Professional Diploma in Hepato-Pancreatico-Biliary Anesthesia & Intensive care

(According to currently applied credit points bylaws)

Faculty of medicine
Assiut University
2019-2021/2021-2023

Contents

Diploma of Hepato Pancreatico-Biliary Anesthesia & Intensive care

A. Basic Information

- **Program Title:** Professional Diploma degree in Hepato Pancreatico-Biliary Anesthesia & Intensive care
- **Nature of the program:** Single.
- **Responsible Department:**
  - Department of Anesthesia and intensive care and pain management- Faculty of Medicine- Assiut University.
- **Program Academic Director:**

  Prof. Hany Ahmed Ibrahim El Morabaa
- **Coordinator (s):**

Principle coordinator:

- Ass.Prof. Mostafa Samy Abbas

Assistant coordinator (s)

- Dr. Magdy Mohamed Mahdy
- Dr. Ayman Abdelkhalek
- Dr. Ahmed Hamada
- Dr. Hitham Mohamed

- **Internal evaluators:**

  Prof.Mohamed Mohamed Abdullatif Jadel-Mola
  Prof. Essam Sharkawy Abdalla Sharkawy
  Prof. Zein El Abedeen Zareh Hassan
  Prof. Osama Ali Mohamed
  Prof. Abdel- Radi Shehata Ibrahim
- **External evaluator:** Gamal ElDin Mohammad Ahmad Elewa**,** Professor of Anesthesia Ain Shams University
- Date of Approval of program specification by Assiut University Council : 30 / 3 /2021.
- Date of Approval of program specification by the Ministry of Higher Education and Scientific Research and the Supreme Council of Universities: 1-11-2021.
- **Total number of Modules:** 20 Compulsory Modules + 1 Elective Module

B. Professional Information

1- Program aims

1-1- To enable candidates to acquire satisfactory level of clinical skills, bedside care skills, in addition to update medical knowledge as well as clinical experience and competence in the area of Hepato-pancreatico-biliary and Liver Transplant Anesthesia and Intensive Care and enabling the candidates of making appropriate referrals to a sub-specialist.

1-2- Provide candidates with fundamental knowledge and skills of dealing with critically ill patients, with Hepato-pancreatico-biliary and Liver Transplant anesthesia and Intensive care fundamentals.

1-3- To introduce candidates to the basics of scientific medical research.

1-4- Enable candidates to start professional careers as specialists in Egypt but recognized abroad.

1-5- To enable candidates to understand and get the best of published scientific research and do their own.

2- Intended learning outcomes (ILOs) *for the whole program*:

2-1 Knowledge and understanding:

A. Explain the essential facts and principles of relevant basic sciences including Anatomy, Physiology, Microbiology and Pharmacology related to Hepato-pancreatico-biliary Anesthesia & Intensive care.

B. Mention essential facts of clinically supportive sciences including basics of clinical pathology and Laboratory Testing, nutrition and infection control related to Hepato-pancreatico-biliary Anesthesia & Intensive care.

C. Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of the common diseases and situations related to Hepato-pancreatico-biliary and Liver Transplant Anesthesia.

D. Give the recent and update developments in the pathogenesis, diagnosis, prevention and surgical treatment of common diseases related to Hepato-pancreatico-biliary Anesthesia & Intensive care.

E. Mention the basic ethical and medico-legal principles that should be applied in practice and are relevant to the Hepato-pancreatico-biliary Anesthesia & Intensive care.

F. Mention the basics and standards of quality assurance to ensure good clinical practice in the field of Hepato-pancreatico-biliary Anesthesia & Intensive care.

G. Mention the ethical and scientific principles of medical research methodology, information technology and evidence based medicine.

H. State the impact of common health problems in the field of Hepato-pancreatico-biliary Anesthesia & Intensive care on the society and how good clinical practice improves these problems.

2-2- Intellectual outcomes

A. Correlate the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases of the Hepato-pancreatico-biliary Anesthesia & Intensive care.
B. Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical situations related to Hepato-pancreatico-biliary Anesthesia & Intensive care.
C. Design and /or present a case or review (through seminars/journal clubs.) in one or more of common clinical problems relevant to the field of Hepato-pancreatico-biliary Anesthesia & Intensive care.
D. management plans and alternative decisions in different situations in the field of Hepato-pancreatico-biliary Anesthesia and Intensive care.

2-3- Skills

2-3-1- Practical skills (Patient Care)

A. Obtain proper history and examine patients in caring and respectful behaviors.
B. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment for common conditions related to Hepato-pancreatico-biliary Anesthesia and Intensive care.
C. Carry out patient management plans for common conditions related to Hepato-pancreatico-biliary Anesthesia and Intensive care.
D. Decisions and patient education in common clinical situations related to Hepato-pancreatico-biliary Anesthesia and Intensive care.
E. Perform competently noninvasive and invasive procedures considered essential for Hepato-pancreatico-biliary Anesthesia and Intensive care.
F. Provide health care services aimed at preventing health problems related to Hepato-pancreatico-biliary Anesthesia and Intensive care.
G. Provide patient-focused care in common conditions related to Hepato-pancreatico-biliary Anesthesia and Intensive care, while working with health care professionals, including those from other disciplines
H. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records)

2-3-2- General skills

Including:

- Practice-based Learning and Improvement

- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

Practice-Based Learning and Improvement

A. Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use Portfolio).
B. Appraises evidence from scientific studies.
C. Conduct epidemiological Studies and surveys.
D. Perform data management including data entry and analysis using information technology to manage information, access on-line medical information; and support their education.
E. Facilitate learning of students and other health care professionals including their evaluation and assessment.

