إعتماد توصيف مقررات برنامج الدبلوم فى التخدير والعناية المركزة الجراحية

نقر نحن الموقعون على هذا أدناه أن توصيف وثيقة البرنامج التعليمى لدرجة الدبلوم فى التخدير والعناية المركزة الجراحية والمقررات الدراسية المكونة له قد تم وضعها بمعرفة الأقسام المعنية

م	اسم المقرر	اسم منسق المقرر	التوقيع	اسم رئيس القسم	التوقيع
١.	القياسات الإكلينيكية والفيزياء الحيوية	د./ الحداد على موسي		أ.د./ صلاح أحمد محمد مسعود	
٢.	الفسيولوجيا	د./ نوال بدوي على		أ.د./ جلال محمد عبد القادر	
٣.	الفارماكولوجيا الطبية	د./ فاتن محمد عمران		أ.د./ محمود حمدي	
٤.	الاحصاء الطبى	د./ أحمد فتحي حامد		د./ ايمان عبد الباسط محمد	
٥.	التخدير والعناية المركزة الجراحية	د./ الحداد على موسي		أ.د./ صلاح أحمد محمد مسعود	

عميد الكلية

وكيل الكلية للدراسات العليا

Peer Revision

Reviewers	University	Date of Revision
- Prof. Dawlat Salem	Cairo	10/12/2011
- Prof. Ahmad K. Mansur	Mansura	28/11/2011

Program Specification for Diploma of Anesthesia and Surgical Intensive Care

Sohag University **Faculty of Medicine**

A. Basic Information

1. Program title: Diploma degree in Anesthesia and Surgical Intensive Care
2. Program type: Single
3. Faculty: Faculty of Medicine
4. Department: in Anesthesia and Surgical Intensive Care
5. Coordinator : Prof. Dr. Al- Haddad Ali Mousa
6. Assistant Coordinator: Ass. Lec. Dr. Ayman Mohammed Abdelkareem
7. External evaluator :Prof / Mohamed Almaz
8. Last date of program specifications approvalFaculty council No. "250", decree No. "1378" dated 28/12/2013.

B. Professional Information

1. Program aims

The aim of this program is to provide the postgraduate with the advanced medical knowledge and skills essential for the mastery of practice of the specialty and necessary for further training and practice in the field of Anesthesiology and Surgical Intensive Care through providing:

1. Scientific knowledge essential for the professional practice of Anesthesiology and intensive care according to the international standards.
2. Skills necessary for proper diagnosis and management of patients in the field of Anesthesiology and Surgical Intensive Care including diagnostic, problem solving, decision making and anesthetic skills.
3. Ethical principles related to the practice of this highly sensitive specialty.
4. Active participation in community needs management and problems identification.
5. Maintenance of abilities necessary for continuous medical education.

2. Attributes of the student:

Application of the specific knowledge gained during practice of Anesthesia.

1. Identification of professional problems in this specialty and suggest solutions for them.
2. Mastering professional skills and usage of suitable technologies in practice of Anesthesia.
3. Ability to efficiently communicate and lead team works throughout organized professional work.
4. Decision making at the lights of the available information.
5. Perfect utilization of available resources.
6. Awareness of his role in community development and maintain good environment.

7. Reflects the commitment to act with integrity, credibility and professional norms and accountability.
8. Recognize the need to develop himself and to engage in continuous learning

3. Intended learning outcomes (ILOs):

a) Knowledge and understanding

By the end of the study of diploma program in Anesthesia and Intensive care unit the Graduate should be able to know and understand each of:

a1. Demonstrate the advances in preoperative patient evaluation.
a2. Mention and explain pre anesthetic medications.
a3. Define the patient monitoring during anesthesia and in surgical intensive care.
a4. Mention the advances in breathing system and resuscitation system.
a5. Illustrate the essential features of anesthesia machine.
a6. Demonstrate the knowledge in airway management.
a7. Explain and define types, classification, mechanism of action of ,reversal of block, pharmacodynamics & pharmacokinetics of anesthetic drugs.
a8. Describe the advances of regional Anesthesia.
a9. Define the advances in cardiopulmonary bypass
a10. Describe the advances in mechanical ventilation..
a11. Illustrate the impact of anesthesia for patient with variable general diseases.
a12. Describe advances in management of anesthetic complication.
a13. Define the types and techniques of anesthesia needed for all diseases .
a14. Mention etiology of electrolyte disturbance (e.g. hyper & hyponatremia, hyper & hypokalemia), how to diagnose it and anesthetic management.
a15. Mention the fluid management, evaluation of intravascular volume, perioperative fluid therapy and blood transfusion.
a16. Define the management of the trauma patient under anesthesia and in surgical intensive care.
a17. Demonstrate knowledge of Cardiopulmonary Resuscitation (CPR).
a18. Define the principles of management of ICU cases.
a19. List the clinical picture and differential diagnosis of intensive care patients
a20. Mention scientific developments in the field of Anesthesia and Surgical intensive care.
a21. Describe the principles and fundamentals of ethics and legal aspects of professional practice in the field of Anesthesia and Intensive care unit.
a22. Describe the principles and fundamentals of quality of professional practice in the field of Anesthesia and Surgical intensive care
a23. Describe the effect of professional practice on the environment and the methods of environmental development and maintenance.

b) Intellectual skills

By the end of the study of diploma program in Anesthesia and Surgical intensive care the Graduate should be able to:

b1. Identify and analyze of the information in the field of Anesthesia and Intensive care unit and ranking them according to their priorities.
b2. Solve Problems in the area of Anesthesia and Intensive care unit
b3. Analyze reading of researches and issues related to Anesthesia and Intensive care unit
b4. Assess the risk of professional practices in the field of Anesthesia and Intensive care unit
b5. Know how to take decision

c) Professional and practical skills

By the end of the study of diploma program in Anesthesia and Surgical intensive care the Graduate should be able to:

c1. Apply of professional skills in the field of Anesthesia and Intensive care unit
c2. Write medical reports.
c3. Use of appropriate technology in the field of Anesthesia and Intensive care unit

d) General and transferable skills

By the end of the study of master program in Anesthesia and Surgical intensive care the Graduate should be able to:

d1. Do the different types of effective communication.
d2. The use of information technology to serve the development of professional practice.
d3. Asses himself and identify of personal learning needs.
d4. Use of different sources for information and knowledge
d5. Work in a team and time management.
d6. Lead a team in familiar professional contexts.
d7. Scientific meetings administration according to the available time.

