The issue of our times, 2006.
4. Communicable Disease Control Handbook, Oct 1, 2005.
5. Farrell, Jeanette, Invisible Enemies: Stories of infectious diseases, 2005.
6. Link, Kurt, The vaccine controversy: the history, use and safety of vaccinations, 2005.
7. McDaniel, Susan & Campbell, Thomas L. & Heyworth, Jeri and Alan Lorenz Family – Oriented Primary Care: A Manual for Medical Providers (Aug 27, 2004).
8. Star, Winfred L., Women's Primary Health Care: Protocols for Practice, Second Edition (Jan 2004).

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

9. Wick, Frederick S. South, Infectious diseases in 30 days, 2003.
10. Young kin, Ellis Q. and Davis, Marcia Szmania, Women's Health: A Primary Care Clinical Guide, (May, 2003).
11. Perlin, David & Cohen, Am, The Complete Idiots Guide To Dangerous Disease & Epidemics, 2002.
12. Giesecke, Johan, Modern Infectious Disease Epidemiology, (2001).
13. Jamison, Jennifer R., Maintaining Health In Primary Care: Guidelines for Wellness In the 21st Century, 2001.
14. Stanberry, Lawrence R. & Bernstein, David I., Sexually transmitted diseases: Vaccines, Prevention and control, 2000.
15. Murphy, Christine, the Vaccination Dilemma, 2000.
16. Control of Communicable Diseases Manual 2000.
17. الصحة والسلامة العامة، دار البازوري، عمان، 2005.
18. العزة وحسني، سعيد ، تريض الصحة النفسية دار الثقافة، عمان، 2004.
19. قطيشات، تالا، مبادئ في الصحة و السلامة العامة، دار المسيرة، عمان 2002.
20. خضير وتوفيق، محمد ، مبادئ في الصحة والسلامة العامة، دار صفاء، عمان، 2001.
21. الموجز في الصحة العامة، الدكتور محمد حسن الزعبي، 2000م.
22. الشاعر، عبد المجيد، التغذية والصحة دار اليازوري، العملية للنشر والتوزيع، عمان 2000.
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24. الشاعر، عبد المجيد، الرعاية الصحية الأولية دار اليازوري العلمية للنشر والتوزيع، عمان، 2000.



Program Para-medical Professions

Specialization	Sterilization
Course Number	21115243
Course Title	Quality Assurance Control
Credit Hours	(3)
Theoretical Hours	(3)
Practical Hours	(0)



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Brief Course Description:

This course deals with the main concepts of quality, the dimensions of quality, quality assurance designing, quality Improvement and problem solving. It concentrates on the quality assurance process and the quality of sterility after sterilization of medical instruments and medical materials and the integration of quality activity in the hospital.

Course Objectives:

Upon the completion of the course, the student will be able to:

1. Main Concepts Of Quality
2. Dimensions Of Quality
3. Quality Assurance Process
4. Area Design For CSSD
5. Quality Of Machines
6. Quality Of sterility After Sterilization
7. Integration Of Quality Activity in the hospital



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Detailed Course Description:

Unit Number	Unit Name	Unit contacts	Time Needed
1.	Main Concepts Of Quality	<ul style="list-style-type: none"> ▪ Main concepts Of Quality: ▪ Quality control ▪ Total Quality Management. ▪ Quality Assurance. ▪ Health System Components (Input, Process, Output). 	
2.	Dimensions Of Quality	<ul style="list-style-type: none"> ▪ Dimensions of Quality. ▪ Technical Competence. ▪ Accessibility. ▪ Effectiveness. ▪ Efficiency. ▪ Continuity. ▪ Safety. ▪ Persecutions On The meaning Of Quality. ▪ The Approach to Quality Assurance. 	
3.	Quality Assurance Process	<ul style="list-style-type: none"> ▪ Quality Assurance Designing. ▪ Planning. ▪ Sitting Standards. ▪ Communicating Standards. ▪ Quality Control. ▪ Quality Improvement / problem solving. ▪ Identifying the problem. ▪ Defining the problem operationally. ▪ Choosing a Team. ▪ Analyzing and Studying the Problem. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

		<ul style="list-style-type: none"> ▪ Developing Solutions. ▪ Implementing and Evaluating. 	
4.	Area Design For CSSD	<ul style="list-style-type: none"> ▪ Ceiling Quality ▪ Lighting Quality. ▪ Walls Quality. ▪ Flooring Quality. ▪ Air Flow and Pressure. ▪ Total Layout. 	
5.	Quality Of Machines	<ul style="list-style-type: none"> ▪ Washers. ▪ Quality of Wart. ▪ Quality Chemical Indicators. ▪ Daily And Weekly maintenances. ▪ Sterilizers: ▪ Daily air flow Test. ▪ Chemical Indicators. ▪ Dialogical Indicators. ▪ Daily And Weekly maintenances. 	
6.	Quality Of sterility After Sterilization	<ul style="list-style-type: none"> ▪ Quality Of sterility After Sterilization. ▪ Package Cheek up. ▪ Package Types Storage. ▪ Shelf Life 0. 	
7.	Transport	<ul style="list-style-type: none"> ▪ Quality of Cars. ▪ Quality of lifts. ▪ Quality of Open Cars. ▪ Quality of Vehicles. 	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

8.	Integration Of Quality Activity in the hospital	<ul style="list-style-type: none"> ▪ Clean Utility. ▪ Dirty Utility. ▪ Restricted Areas. ▪ Operation Room. 	
9.	Record Keeping	<ul style="list-style-type: none"> ▪ Receive Record Keeping. ▪ Wash Record Keeping. ▪ Pack Record Keeping. ▪ Sterilize Record Keeping. ▪ Delivery Record Keeping. ▪ Maintenance Record Keeping. 	
10.	Mechanical Equipment	<ul style="list-style-type: none"> ▪ Incident resorptive record keeping log book policies and procedures In CSSD. 	

Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects Discussions and lecture Presentations		10%	--/--/----

Teaching Methodology:

Lectures. Group discussion. Videos. Live patterns & samples. Practical applications. Field Visits (Industries).



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Text Books & References:

Text Books:

1. Microbiology Richard Harvey, Pamela, Champed Bruce D. Fisher 2007 PP438
2. Burrton's Microbiology Paul Engel Kirk, Gwendolyn Boron 2007 390PP.
3. Microbiology, Geraral Tortora, Berdell Funky Christian Case 1000PP. 18JD 2007.
4. McDonnell, Gerald E., Antisepsis, Disinfection, and Sterilization: Types, Action, and Resistance. Amir Society For Microbiology, 2007
5. Brophy, T., & Srodon, P.D. & Briggs, C.& Barry, P. & Steatham, J. & Birch, M.J., Quality Of Surgical Instruments, The Royal College Of Surgeons Of England, 2006.
6. Mishkin, G.J. & Ronco, C., Disinfection by sodium Hypochlorite: Dialysis Applications, Kroger Pub., 2006.
7. Medical Microbiology and Immunology Warren Levinson. 660PP. 2006
8. Microbiology Prescott Harley Kline Sixth edition 2005 Published by MC Graw. Hill Martin J. Lang.
9. Huys, Jan, Sterilization of Medical Supplies By steam, Volume 1 General revised Edition, Heart Consultancy, Renkum, The Netherlands, 2004.





Program Para-medical Professions

Specialization	Sterilization
Course Number	21115200
Course Title	Field Training
Credit Hours	(3)
Theoretical Hours	(0)
Practical Hours	280 Training hours



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Brief Course Description:

This course is designed to provide the student with proper skills as a CSSD technician who will work in a hospital or a medical clinic as a final stage to train him/her to be legible to receive contaminated instruments and to sterilize them .The course will provide him/her with the proper way of how contaminated instruments are cleaned by using all the manual, and mechanical methods.Moreover,it deals with the Proper usage of PPE & cleaning chemicals & a paroles. Then, the course will guide the students to how instruments are inspected after cleaning as a set and put in the proper package with the proper quality assurance technic. Finally, the course will provide the students with the skills that enable him to conduct proper machine testing (Washers, Sterilizes, etc....).

Course Objectives:

Upon the completion of the course, the student will be able to:

1. How contaminated instruments are received.
2. How contaminated instruments are cleaned by using all methods (manual, mechanical)
3. Proper usage of PPE & cleaning chemicals & paroles.
4. How to inspect instruments after cleaning.
5. How to prepare instruments as a set and pack them in a proper package with the proper quality assurance technic.
6. Conduct proper machine testing (Washers, Sterilizes, etc....).
7. Store sterilized packages and instrument properly and follow FIFO rules.
8. Transport sterile materials to final destinations (O.R, words, E.D...).
9. Conduct a dirty pick up and transport contaminated instruments.

Detailed Course Description:

Unit Number	Unit Name	Unit Contact	Time Needed
1.	Sterilization flow	<p>Orientation:</p> <ul style="list-style-type: none"> ▪ Receiving : ▪ Wear all PPE Gown, Gloves, mask, eye protection. ▪ Handle everything carefully as if dangerously contaminated. ▪ Follow paper work procedures. ▪ Rinse under running cold water. <p>Cleaning:</p> <ul style="list-style-type: none"> ▪ Make sure mouth is fully covered. ▪ Open all instruments and disassemble all components. ▪ Use plastic brushes to reach all grooves and hollow instruments. ▪ Follow all chemical instructions for safety and delusion. <p>Inspection:</p> <ul style="list-style-type: none"> ▪ Inspect under well laminated area and use magnifying glass if needed. ▪ Run clean brushes in conflation to make sure they are clean. ▪ Lubricate all joints that need so. ▪ Inspect proper function of instrument before set up. 	
2.	Dissembling and packaging	<ul style="list-style-type: none"> ▪ Follow chart index every time. ▪ Follow quality assurance. ▪ Backdating. 	

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3.	Sterilization	<ul style="list-style-type: none"> ▪ Orientation. ▪ Sterilize by: <ul style="list-style-type: none"> ▪ Steam. ▪ Dry heat. ▪ EO ▪ Plasma. 	
4.	Scopes	<ul style="list-style-type: none"> ▪ Orientation. ▪ Rigid. <ul style="list-style-type: none"> ▪ Cleaning. ▪ Disinfecting. ▪ Sterilization. ▪ Flexible: <ul style="list-style-type: none"> ▪ Cleaning. ▪ Disinfection ▪ Sterilization. 	
5.	Storage	<ul style="list-style-type: none"> ▪ Orientation ▪ Application of personal safety measures. ▪ Practice 7 storage arrangements (classification). ▪ Documentation. 	
6.	Bacteriology	<ul style="list-style-type: none"> ▪ Orientation. ▪ Application of Biosafety measures. ▪ Media preparation. ▪ Practice of bacterial culture. 1. Identification of bacterial growth. ▪ Documentation. 	



Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam Practical	20%	--/--/----
	Second Exam Practical	20%	--/--/----
	Final Exam Practical	50%	--/--/----
Homework and Projects Discussions and lecture Presentations		10%	

Teaching Methodology:

Orientation. Group discussion. Videos. Live patterns & samples. Practical applications in the Labs, Hospitals and Clinics. Field Visits (Hospitals, Clinics, Labs and Industries).



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