Interpersonal and Communication Skills

F. Maintain therapeutic and ethically sound relationship with patients.
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.
I. Work effectively with others as a member of a health care team or other professional group.

Professionalism

J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society
K. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Systems-Based Practice

M. Work effectively in relevant health care delivery settings and systems including good administrative and time management.
N. Practice cost-effective health care and resource allocation that does not compromise quality of care.
O. Assist patients in dealing with system complexities.

3- Program Academic Reference Standards (ARS) (Annex 2)

Academic standards for Professional Diploma degree in **Hepato-pancreatico-biliary Anesthesia and Intensive Care**

Assiut Faculty of Medicine developed master degree programs' academic standards for different clinical specialties.

In preparing these standards, the General Academic Reference Standards for post graduate programs (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program.

These standards were approved by the Faculty Council on 17-6- 2009. These standards were revised and approved without changes by the Faculty Council on 23-9-2014.

During preparation of Professional Diploma in Hepato-pancreatico-biliary Anesthesia and Intensive care, the master degree programs' academic standards for different clinical specialties were adopted.

These standards were re-revised and approved without changes by the Faculty Council on 27-11-2022

4- Program External References (Benchmarks)

1. ACGME (Accreditation Council for Graduate Medical Education). http://www.acgme.org/acWebsite/navPages/nav_Public.asp

5. Program Structure and Contents

A. Duration of program: **2 years**

B. Structure of the program:

According the currently applied bylaws:

Total number of credit point: 120 ECTS

Total marks = 2400 marks in **four Semesters. [Each 1 ECTS= 20 marks=30 hours]**

Compulsory Modules: 98.5%

Elective Module: 2 credit point: 1.5%

Name	ECTS	% from total
▪ Basic modules	28	21.5%
▪ Specialty Related Anesthesia Sciences	30	23%
▪ Anesthetic and Intensive Care Management of HPB Surgeries	30	23%
▪ Elective module	2	1.5%
▪ Anesthetic and Intensive Care Management of Liver Transplant Surgeries	30	23 %
▪ Others (Computer, …)	1	0.8%
▪ Field training	44	36.7%
Total	120	100%

1st Semester: Basic Science and Elective Modules

- **Duration**: 6 months
- **Contents**: **Track 1:** Basic Sciences Modules (9 modules)
  Track 2: Elective Module (2 modules)

Modules	ECTS	Marks	Hours
1- Anatomy	6	120	180
2- Physiology	4	80	120
3- Microbiology	3	60	90
4- Pharmacology	5	100	150
5- Clinical Pathology and Laboratory Testing	2	40	60
6- Nutrition	2	40	60
7- Basic and Advanced Infection Control in hepatic patient	2	40	60
8- Research methodology & Statistics.	2	40	60
9- Evidence based Medicine	1	20	30
10- Information Technology	1	20	30
11- Elective modules*	2	40	60
Total	30	600	900

*** Elective modules (choose from the following):**

- Hospital administration
- Medical Ethics

2nd Semester: Specialty Related Anesthesia Sciences

- **Duration**: 6 months
- **Contents**: 4 modules

ourse	Monitoring	Perioperative Emergencies	Anesthetic Management of HPB Surgeries Part 1	Preanesthetic Evaluation	Total
CP	10	8	10	2	30
Marks	200	160	200	40	600
Hours	300	240	300	60	900

3rd Semester: Anesthetic and Intensive Care Management of HPB Surgeries

- Duration: 6 months.
- Contents: 3 modules.

Module	Liver Related Medical Sciences	Anesthetic Management of HPB Surgeries Part 2	Intensive Care Patient Management	Total
CP	5	10	15	30
Marks	100	200	300	600
Hours	150	300	450	900

4th Semester: Anesthetic and Intensive care Management of Liver Transplant Surgeries

- Duration: 6 months.
- Contents: 3 modules

Track: Anesthetic and Intensive Care Management of Liver Transplant Surgeries

Module	Transplantation Related Medical Sciences	Anesthetic Management of Liver Transplant Surgeries	Liver Transplant Intensive Care	Total
CP	5	10	15	30
Marks	100	200	300	600
Hours	150	300	450	900

C. Program Time Table

1- Duration of program 2 years divided into:

- **1st Semester: (6 month).**
  - Program-related basic science modules and ILOs+ elective Module.
  - Students are allowed to sit the exams of these modules at the end of the semester.
- **2nd Semester: (6 month)**
  - Program-related clinical supportive science modules.
  - Students are allowed to sit the exams of these modules at the end of the semester.
- **3rd and 4th Semesters: (1 year).**
  - Program –related specialty modules and ILOs
  - Students are allowed to sit the exams of these modules at the end each semester.