4. Academic standards

External references for standards (Benchmarks)

Sohag faculty of medicine adopted the general national academic reference standard (NARS) provided by the national authority for quality assurance and accreditation of education (naqaae) for postgraduates program. This was approved by the faculty council decree NO.7528, in its cession NO.191 Dated: 15/3/2010. The adoption of NARS and the suggested ARS were approved by University council degree No 587, in its cession No.60. Dated 26-12-2011

5. Curriculum Structure and Contents

5.a- Program duration: 3 semesters (one and half years)

5.b- Program structure :

	hours /week		
Subject	**Lectures**	**Practical / Surgical9**	**Clinical**
First Part:			
Minors :			
Biophysics, clinical measurements and physiology	2	2	----
Pharmacology	2	2	----
Second Part:			
Anesthesia and Surgical Intensive Car	6h/w	6h	---

code	Item		No	%
b.i	Total credit hours	Compulsory	43	100
		Elective	0	0
		Optional	0	0
b.iii	credit hours of basic sciences courses		7	12.3
b.iv	credit hours of courses of social sciences and humanities		0	0
b.v	credit hours of specialized courses:		28	65.1

b.vi	credit hours of other course	8	18.6
b.viii	Program Levels (in credit-hours system): Level 1: 1st part Level 2: 2nd Part	 15 28	 34.9 65.1

6. Program courses

6.1- Level/Year of Program

a. Compulsory :

		hours /week			Program ILOs covered
Subject	**Total No. Of Units**	**Lectures**	**Practical / Surgical**	**Clinical**	
First Part:					
Minors :					
Biophysics, clinical measurements and physiology	4	2	2	--	a4, a5, a14, b7, c6, d2, d8
Pharmacology	4	2	2	--	a2, a7, a8, b6, c4, c5, d8
Biostatistics	2	1	1	---	a15, a16, b3, c1, d3
Second Part:					
Majors					
Anesthesia and Surgical Intensive Care: - Examining the patient and preparing him/her for anesthesia - How to use different tools used in anesthesia -Anesthesia in different techniques -Anesthesia and its relation to diseases - CPR, Intensive care and managing chronic pain.	16	8/hw	8		a1- a6, a8- a14,b1- b5 c1 – c3,d1 – d8

b. Optional : no optional courses

7. Program admission requirements: General Requirement

A. Candidates should have either:
   1. MBBCh Degree form any Egyptian Faculties of Medicine or
   2. Equivalent Degree from Medical Schools abroad approved by the Ministry of Higher Education.

B. Candidate should complete the house officer training year

C. Follow postgraduate regulatory rules of Sohag Faculty of Medicine.

8. Regulations for progression and program completion

Duration of program is 3 semesters (1.5 years), starting from registration till the second part exam divided to:

First Part: (≥6 months = 1 semester):

- Program-related basic and clinical sciences and some Anesthetic and Intensive care courses.

- At least six months after registration should pass before the student can ask for examination in the 1st part.
- Two sets of exams: 1st in April — 2nd in October
- For the student to pass the first part exam, a score of at least 40% of the written exam
- Those who fail in one curriculum need to re-exam it only.

Second Part: (≥12 months = 2 semester):

- Program related specialized science of Anesthesia and surgical intensive care Courses and ILOs.
- After passing at least:
  - 12 months training in the department of Anesthesia and Surgical Intensive Care.
  - Basic sciences departments actual work for 12 months as a trainee in the department of Anesthesia and surgical intensive care
- The students should pass the 1st part before asking for examination in the 2nd part.
  - Two sets of exams: 1st in April— 2nd in October.
  - For the students to pass the second part exam, a score of at least 60% is needed (with at least 60% of the written exam and 50% of the oral and clinical exams)

9. Methods of students assessment

Method of assessment	The assessed ILOs
1-Research assignment	- General transferable skills, intellectual skills
2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills
3-OSCE	-Practical skills, intellectual skills, general transferable skills
4-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills

Assessment schedule:

Part I:

- Biophysics, clinical measurements: Written Exam (2 hours) + structured oral Exam.
- Physiology: Written Exam (2 hours) + structured oral Exam.
- Clinical pharmacology: Written Exam (2 hours) + structured oral Exam.
- Biostatistics : Written Exam (2 hours) + Structured oral Exam

Part II:

- Anesthesia and Surgical Intensive Car: Two Written Exam (3 hours for each) + OSCE + Structured oral Exam.

10. Evaluation of program intended learning outcomes

Evaluator	Tool	Sample
1- Senior students	Questionnaire	30
2- Alumni	Questionnaire	30
3- Stakeholders (Employers)	Questionnaire	30
4-External Evaluator(s) (External Examiner(s))	Report	1
5- Other		

Course Specification of Biophysics and Clinical Measurements for Diploma degree in Anaesthesia and Surgical Intensive Care

Sohag University **Faculty of Medicine**

1. Program in which the course is given: Diploma degree in Anesthesia and Surgical Intensive Care
2. Major or Minor element of the program: Minor
3. Department offering the program: Anesthesia and Surgical Intensive Care
4. Department offering the course: Anesthesia and Surgical Intensive Car and physiology departments.
5. Academic year / Level :First Part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A- Basic Information

Title: Biophysics and Clinical Measurements and Physiology

Code: ANE 0501-100

Module	**Lecture**	**Practical**	**Total**	**credit**
Biophysics & Clinical Measurements	60	30	90	5

B- Professional Information

1. Overall Aims of Course

By the end of the course the student should be able to:

- Demonstrate knowledge of application of the principles and knowledge of the medical sciences in the field of physics.
- Demonstrate an understanding of the principles of physics.
- Describe the principles that govern monitoring devices.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student should be able to:

a1. Describe definition of the heat; ambient, latent, clinical application, transfer of heat

a2. Demonstrate laws of gases; Boyle's, Charle's, Lussac, Dalton, Kelvin scale, equation of state of perfect gas.

a3. Explain liquefaction of gases; critical temp, critical pressure, physical properties of gases, clinical application of gas cylinder.

a4. Demonstrate solubility of gases in liquids; factor affecting solubility, solubility coefficient, blood/gas partition coefficient.

a5. Define diffusion of gases; physical factors affecting diffusion, Bulk flow, factors affecting diffusion of gases across pulm membrane

a6. Mention and explain flow of fluid through uniform tube, through tubes of variable diameters and through orifice.

a7. Illustrate properties of gases, liquid& vapor; density, specific gravity, viscosity, humidity, surface tension, osmotic pressure & clinical application.

a8. Describe Vaporization & vaporizer; properties of vapor, vapor pressure curve, types of vaporizers, factor affecting design, calibrations, factor affecting performance.

a9. Explain humidifier; types, advantages, mechanism, complication.

a10. Illustrate mechanical ventilators; types, criteria, ventilation – perfusion disturbance.

a11. Illustrate pressure reducing valves; types, advantages, physical principles.

a12. Mention and explain fires & explosion; prevention, source, ignitable anesthetics.

a13. Demonstrate nuclear physics and ionizing radiation; atomic structure, radioactivity, measurement of radiation.

a14. Mention and explain measuring system; sensor, processor, recorder, unit of measurement.

a15. Define derived mechanical units; measurement of pressure, temp, humidity, volume, blood loss, measurement of flow, blood flow, gas flow, blood pressure, CVP, PAWP.

a16. Illustrate analysis of gas mixture acid-base state; measurement of O2 tension, co2 tension, PH, acid-base evaluation.

a17. Mention and explain monitoring of cardiovascular system; arterial blood pressure, ECG, central venous catheterization, pulm art catheter, cardiac output.

a18. Explain monitoring of respiratory system; precordial & esophageal stethoscope, pulse oximetry, capnography, anesthetic gas analysis.

a19. Mention monitoring of CNS; electroencephalography, evoked potentials.

a20. Mention muscular monitoring; peripheral nerve stimulator.

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b1. Correlate between the state of the anesthetized patient and the parameters that observed.

b2. Integrate the effect of calibrated equipments on the patient.

b3. Identify the problem implied on the patient due non calibrated equipment.

b4. Interpret the principles & laws that govern anesthesia**.**

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c1. Evaluate anesthetic equipment status.

c2. Define the appropriate equipment.

c3. Use the measuring system for observing the patient.

c4. Perform blood gas analysis, CVP& PAWP insertion.

c5. Monitoring of the patient

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d1. Communicate with each others and interact effectively with patients using the propitiate anesthetic sets, then write a report about the result of calibrations, integrity of these sets and complications and r discuss with staff members.

d2. Present orally plan for test the anesthetic equipments in accordance with the standard scientific guidelines in seminars or group meetings, discuss results, defend his/her ideas with staff members. Students can recognize and accept the limitations in their knowledge and clinical skills.
d3. Manipulate computer programs, do web search, to write an essay about patient with certain problems due anesthetic equipments and with trial of solving.
d4. Work together to check anesthetic equipments integrity and discuss their point of view.

3. Contents

Topic	No. of hours	Lecture	Tutorial/ Practical
Heat	7	4	3
Laws of gases	7	4	3
Liquefaction of gases	7	4	3
Solubility of gases	7	4	3
Diffusion of gases	7	4	3
Flow of fluids	7	4	3
Properties of gases, liquid& vapor	7	4	3
Vaporization & vaporizer	7	4	3
Humidifier	7	4	3
Mechanical ventilators	7	4	3
Pressure reducing valves	7	4	3
Fires & explosion	7	4	3
Nuclear physics	7	4	3
Analysis of gas mixture	7	4	3
Monitoring of the patient	7	4	3
Total	**120**	**60**	**30**
Credit	**5**	**4**	**1**

4. Teaching and learning methods

4.1- Lectures.
4.2- Practical sessions.
4.3- Operative theater work.
4.4- Application of anesthetic plan under observation.

5. Students Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills

Assessment Schedule

Assessment 1: Final written exam.

Assessment2; Final Structured Oral Exam.

Weighting of assessment

Final written exam	50%
Final Structured Oral Exam	50%
Total	100%

6. List of References

6.1- Course Notes:

Book for Physics, Anesthesia & ICU department, Sohag University

6.2-Essential books:

Basic physics & measurement in anesthesia; Davis P.D., Parbrook G. D. and Kenny C.N., 4th edition, Butterworth Heirmann, pp2-3, 1995

6.3-Periodicals and websites:

British Journal of Anesthesia, Anesth. Analg journal, Anesthesiology journal, Acta anaesthesiol Scand, Eur journal Anaesethesiol

www.sciencedirect.com

7. Facilities required for teaching and learning

7.1- Facilities for field work: Operative List, ICU work.