Graduations and exams

The students pass if they get 50% from the written exams and 60% from oral and clinical/practical exams of each module and 60% of summation of the written exams, oral and clinical/practical exams of each module.

Total degrees: 2400 marks.
Speciality Modules: 1800 marks.
For speciality Modules

- Written exam: 56.4 % [1016 marks].
- Oral and Practical 43.6% [836 Marks]
- Portfolio 25 % of degree for oral exams

D. Curriculum Structure (modules):

Code No.	Module Title	CP	Student Workload					
			Lecture	Practical	Homework/ Assignment	Test Preparation	Other Private study #	Total Hours
First semester (30 ECTS)								
Track 1: Basic Sciences (10 modules)								
1	Anatomy	6	40	-	-	140	-	180
2	Physiology	4	40	-	-	80	-	120
3	Microbiology	3	30	-	-	60	-	90
4	Pharmacology	5	50	-	-	100	-	150
5	Clinical Pathology and Laboratory Testing	2	20	-	-	40	-	60
6	Basic Nutrition	2	24	10	-	22	4	60
7	Basic and Advanced Infection Control in hepatic patient	2	20	10	-	20	10	60
8	Statistics and Research methodology	2	14	20	6	20	-	60
9	Evidence based Medicine	1	6	9	3	9	3	30
10	Information Technology	1	2	22	6		-	30
Track2: Elective modules (1 module)								
10	Elective module	2	Student Workload differ according module type				-	60
Second semester (30 ECTS)								
Track: Specialty Related Anesthesia Sciences (4 modules)								
1	Patient monitoring	10	60	180	-	60	-	300
2	Perioperative Emergencies	8	30	120	-	70	20	240
3	Anesthetic Management of HPB Surgeries Part 1	10	40	180	-	80	-	300
4	Preanesthetic Evaluation	2	10	30	-	20	-	60
Third semester (30 ECTS)								
Track: Anesthetic and Intensive Care Management of HPB Surgeries (3 modules)								
1	Liver Related Medical Sciences	5	30	60	-	60	-	150
2	Anesthetic Management of HPB Surgeries Part 2	10	40	180	-	80	-	300
3	Intensive Care Patient Management	15	60	240	30	120	-	450
Fourth semester (30 ECTS)								
Track: Anesthetic and Intensive Care Management of Liver Transplant Surgeries (3 modules)								
1	Transplantation Related Medical Sciences	5	40	-	10	80	20	150
2	Anesthetic Management of Liver Transplant Surgeries	10	40	180	-	80	-	300
3	Liver Transplant Intensive Care	15	60	240	30	120	-	450

Student work load calculation: One ECTS = 30 working contact hours (contact and non-contact).
One lecture = 3 hours = 1/10 ECTS [**1** ECTS **= 10 lectures**]
One practical day = 6 hours = 1/5 ECTS [1 ECTS = 5 practice days]
One day on-duty = 10 hours = 1/3 ECTS [1 ECTS = 3 on-duty days]
 # Student private study includes: Reports, Seminars, Projects, Workshops, Conferences, Fieldworks, Hospital works, Journal Club, portfolio, Video-conferences, Internet Activities.
1 active seminar/workshop = 1 ECTS = 30 h
1 passive attendance seminar /work shop = 1/5 ECTS= 6 h
1 passive attendance in specialized conference = 1/2 ECTS= 15 h

6. Module Contents (Annex 1)

The competency based objectives for each module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.
See Annex 1 for detailed specifications for each module

7-Admission requirements

- **Admission Requirements (prerequisites) if any :**
  Master degree in Anesthesia

VACATIONS AND STUDY LEAVE

The current departmental policy is to give working candidate 2 weeks leave prior to first/ second /third / fourth semester exams.

FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post-graduate studies and the faculty and university councils.

8-Progression and completion requirements

- Examinations of the first semester could be set at 6 months from registering to the Professional Diploma degree.
- Examination of the fourth semester cannot be set before 2 years from registering to the degree.

The students are offered the degree when:

1. Passing the exams of all basic science, elective and specialty modules of this program as regulated by the post graduates approved rules by the faculty council.
2. Completing all scheduled ECTS and Portfolio (minimum 80%).