7.2- Computers with net connection.

7.3- Data Show and overhead projectors.

Course Coordinator: Dr. El-Hadad Ali Mosa

Head of Department: Prof. Dr. Abd El-Rahman Hassan

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013

Course Specification of Medical Physiology for Diploma degree in Anaesthesia and Surgical Intensive Care

Sohag University **Faculty of Medicine**

1. Program in which the course is given: Diploma degree in Anesthesia and Surgical Intensive Care
2. Major or Minor element of the program: Minor
3. Department offering the program: Anesthesia and Surgical Intensive Care
4. Department offering the course: Anesthesia and Surgical Intensive Car and physiology departements.
5. Academic year / Level :First Part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A- Basic Information

Title: Medical Physiology

Code:PHY0501-100

Module	**Lecture**	**Practical**	**Total**	**Credit**
Medical Physiology	30	30	60	3

B- Professional Information

1. Overall Aims of Course

To prepare an **anesthesiologist** oriented with the Physiology of C.N.S & circulation especially that concerned with pain & analgesic system. Also the regulation of arterial blood pressure, the different types pf shock and their management. In addition, graduates should have enough knowledge about the control of respiration and acid base balance. They should have adequate information about the nerve conduction & muscle contraction.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of this course, students should have adequate knowledge about:

a1. The physiology of pain & analgesic system.

a2. The physiology of important phenomena in the body that concerned with anaesthesia practice as coagulation, pain, control of arterial blood pressure & changes with hemorrhage & shock.

b) Intellectual skills:

By the end of the course, the students are expected to be able to:

b1. Assessment of the haemodynamic stability of the patient intraoperatively

b2. Be oriented with the physiology of respiration especially acid base balance, hypoxia & cyanosis.

D) general & transferable skills:

By the end of this course, students should is expected to:

d1. Communicate with members of physiology department.

d2. Appreciate & apply physiological skills in intraoperative patient.

3. Contents

Topic	No. of hours	Lecture	Tutorial/ Practical
the physiology of endocrine & reproduction. a- pancreas, thyroid, adrenal functions & disorders	4	2	2
the physiology of the autonomic nervous system	8	4	4
Blood 1. blood coagulation 2. R.B.Cs, platelets	8	4	4
circulation a. arterial blood pressure b. heart rate c. cardiac output d. Hemorrhage e. Shock f. Pulmonary circulation & coronary circulation. G. Oedema.	8	4	4
respiration • normal mechanisms of respiration • O2 & CO2 transport in the blood • hypoxia • cyanosis • Control of respiration. • Acid base balance. • Dyspnea & asphyxia	8	4	4
VIC.N.S: Pain & analgesic system sleep. Neuro- transmitters. Spinal cord lesions. Cerebral blood flow.	8	4	4
Digesion swallowing & vomiting	8	4	4
muscle & nerve action potential & resting membrane potential. nerve conduction & excitability. mechanism of muscle contraction. changes during muscle contraction.	8	4	4
Total	60	30	30
Credit	3	2	1

4. Teaching and learning methods

4.5- Lectures.

4.6- Practical sessions.

4.7- Operative theater work.

4.8- Application of anesthetic plan under observation.

5. Students Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills

Assessment Schedule

Assessment 1: Final written exam.

Assessment 2: Final Structured Oral Exam

Weighting of assessment

Final written exam	50%
Final Structured Oral Exam	50%
Total	100%

6. List of References

Course notes
Department notes, lectures & handouts.
Essential books (textbooks)
Gyton textbook of physiology

7. Facilities required for teaching and learning

7.1- Facilities for field work: Operative List, ICU work.

7.2- Computers with net connection.

7.3- Data Show and overhead projectors.

Course Coordinator: Dr. Hoda Moustafa

Head of Department: Prof: Ahmed Mostafa

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013

Course Specification of Clinical Pharmacology for Diploma degree in Anaesthesia and Surgical Intensive Care

Sohag University **Faculty of Medicine**

1. Program on which the course is given: Diploma Degree
2. Major element of program.
3. Department offering the program: Depart Anaesthesia and Surgical Intensive Care
4. Department offering the course: Clinical Pharmacology
5. Academic year / Level: 1st year
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Clinical Pharmacology

Lecture	Tutorial/ practical	Total	Credit
30hrs	30 hrs	60 hrs	3

B. Professional Information

1. Overall Aims of Course

By the end of the course the student should be able to
Demonstration of knowledge of application of the principles and knowledge of the medical sciences in the field of Clinical Pharmacology.
Demonstration of knowledge of pharmacokinetics & dynamics.
Demonstrate an understanding of the principles and practice of pharmacology.
Describe the principles that govern taking decision for the suitable types of drugs for the patient.
Demonstration of types, mechanism of actions, effect, clinical uses, complication, side effects and drug interaction of drugs.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course, students should he able to:

a1. Describe principles of pharmacokinetics & dynamics of drugs, mechanism of actions, effect, clinical uses, complication, side effects and drug interaction of drugs.

a2. Demonstrate how to evaluate the suitable type of drugs for the patients and describe the principles of action.

Anesthesia Course Specifications 2008-2009

a3. Define the pharmacodynamics; mechanism of action, Drug receptor interaction, adverse drug reaction, factors modifying drug action.

a4. Explain the pharmacokinetics; the drug absorption, distribution, biotransformation or metabolism, clearance, drug interaction.
a5. Demonstrate the adrenergic pharmacology; synthesis of catecholamines, adrenergic receptors, endogenous catecholamines, classification of sympathomimitic drugs, action, uses, side effects, drug inhibiting, action, uses, side effects and clinical uses.
a6. Mention and explain the cholinergic pharmacology ; synthesis of acetyle choline , cholinergic receptors, cholinomimitics, cholinesterase inhibitors, action, uses, side effects and clinical uses.
a7. Describe the autacoids; types, physiologic role, effect and its clinical application.
a8. Mention the musle relaxant; classification, mech of action, uses, adverse reaction and advantages of each muscle relaxant.
a9. Illustrate the respiratory pharmacology; drug therapy of asthma, mech of action of bronchodilator, anti tussive, expectorants and ttt of pulmonary edema.
a10. Mention and explain gastrointestinal pharmacology; ttt of peptic ulcer, ttt of gastro esophageal reflux, anti-emetic, drug used for diarrhea and constipation, IB$, hepatic encephalopathy.
a11. Define the blood pharmacology; define mech of action, side effects and clinical uses of anticoagulant, antiplatelets, fibrinolytic drugs, drug used for bleeding disorders, intravenous fluid therapy, drug therapy of hyperlipidemia.
a12. Illustrate renal pharmacology; mech of action side effects and clinical uses of diuretics.
a13. Describe the endocrine pharmacology; hormones secreted by the islets of langerhans, ttt of D.M., metabolic effect of insulin, insulin preparation & oral antidiabetic agents, coma in D.M.
a14. Demonstrate drug affecting bone-calcium homeostasis; effect of vit D, parathyroid hormone, calcitonin, disturbance of calcium homeostasis, osteoporosis.
a15. Mention and explain pharmacology of hypothalamic &pituitary hormones, thyroid hormones &anti thyroid drugs, corticosteroids, sex hormones.
a16. Describe the central nervous system pharmacology; mention and explain mech of action, side effects and clinical uses;sedative-hypnotics , anxiolytics, spasmolytic drugs, antipsychotic drugs, antidepressant, antiepileptic, analgesic drugs, drug therapy of gout & rheumatoid arthritis, opoids analgesia, drug abuse, local anesthetic, general anesthetic.
a17. Illustrate cardiovascular pharmacology; classification of antiensive drugs, hypertensive crisis, drug management of heart failure, inotropic drugs, major antianginal drugs, antiarrythmic drugs.
a18. Demonstrate the pharmacology of chemotherapy; mention and explain antimicrobial, anti parasitic, antifungal, antiviral, anticancer therapy.

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b1. Correlate between the medical condition of the patient and the the drug that will be used for treatment.
b2. Integrate the effect of drug on the patient.
b3. Identify the problem implied on the patient due the drug used

b4. Interpret the advantages and disadvantages of different types of drug therapy**.**

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c1. Evaluate patient medical condition.

c2. Define the appropriate medication.

c3. Perform management using the adjusted doses efficiently.

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d1. Communicate with each others and interact effectively with patients using the propitiate drug therapy, then write a report about the mechanism, effect, side effect and complications or discuss with staff members.

d2. Present orally plan of treatment for the patient with certain disease in accordance with the standard scientific guidelines in seminars or group meetings, discuss results, defend his/her ideas with staff members. Students can recognize and accept the limitations in their knowledge and clinical skills.

d3. Manipulate computer programs, do web search, to write an essay about patient with medical problems, with trial of solving.

d4. Work together to correlate suitable treatment of patient and discuss their point of view for ttt.

3. Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Pharmacokinetics & dynamics	4	2	2
Adrenergic pharmacology	4	2	2
Cholinergic pharmacology	4	2	2
Autacoids	4	2	2
Central Nervous System	4	2	2
Cardiovascular pharmacology	4	2	2
Renal pharmacology	6	3	3
Respiratory pharmacology	6	3	3
Gastrointestinal pharmacology	6	3	3
Endocrine pharmacology	6	3	3
Blood pharmacology	6	3	3
Chemotherapy	6	3	3
Total	**60**	**30**	**30**
Credit	**3**	**2**	**1**

4. Teaching and Learning Methods

4.1- Lectures.

4.2- Seminar, sessions.

4.3- Operative theater work.

4.4- Application of drug therapy, anesthetic plan under observation.

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills

Assessment Schedule

Assessment 1: Final written exam.

Assessment2; Final Structured Oral Exam

Weighting of Assessments

Final-term Examination	50 %
Structured Oral Exam	50%
Total	100%

6. List of References

6.1- Essential Books (Text Books):

Harman J., Limbird L and Goodman G., (2001): Goodman &Gilman the pharmacologic basis of therapeutics, 10th edition.

6.2- Recommended Books:

Miller R.D., Cucchiara RF et al, (2000): Anesthesia, 5th edition, vol(1).

7. Facilities Required for Teaching and Learning:

1- Appropriate teaching aids (anesthetic drug ampoules or vials).
2- Facilities for field work: Operative List, ICU work.
3- Computers with net connection.
4- Data Show and overhead projectors.