9- Program assessment methods and rules (Annex IV)

Method	ILOs measured

Written examinations: **Structured essay questions** **Objective questions:** **MCQ** **Problem solving**	**K & I**
Clinical: **Long/short cases** **OSCE**	**K , I, P &G skills**
Structured oral	**K , I &G skills**
Portfolio assessment	**All**
Research assignment	**I &G skills**

Weighting of assessments:

Modules		Degrees			
	Module code	Written Exam	Degree		Total
			Oral Exam*	Practical / Clinical Exam	
First Semester					
1. Anatomy	HBA401	70	50	-	120
2. Physiology	HBA403	50	30	-	80
3. Microbiology	HBA407	40	20	-	60
4. Pharmacology	HBA406	60	40	-	100
5. Clinical Pathology and Laboratory Testing	HBA431	25	15	-	40
6. Basic Nutrition	HBA409A	25	15		40
7. **Basic and Advanced Module of Infection Control in hepatic patient**	IPU400B	25	-	15 (case study)	40
8. Statistics and Research methodology	HBA429A#§	30	-	10	40
9. Evidence Based Medicine*	EDC400A	10 Assignment	-	10	20
10. Information Technology	HBA429B§	-	-	20	20
11. Elective modules - Hospital Administration /OR - Medical Ethics		Distribution of the degree according to module type			40
Second Semester					
1. Patient monitoring	HBA429B	120	60	20	200
2. Perioperative Emergences	HBA429C	90	50	20	160
3. Anesthetic Management of HPB Surgeries Part 1	HBA429D	120	80		200
4. Preanesthetic Evaluation	HBA429E	20	20	-	40
Third Semester					
1. Liver Related Medical Sciences	HBA429F	60	40		100
2. Anesthetic Management of HPB Surgeries Part 2	HBA429G	120	80		200
3. Intensive Care Patient Management	HBA429H	180	120		300
Fourth Semester					
1. Transplantation Related Medical Sciences	HBA429I	60	40	-	100
2. Anesthetic Management of Liver Transplant Surgeries	HBA429J	120	50	30	200
3. Liver Transplant Intensive Care	HBA429K	180	80	40	300
Total					2400

* 25% of the oral exam for assessment of Portfolio.

10-Program evaluation

By whom	method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits Questionnaires	#
Senior students	Questionnaires	#
Alumni	Questionnaires	#

#Annex 5 contains evaluation templates and reports (Joined in the departmental folder).

11-Declaration

We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.
All Module specifications for this program are in place.

Contributor	Name	Signature	Date
▪ **Program Principle Coordinator:**	Ass.Prof. Mostafa Samy Abbas		
▪ **Program Academic Director:**	**Head of Department**		

Annex 1, Specifications for Courses / Modules

First semester Modules

Basic Science Track

1. Anatomy.
2. Physiology.
3. Microbiology.
4. Pharmacology.
5. Clinical Pathology and Laboratory Testing.
6. Basic Nutrition.
7. Basic and Advanced Infection Control in hepatic patient
8. Statistics and Research methodology
9. Evidence based Medicine
10. Information Technology

Elective Modules Track

1. Hospital Administration
2. Medical Ethics

Anatomy Module (I-1)

Name of department: **Anatomy**

Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Anatomy**
- **Module code:** HBA401
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Anesthesia and Intensive care.**
- **Total CP= 6 / total marks : 120 / total hours 180**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
6 CP	40 hours	-	-	140	-	180
Percentage%	22.2%	-		77.8%		100

- **Department (s) delivering the Module: Anatomy in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  Staff members of anatomy Department in conjunction with Anesthesia and Surgical Intensive Care Department as annually approved by both departments' councils
- **Date last reviewed: 6/2019.**
- **General requirements (prerequisites) if any : None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire the facts of anatomy necessary for the Hepato-pancreatico-biliary Anesthesia and Intensive care.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ Learning	*Methods of Evaluation*
A1. **Describe Principles of** - Liver anatomy. - Anatomy of Pancreatico-biliary system - Splanchnic Circulation	-Lectures	-Written and oral examination - Portfolio

B- Intellectual outcomes

ILOs	Methods of teaching/ Learning	Methods of Evaluation
B1. Correlates the facts of anatomy with clinical reasoning, diagnosis and management of common diseases related to the Hepato-pancreatico-biliary anesthesia and Intensive care.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Portfolio

C- Practical skills = 0

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ Learning	Methods of Evaluation
D1-Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ Learning	Methods of Evaluation
D2. Work effectively with others	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D3. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Portfolio

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D4. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating

4. Module contents (topics/modules/rotation)

Module Matrix

Time Schedule: First semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Liver anatomy	A1	B1	-	D1-D4
Pancreatico-biliary anatomy	A1	B1	-	D1-D4
Splanchnic circulation	A1	B1	-	D1-D4

5. Module Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience

6. Module Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Module assessment methods:

i. Assessment tools:

- Written and oral examination
- Portfolio

ii. Time schedule: At the end of the first Semester

iii. Marks: 120

- Written = 70
- Oral = 50

8. List of references

- **Lectures notes**
- **Essential books**

  Gray's Anatomy of the Human Body (30th Edition)
- **Periodicals, Web sites**, … etc: None
- others: None

9. Signatures

Module Coordinator	
Module Coordinator: **…….**	**Head of the Department:** **……**
Date: ……	**Date: ……**

Physiology Module (I-2)