Course Coordinator: Dr. Faten M. Omeran

Head of Department: Prof. Mahmoud Hamdi

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013

Course Specification of Biostatistics in Diploma degree in Anesthesia & Surgical intensive care

Sohag University **Faculty of Medicine**

1. Program Title: Diploma degree in Anesthesia & Surgical intensive care
2. Minor element of program
3. Department offering the program: Anesthesia & Surgical intensive care
4. Department offering the course: Community Medicine and public Health.
5. Academic Year/level: 1st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A- Basic Information

Title: Course Specification of Biostatistics in Diploma degree in Anesthesia & Surgical intensive care

Code: COM 0501-100

Total hours

Lectures	Practical	Tutorial	Total hour	Credit hours
15	30	-	45	2

B- Professional Information

1. Overall Aims of the Course

The aim of this program is to provide the postgraduate student with the advanced medical knowledge and skills essential for the mystery of the practice of biostatistics specialty and necessary to provide further training and practice in the field of Obstetrics & Gynecology through providing recent scientific knowledge essential for the mystery of practice of biostatistics according to the international standards

2. Intended Learning Outcomes of Course (ILOs)

a) Knowledge and understanding:

By the end of the course, the Anesthesia & Surgical intensive care post-graduate is expected to be able to:

a1. Enumerate the principles and fundamentals of quality of professional practice in the field of Anesthesia & Surgical intensive care.

a2. List the effect of professional practice on the environment and the methods of environmental development and maintenance.

b) Intellectual Skills

By the end of the course, the student is expected to be able to:

b1. Analyze researches and issues related to Anesthesia & Surgical intensive care.

c) Professional and Practical Skills:

By the end of the course, the student is expected to be able to:

c1. Apply professional skills in the area of Anesthesia & Surgical intensive care.

d) General and Transferable Skills:

By the end of the course, the student is expected to be able to:

d1. Assess himself and identify personal learning needs.

3. Contents

Topic	No of hours	Lecture	Tutorial/ Practical
collection, analysis and interpretation of data	4	4	
Tests of significance: Proportion test	9	3	6
Chi-square test	8	2	6
Student T test	8	2	6
Paired T test	8	2	6
- parametric and non parametric tests	8	2	6
Total hours	**45**	**15**	**30**
Credit	**2**	**1**	**1**

4. Teaching and Learning Methods

4.1- Lectures.

4.2- Practical sessions.

4.3- Computer search assignments

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment 1……..Final written exam….. **week: 24**

Assessment 2……..Final Structured Oral Exam **….** **week: 24**

Assessment 3…… Attendance and absenteeism throughout the course

Weighting of Assessments

Final written examination	50 %
Structured Oral Exam	50 %
Total	100 %

Any formative only assessments: Attendance and absenteeism throughout the course

Computer search assignment performance throughout the course

6. List of References

6.1- Course Notes

Lecture notes prepared by staff members in the department.

6.2- Essential Books (Text Books)

1-Maxy-Rosenau Public health and preventive medicine, Prentice – Hall International Inc

6.3- Recommended Books

1- Dimensions of Community Health, Boston Burr Ridge Dubuque.

2- Short Textbook of preventive and social Medicine. Prentice-Hall International Inc.

3- Epidemiology in medical practice, 5th edition. Churchill Livingstone. New York, London and Tokyo

6.4- Periodicals, Web Sites, … etc

1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

7. Facilities Required for teaching and learning.

1- Adequate infrastructure: including teaching places (teaching class, teaching halls, teaching laboratory), Comfortable desks, good source of aeration, bathrooms, good illumination, safety & Security tools.

2- Teaching Tools: including screens, Computer including cd(rw), data shows, Projectors, flip charts, white board, video player, digital video camera, Scanner, copier, color and laser printers.

3- Computer Program: for designing and evaluating MCQs

Course Coordinator: Dr/Ahmed Fathy Hammed

Head of Department: Prof/Eman Abd El-Baset Mohammed

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013

Course Specifications of Anesthesia & Surgical intensive care

Sohag University **Faculty of Medicine**

1- Program (s) on which the course is given: Diploma

2- Major or minor element of program: Major

3- Department offering the program: Dept. of Anesthesia & surgical care unit.

4- Dept offering the course: Dept. of Anesthesia & surgical care unit

5- Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. **Basic Information**

Title: Dept. of Anesthesia & surgical care unit.

Code:ANE0501-100

Lectures	Tutorials/Clinical	Total hour	Credit hours
240	330	770	27

B. Professional Information

1. **Overall aims**

Demonstration of knowledge of application of the principles and knowledge of the medical sciences in the field of Anesthesia.
Demonstration of knowledge of anesthesia.
Demonstrate and understanding of the principles and practice of anesthesia.
Demonstrate the steps used for patient evaluation.
Describe the principles that govern taking decision for the suitable type of anesthesia for the patient.
Demonstration of types, mechanism of actions, effect, clinical uses, complication and drug interaction of anesthetic drugs.
Describe the threats to anesthesiologist, and common medical errors, which can occur during this practice of medicine.
Early, detection, and management of any complication.

2. Intended Learning Outcomes (ILOs)

a) **Knowledge & Understanding**

By the end of the course, students should he able to:

a1. Describe principles and the types of anesthetics.

a2. Demonstrate how to evaluate the patient and define the suitable type of anesthesia and describe the principles for CPR.

a3. Demonstrate how to diagnose proper preoperative patient evaluation, ASA (American society of anesthiologists) physical status, and correlation with the surgery and if it is elective or emergency surgery.