Name of department: Physiology Department

Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Physiology**
- **Module code:** HBA403
- **Speciality: Professional Diploma in the Hepato-pancreatico-biliary anesthesia and Intensive care.**
- **Number of ECTS : 4**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
5 CP	40 hours	-	-	80 hours	-	120
Percentage%	33.3 %	-	-	66.7 %	-	100

- **Department (s) delivering the Module: Physiology in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  Staff members of Physiology Department in conjunction with Anesthesia and Intensive Care Department as annually approved by both departments' councils
- **Date last reviewed: 5/2019.**
- **General requirements (prerequisites) if any : None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire the facts of Physiology necessary for the Hepato-pancreatico-biliary Anesthesia and Intensive care.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ Learning	*Methods of Evaluation*
A1. **Describe Principles of:** – Portal circulation – Liver function with details of role of liver in metabolism – Bile synthesis, secretion and its function – Secretory function of pancreas – Control in pancreatic secretion and bile flow – Coagulation system.	-Lectures	-Written and oral examination - Portfolio

B- Intellectual outcomes

ILOs	Methods of teaching/ Learning	Methods of Evaluation
B1. Correlates the facts of physiology with clinical reasoning, diagnosis and management of common diseases related to the Hepato-pancreatico-biliary anesthesia and Intensive care	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Portfolio

C- Practical skills = 0

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ Learning	Methods of Evaluation
D1.Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ Learning	Methods of Evaluation
D2. Work effectively with	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D3. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Portfolio

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D4. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating

4. Module contents (topics/modules/rotation)

Module Matrix

Time Schedule: First semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
– Portal circulation	A1	B1	-	D1-D4
– Liver function with details of role of liver in metabolism	A1	B1	-	D1-D4
– Secretory function of pancrease and Control in pancreatic secretion and bile flow	A1	B1	-	D1-D4
– Bile synthesis, secretion and its function	A1	B1	-	D1-D4
– Coagulation system	A1	B1	-	D1-D4

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication

4. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Assessment methods:

i. Assessment tools:

- Written and oral examination
- Portfolio

ii. Time schedule: At the end of the first Semester

iii. Marks: 80 (50 Writen + 30 oral)

8. List of references

- **Lectures notes**
- **Essential books**

  Guyton and Hall Textbook of Medical Physiology 13th Edition
- **Periodicals, Web sites, … etc: None**
- **Others: None**

9. Signatures

Module Coordinator	
Module Coordinator: ……	**Head of the Department: ……**
Date: ……	**Date: …….**

Microbiology Module (I-3)

Name of department: Microbiology and Immunology Department.
Faculty of medicine Assiut University 2019-2021

1 Module data

- **Module Title: Microbiology**
- **Module code:** HBA407
- **Specialty: Professional Diploma in the Hepato-**pancreatico-biliary Anesthesia and Intensive care.
- **Number of ECTS: 3.**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
3 CP	30	-		60	-	90
Percentage%	33.3%	-		66.7%	-	100

- **Department (s) delivering the module: Microbiology and Immunology in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  Staff members of Microbiology and Immunology Department in conjunction with Anesthesia and surgical Intensive Care Department as annually approved by both departments' councils
- **Date last reviewed: 6/2019.**
- **General requirements (prerequisites) if any : None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire the facts of microbiology necessary for the Hepato-pancreatico-biliary Anesthesia and Intensive care.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ Learning	*Methods of Evaluation*
A1. **Describe Principles of** - Principles of immune response - Basic of humoral and cellular immune response	-Lectures	-Written and oral examination - Portfolio

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Correlates the facts of microbiology and immunology with clinical reasoning, diagnosis and management of common diseases related to the Hepato-pancreatico-biliary anesthesia and Intensive care.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Portfolio

C- Practical skills = 0

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1-Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D2. Write a report in common condition mentioned in A1	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D3. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Portfolio

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D4. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating

4. Module contents (topics/modules/rotation)

Module Matrix

Time Schedule: First semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
– Principles of immune response	A1	B1	-	D1-D4
– Basis of humoral and cellular immune response	A1	B1	-	D1-D4

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Assessment methods:

i. Assessment tools:

- Written and oral examination
- Portfolio

ii. Time schedule: At the end of the first Semester

iii. Marks: 60 (Written 40 + 20 oral)

8. List of references

- **Lectures notes**
- **Essential books,** Microbiology: An Introduction 12th Edition
- **Periodicals, Web sites, … etc: None**
- **others: None**

9. Signatures

Module Coordinator	
Module Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……

Name of department: Pharmacology
Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Pharmacology**
- **Module code:** HBA406
- **Specialty: Professional Diploma in the** Hepato-pancreatico-biliary and Liver Transplant anesthesia and Intensive care
- **Number of ECTS: 5**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
5 CP	50	-	-	100	-	150
Percentage%	33.3%	-	-	66.7%	-	100

- **Department (s) delivering the module: Pharmacology in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  Staff members of Pharmacology Department in conjunction with Anesthesia and Surgical Intensive Care Department as annually approved by both departments' councils
- **Date last reviewed: 5/2019.**
- **General requirements (prerequisites) if any : None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

The student should acquire the facts of pharmacological aspects for Hepato-pancreatico-biliary anesthesia and Intensive care.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A1. **Describe Principles of** - Mechanism of drug resistance and indications of chemoprophylaxis - Drugs used in portal hypertension - Antiviral agents - Antibacterial agents - Antifungal agents - Immunosuppression – basics and commonly used drugs – doses, monitoring and adverse effects - Commonly used drugs in patients with end stage liver disease.	-Lectures	-Written and oral examination - Portfolio

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Correlates the facts of Pharmacology with clinical reasoning, diagnosis and management of common diseases related to the Hepato-pancreatico-biliary anesthesia and Intensive care**.**	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Portfolio

C- Practical skills = 0

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ Learning	Methods of Evaluation
D1.Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation

D2. Write a report in common condition mentioned in A1	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D3. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Portfolio

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D4. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating

4. Contents (topic s/modules/rotation

Module Matrix

Time Schedule: First semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
- Mechanism of drug resistance and indications of chemoprophylaxis	A1	B1	-	D1-D4
- Drugs used in portal hypertension	A1	B1	-	D1-D4
- Antiviral agents	A1	B1	-	D1-D4
- Antibacterial Agents	A1	B1	-	D1-D4
- Antifungal Agents	A1	B1	-	D1-D4
- Immunosuppression – basics and commonly used drugs – doses, monitoring and adverse effects	A1	B1	-	D1-D4
- Commonly used drugs	A1	B1	-	D1-D4

in patients with end stage liver disease.				

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Assessment methods:

i. Assessment tools:

- Written and oral examination
- Portfolio

ii. Time schedule: At the end of the first Semester

iii. Marks: 100 (60 written + 40 oral)

8. List of references

- **Lectures notes**
- **Essential books,** Lippincott Illustrated Reviews: Pharmacology 6th edition
- **Periodicals, Web sites, … etc: None**
- **Others: None**

9. Signatures

Module Coordinator	
Module Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……

Clinical Pathology and Laboratory testing Module (I-5)

Name of department: Clinical Pathology Department

Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Clinical Pathology**
- **Module code:** HBA431
- **Speciality: Professional** Diploma in the Hepato-pancreatico-biliary anesthesia and Intensive care**.**
- **Number of ECTS : 2**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
2 CP	20	-	-	40	-	60
Percentage%	33.3%	-	-	66.7%	-	100%

- **Department (s) delivering the module: Clinical Pathology in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  Staff members of Clinical Pathology Department in conjunction with Anesthesia and Surgical Intensive Care Department as annually approved by both departments' councils
- **Date last reviewed: 5/2019.**
- **General requirements (prerequisites) if any: None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire the facts of laboratory investigations necessary for the Hepato-pancreatico-biliary anesthesia and Intensive care.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A1. **Describe Principles of** - Interpretation of liver function tests; Normal Markers of cholestasis and cholangitis, Synthetic function (INR, clotting factors, albumin, bilirubin). - Coagulation studies - Sepsis biomarkers	-Lectures	-Written and oral examination - Portfolio

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Correlates the facts of clinical pathology with clinical reasoning related to the Hepato- Hepato-pancreatico-biliary anesthesia and Intensive care	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Portfolio

C- Practical skills = 0

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1.Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D2. Write a report in common condition mentioned in A1	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D3. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Portfolio

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D4. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating

4. Module contents (topic s/modules/rotation

Module Matrix

Time Schedule: First semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
– Interpretation of liver function tests	A1	B1	-	D1-D4
– Coagulation studies	A1	B1	-	D1-D4
– Sepsis biomarkers	A1	B1	-	D1-D4

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Assessment methods:

i. Assessment tools:

- Written and oral examination
- Portfolio

ii. Time schedule: At the first semester

iii. Marks: 40 (25 written + 15 oral)

8. List of references

- **Lectures notes**
- **Essential books**, Clinical Pathology Board Review 1st Edition
- **Periodicals, Web sites, … etc: None**
- **others: None**

9. Signatures

Module Coordinator	
Module Coordinator: ……	**Head of the Department: ……**
Date: ……	**Date: ……**

Basic Nutrition Module (I-6)

Name of department: Public Health and Community Medicine
Faculty of Medicine Assiut University 2018-2019

1. Module data

- **Module Title: Basic Nutrition**
- **Module code:** HBA409A
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Anesthesia and Intensive care.**
- **Total CP= 2 (total hours 60)**

Credit Points	Hours for student Workload/Semester				
	Lecture	Practical/ Clinical	Test Preparation	Journal Club (Critical Appraisal of scientific articles related to nutrition)	Total Hours
2 CP	24 hours (12 lectures)	10 hours	22 hours	4 hours	60 hours
Percentage %	40 %	16.7%	36.7%	6.6%	100%

- **Department (s) delivering the module: Staff members of Public Health and Community Medicine Department in conjunction with Anesthesia and Surgical Intensive Care as annually approved by both Departments' councils.**
- **Coordinator (s):**
  - **Prof. Medhat Araby Khalil saleh**
  - **Assistant coordinator: Diploma coordinators**
- **Date last reviewed: 8-5-2019.**
- **General requirements (prerequisites) if any:**
  None
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