a4. Mention and explain pre anesthetic medications and illustrate the suitable drugs and their specific effect to decrease the risk of aspiration, decrease anxiety, and decrease the stress during intubation.
a5. Define the patient monitoring; hemodynamic as non invasive & invasive arterial blood pressure monitoring, CVP measuring.
a6. Mention the breathing system, component of Mapelson circuits, classifications, its performance characteristics. Circle system component, optimization of its design, and character of resuscitation system.
a7. Illustrate the essential features of anesthesia machine, purpose, and problem associated with anesthesia ventilator and how to manage.
a8. Demonstrate knowledge of airway management, define the use, advantages and disadvantages of face mask, nasal airway, oral airway., How to manage difficult air way & its causes. Illustrate the importance of endo-tracheal tube and explain proper tube location.
a9. Mention types of Inhalational anesthetics and illustrate the factors affecting alveolar concentration, factors affecting recovery, mechanism, MAC, effect and toxicity.
a10. Define the types of nonvolatile anesthetics; explain properties of the ideal intravenous anesthetic agents, and classification of IV Anesthetics. Explain and define mechanism of action, Effects and Adverse effects of intravenous anesthetic.
a11. Explain and define types, classification of muscle relaxants, mechanism of action, reversal of block, pharmacodynamics & pharmacokinetics.
a12. Explain the types of cholinesterase inhibitors, mechanism of action, muscarinic effect of cholinesterase inhibitors, Use of neostigmine to reverse the neuromuscular blockers. The role of anticholinergic drugs.
a13. Explain the adrenoceptor physiology, receptor selectivity of the adrenergic agonist and antagonist, effect of adrenergic agonists on organ systems, clinical consideration and uses of each drug.
a14. Define the hypotensive agents effect on different body systems. Demonstrate the controlled hypotension, role of these drugs to achieve the hypotension contraindication, complications.
a15. Define local anesthetics, their classification, structural relationship, physiochemical proprieties, effect on different body systems, and explain the risk of unintentional I.V. injection of bupivacaine, local anesthetic overdose.
a16. Describe the principles of regional Anesthesia and explain the advantages of regional anesthesia versus general anesthesia. Mention the methods of regional Anesthesia. Difference between spinal, epidural and caudal. prepheral nerve blocks.
a17. Illustrate the cardiac cycle, determination of ventricular performance, assessment of the ventricular function, coronary perfusion, patho-physiology of heart failure.
a18. Illustrate the cardiac risk factors, clinical predictors of peri-operative cardiovascular risk. Preoperative management of hypertension, ischemia, CHF, valvular disease.
a19. Illustrate the impact of anesthesia for patient with respiratory disease e.g. obstructive and restrictive pulmonary disease, pulmonary risk factor, changes with laparoscopic surgery.
a20. Define the anesthesia for thoracic surgery, effect of posture on lung mechanics. Illustrate one long ventilation, anesthetic management for lung

resection, cyst, abscess, broncho-pleural fistula, bronchoscope, esophageal surgery.

a21. Mention neurophysiology; regulation of the cerebral blood flow, CSF, intracranial pressure, effect of the anesthetic agent on cerebral physiology & cerebral monitoring. Brain protection strategy.

a22. Mention the anesthetic management for craniotomy, post fossa tumors, head trauma, spine surgery.

a23. Mention etiology of electrolyte disturbance (e.g. hyper &hyponatremia, hyper & hypokalemia…), how to diagnose it and anesthetic management.

a24. Mention the fluid management, evaluation of intravascular volume, perioperative fluid therapy and blood transfusion.

a25. Mention physiology of acid –base balance, its compensatory mechanisms, types, disorders, diagnosis and anesthetic consideration.

a26. Illustrate renal physiology and effect of anesthesia on the renal function. Anesthetic management of patient with renal disease, TURP syndrome.

a27. Illustrate hepatic physiology and effect of anesthesia on the hepatic function. Anesthetic management of patient with liver disease & coagulopathy.

a28. Illustrate anesthesia for patient with endocrine disease; how to manage.

a29. Illustrate anesthesia for patient with neuromuscular disease; myasthenia gravis, myathenic syndrome, muscular dystrophies, and myotonia.

a30. Define anesthesia for Ophthalmic surgery, effect of anesthetic agent on the intraocular pressure.

a31. Define anesthesia for Otorhinolaryngologicl surgery, Anesthetic management for endoscopy, sinus surgery, ear surgery and head and cancer surgery.

a32. Define anesthesia for orthopedic surgery, hip surgery, knee surgery. Illustrate special consideration to bone cement, pneumatic tourniquet, fat embolism syndrome, deep venous thrombosis and upper extremity surgery.

a33. Define the management of the trauma patient; initial assessment, anesthetic considerations; head, spinal cord, chest, abdominal, extremity trauma and burn patient.

a34. Define maternal physiology during pregnancy and the placental transfer of anesthetic agents, their effect on utero-placental transfer

a35. Define the anesthetic risk in obstetric patient, anesthesia for labor, vaginal deliveries, anesthesia for cesarean section and complicated pregnancy. Anesthetic management of pregnancy induced hypertension and pregnancy with medical or surgical diseases.

a36. Define pediatric anesthetic techniques, anesthetic risk, anatomic and physiological development and effect of anesthetics, pathophysiology & anesthetic considerations in specific pediatric disorders; prematurity, intestinal malrotation, congenital diaphragmatic hernia, hypertrophic pyloric stenosis, foreign body aspiration, tonsillectomy and malignant hyperthermia.

a37. Define geriatric anesthesia. Age related anatomic, physiologic, pharmacologic changes and common disease.

a38. Mention anesthetic Complications; factors associated with human errors and equipment misuse, Complications related to position, common documentation pitfalls, occupational hazards.

a39. Demonstrate knowledge of Cardiopulmonary Resuscitation (CPR), define the causes of cardio respiratory arrest. Recognition of patients at risk; Illustrate BASIC LIFE SUPPORT, Universal ALS Algorithm.

b) Intellectual Skills

By the end of the course, students should he able to:

b1. Correlate between the medical condition of the patient and the surgery that will be operated and think about the anesthetic plan.
b2. Integrate the effect of anesthetic on the patient intraoperatively and postoperatively.
b3. Idenify the anesthetic problem implied if the patient medically diseased.
b4. Interpret the advantages and disadvantages of different types of anesthesia.