To provide the students with the required scientific basis of applied clinical nutrition in Hepato-pancreatico-biliary Anesthesia and Intensive care., that enable them to apply their nutritional skills of problem solving and critical thinking in case studies and cases in real sittings to improve health status of those patients.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ Learning	*Methods of Evaluation*
A1. **Describe Principles of** - Effect of chronic liver diseases on nutritional status and metabolism - Assessment of nutritional status in hepatic patients - Applying knowledge to calculate nutrients' requirements for hepatic patients - Nutritional therapy in NAFLD/NASH - Nutrition in acute liver disease - Nutritional guidelines in liver injuries - Nutrition in compensated liver cirrhosis and End-Stage Liver Disease. - Applied nutrition in patients with pancreatitis (both acute and chronic) - Nutrition in Gallbladder Diseases (stone & Cholestasis) - Nutritional needs and interpretation in surgical patients (perioperative and postoperative) in hepato-biliary system - Role of parenteral nutrition in hepatic patients	- Lectures and discussion – Demonstrations	-Written and oral examination

B- Intellectual outcomes

ILOs	Methods of teaching/ Learning	Methods of Evaluation
B1. Formulate the facts of nutrition with clinical reasoning, diagnosis and management of common diseases related to the Hepato-pancreatico-biliary anesthesia and Intensive care.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Portfolio

C- Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1. Obtain proper history and examine patients in caring and respectful behaviors.	-Lectures -Seminars	OSCE Portfolio
C2. Apply practical skills in the assessment of nutritional status of patients with hepatic-biliary pancreatic diseases.	- Practical application	- Clinical work in outpatient& inpatients clinics

	- Case studies -Individual and group exercises	-Portfolio -Practical Examination
C3. Apply evidence-based knowledge to calculate total energy requirements of hepatic patients based on their physiological & nutritional states.		
C4. Apply different nutrition protocols for short- and long-term nutrition management of different hepatic-biliary pancreatic diseases.		

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1. Identify the relation between clinical nutrition and health status of patients with hepato-biliary pancreatic diseases.	(Discussion and tutorial) Observation and supervision Written and oral communications.	-Written and oral examination -Portfolio -Critical appraisal
D2. Appraises evidence from scientific articles related to nutrition of patients with hepato-biliary pancreatic diseases.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D3. Maintain therapeutic and ethically sound relationship with patients.	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list
D4. Work effectively with others as a member of a health care team		
D5. Council patients and families about the importance of nutrition in patients with liver diseases.		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D6. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Portfolio
D7. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society		

D8. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D9. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating

4. Module contents (topic s/modules/rotation

Module Matrix

Time Schedule: First semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
- Effect of chronic liver diseases on nutritional status and metabolism	A1	B1	C1-C4	D1-D9
- Assessment of nutritional status in hepatic patients	A1	B1	C1-C4	D1-D9
- Apply knowledge to calculate the nutrient requirements for hepatic patients	A1	B1	C1-C4	D1-D9
- Nutritional therapy in NAFLD/NASH	A1	B1	C1-C4	D1-D9
- Nutrition in acute liver disease	A1	B1	C1-C4	D1-D9
- Nutritional guidelines in liver injuries	A1	B1	C1-C4	D1-D9
- Nutrition in compensated liver cirrhosis and End-Stage Liver Disease.	A1	B1	C1-C4	D1-D9
- Applied nutrition in patients with pancreatitis (both acute and chronic)	A1	B1	C1-C4	D1-D9
- Nutrition in Gallbladder Diseases (stone & Cholestasis)	A1	B1	C1-C4	D1-D9
- Nutritional needs and interpretation in surgical patients (perioperative and postoperative) in hepato-	A1	B1	C1-C4	D1-D9

biliary system				
- Role of parenteral nutrition in hepatic patients	A1	B1	C1-C4	D1-D9

5. Methods of teaching/learning:

1. Didactic (lectures, Discussion, Demonstrations, seminars, tutorial)
2. Observation and supervision
3. Case studies and presentations
4. Clinical work in inpatients and outpatients clinics
5. Written & oral communication
6. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

Students must be qualified with good intellectual and communication skills but these methods will be used if needed:

1. Extra Didactic (lectures, discussion, seminars, tutorial) according to their needs
2. Extra Laboratory work , practical work, case studies and clinical work in outpatients and inpatient clinics according to their needs

7. Assessment methods:

i. Assessment tools:

- Written and oral examination
- Portfolio
- Practical assessment
- Case studies evaluation
- Critical appraisal of scientific nutritional research articles
- Individual and group exercises
- Clinical work in outpatient& inpatients clinics.

ii. Time schedule: At the end of the first semester

iii. Marks: 40

(25 for written examination (15 oral and Practical)