c) Practical and Professional Skills

By the end of the course, students should be able to;

c1. Evaluate patient fitness.
c2. Define the appropriate pre anesthetic medication.
c3. Perform air management, difficult intubation efficiently.
c4. Insertion of IV, arterial line and CVP efficiently.
c5. Perform Regional anesthesia (e.g. Spinal, Epidural, Local intravenous anesthesia, preph nerve blocks…..…).
c6. perform cardiopulmonary resuscitation.

d) General and Transferable Skills

By the end of the course, students should he able to:

d1. Communicate with each others and interact effectively with patients prepared for surgery for proper evaluation then write a report about the case or discuss with staff members.
d2. Present orally anesthetic plan for the patient in accordance with the standard scientific guidelines in seminars or group meetings, discuss results, defend his/her ideas with staff members. Students can recognize and accept the limitations in their knowledge and clinical skills.
d3. Manipulate computer programs, do web search, to write an essay about patient with medical problems should be prepared for surgery, with trial of solving.
d4. Work together to perform CPR

3. Contents of the course

Topic	No. of hours	Lecture	Practical
Preoperative patient evaluation	10	5	5
Pre-anesthetic medications	10	5	5
Patient Monitoring	10	5	5
Breathing Systems	10	5	5
Anesthesia machine	10	5	5
Airway management	10	5	5
Inhalational anesthetics	10	5	5
Non volatile anesthetics	10	5	5
Muscle Relaxant	10	5	5
Cholinesterase Inhibitors	10	5	5
Anticholinergic drugs.	10	5	5
Adrenergic Agonists & Antagonists.	10	5	5
Hypotensive agents	10	5	5
Local anesthetics	10	5	5
Regional anesthesia	10	5	5

Cardiovascular physiology and anesthesia	10	5	5
Anesthesia for patient with cardiovascular disease.	10	5	5
Anesthesia for cardiovascular surgery.	10	5	5
Respiratory physiology and anesthesia.	10	5	5
Anesthesia for patient with respiratory disease.	10	5	5
Anesthesia for Thoracic surgery.	10	5	5
Neurophysiology and anesthesia.	10	5	5
Anesthesia for Neurosurgery.	10	5	5
Anesthesia for patient with Neurologic and Psychiatric disease.	10	5	5
Fluid management & Transfusion.	10	5	5
Management of patient with electrolyte disturbance.	10	5	5
Acid-Base Balance.	10	5	5
Renal physiology and anesthesia.	10	5	5
Anesthesia for patient with Renal disease.	10	5	5
Anesthesia for Genitourinary surgery.	10	5	5
Hepatic physiology and anesthesia.	10	5	5
Anesthesia for patient with liver disease.	10	5	5
Anesthesia for patient with Endocrine disease.	10	5	5
Anesthesia for patient with Neuromuscular disease.	10	5	5
Anesthesia for Ophthalmic surgery.	10	5	5
Anesthesia for Otorhinolaryngologicl surgery.	10	5	5
Anesthesia for Orthopedic surgery.	10	5	5
Anesthesia for the Trauma Patient.	10	5	5
Maternal & Fetal physiology and anesthesia	10	5	5
Obstetric Anesthesia.	10	5	5
Pediatric Anesthesia.	10	5	5
Geriatric Anesthesia.	10	5	5
Outpatient Anesthesia.	10	5	5
Anesthetic Complications.	10	5	5
Cardiopulmonary Resuscitation.	10	5	5
Pain Management.	10	5	5
Post anesthesia care.0	10	5	5
Critical Care.	10	5	5
Total	**770**	**240**	**330**
Credit Hours	**27**	**16**	**11**

Clinical course

Topic
Perform an anesthetic plan for the cases in the list
Evaluate patient fitness
Define the appropriate pre anesthetic medication.
Perform air management, difficult intubation efficiently.
Insertion of IV, arterial line and CVP efficiently.
Perform Regional anesthesia

Perform Regional anesthesia (e.g. Spinal, Epidural, Local intravenous anesthesia, preph nerve blocks…..…).
Perform cardiopulmonary resuscitation.
ICU management

4. **Teaching and learning methods**

4.1- Lectures.

4.2- Practical sessions.

4.3- Operative theater work by attending the daily lists.

4.4- Application of anesthetic plan under observation.

5. Students Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills

Assessment Schedule

Assessment 1: Final written exam. Week: 24

Assessment2; Final Structured Oral Exam. Week: 48

Weighting of assessment

Final written exam	50%
Final Structured Oral Exam	30%
Final practical exam	20%
Total	100%

6. **List of References**

6.1- Essential Books:

Morgan G.E, Mikhail M and Murry M., (2008): Clinical anesthesiology, 5th edition, McGraw-Hill Companies, UK, and USA.

6.2- Recommended Books:

Miller R.D., Cucchiara RF et al, (2000): Anesthesia, 5th edition, vol(1).

6.3- Periodicals and websites:

British Journal of Anesthesia, Anesth. Analg journal, Anesthesiology journal,

Acta anaesthesiol Scand, Eur journal Anaesethesiol.

www.sciencedirect.com

7. Facilities required for teaching and learning

1. Appropriate teaching aids (photographs, anesthetic drug ampoules or vials, laryngoscope, mask, oral &nasal airway, endotracheal tube, ampu bag, Laryngeal airway, double lumen tube ,canula, different fluid solutions, spinal & epidural needle, monitors, anesthesia machine, ventilators, syringe pump, PCA set).
2. Facilities for field work: Operative List, ICU work.
3. Computers with net connection.
4. Data Show and overhead projectors.

Course Coordinator: Dr. El-Hadad Ali Mosa

Head of Department: Prof. Dr. Abd El-Rahman Hassan

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013