8. List of references

- **Lectures notes**
- **Essential books,** The Essential Pocket Guide for Clinical Nutrition Second Edition, Oxford handbook of clinical nutrition, Basic nutrition and diet therapy, Food Composition Tables of the National Nutrition Institute

i. **Periodicals, Web sites, … etc: Journals of clinical nutrition**

ii. **others: American Liver Foundation http://www.liverfoundation.org**

9. Signatures

Module Coordinator	
Module Coordinator: Prof Dr Medhat Araby Khalil Saleh	**Head of the Department: Prof Dr Randa Mohamed Shams Eldeen**
Date: ……	**Date: ……**

Basic and Advanced Infection Control in Hepatic Patients (1-7)

- **Name of department:** ***Infection Control Department***
  - **Faculty of medicine**
  - **Assiut University**
  - **2019-2021**

1. Module data

- **Module Title:** ***Basic And Advanced Infection Control In Hepatic Patients***
- **Module code:** IPU400B
- **Speciality:**
  Professional Diploma in Hepato-pancreatico-biliary anesthesia and Intensive care
- **Number of ECTS: 2**

Credit Points	Student Workload/Semester (15 weeks)					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study (Workshop, Audit, Project and or presentation)	Total Hours
2	**20**	**-**	**10**	**20**	**10**	**60**
Percentage	33.3 %	(0 %)	16.7%	33.3 %	16.7 %	**100%**

- **Department (s) delivering the Module:** ***Infection Control Unit***
- **Coordinator (s):**
  - **Principal coordinator: Dr. Esraa Mostafa Ali**
  - **Assistant coordinator (s) Dr. Asmaa Mohammed Abdelaziz, Dr. Amal Hossny Dr. Ayat Bekhet , Dr. Amina Abdel Al**
- **Date last reviewed: 1-6-2019**
- **Students to achieve module ILOs are clarified in the joining Portfolio.**

2. Module aims

The student should acquire scientific infection prevention and control facts essential for hepatic patients.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A1. Illustrate Principles of: - Basic of Infection Control. - Bundles Prevention. - Control Infection In Liver Transplantation Unit.	Power point and Video	Test evaluation and case studies
A2. Describe details of: −Basic Content of Infection Control Module with illustration of Cores. - Care VAP Bundle -Catheter associated Urinary tract infections. - SSI bundle. - Central line bundles. - Solid Organ Transplant.	Power point and Video	Test evaluation and case studies

B- Intellectual outcomes

ILOs	Methods of teaching/ Learning	Methods of Evaluation
B1. Correlates the facts of way of infection with clinical reasoning, diagnosis and management of common diseases related to staying in hospital to hepatic patients	Power point and Video	Test evaluation and case studies

C- Practical skills

Practical: 0 credit point

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ Learning	Methods of Evaluation
D1. Use information technology to manage information, access on-line medical information; and support their own education.	Case study and calculation of rate of H.H. complance	Homework

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D2. Write a report in the conditions mentioned in lecture	Audit	Homework

about conditions mentioned in A1 and A1,A2 with calculation rate of infection from ICU.		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D3 Demonstrate a commitment to ethical principles.	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D4. Work effectively in relevant health care delivery settings and systems.	Practical audit	Homework

4. Module Contents (topic s/modules/rotation
Module Matrix

Time Schedule: First Semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Basic of Infection Control. Attendance and effectiveness	A1	B1	-	D1-D4
- Bundles Prevention.	A1	B1	-	D1-D4
- Control Infection In Liver Transplantation Unit.	A1	B1	-	D1-D4
–Basic Content of Infection Control Module With illustration of Cores.	A2	B1	-	D1-D4
- Care VAP Bundle	A2	B1	-	D1-D4
Catheter associated Urinary tract infections.	A2	B1	-	D1-D4
- SSI bundle.	A2	B1	-	D1-D4
- Solid Organ Transplant.	A2	B1	-	D1-D4

5. Methods of teaching/learning:

1. Power point presentation.
2. Video.
3. Case study.

6. Methods of teaching/learning: for students with poor achievements

1. On job training.

7. Assessment methods:

i. Assessment tools:

1. Exam (Written and case study)
2. Homework and audit.

ii. Time schedule: At the end of the first semester

iii. Marks: 40 (25 for written exam - 15 for case study).

8. List of references

i. Lectures notes

- Hard copy
- Soft of infection control hand hygiene audit

ii. Essential books

- Infection control policy of Egypt
- GCI infection control policy

iii. Recommended books

- APIC

iv. Periodicals, Web sites, … etc

- **Periodicals:**
- https://www.who.int/infection-prevention/en/
- https://www.cdc.gov/
- **Web sites: ----------**

v. Others

9. Signatures

Module Coordinator	
Principal Coordinator: **Dr. Esraa Mostafa Ali**	**Head of the Department:** **Prof. Dr. Hebatallah Gamal Rashed**
Date: ……	**Date: ……**

Statistics and Research Methodology (I-8)

Name of department: **Community Medicine Department and Statistic and Insurance Department.**

Faculty of Medicine Assiut University 2019-2020

1. Module data

- **Module Title: Statistics and Methodology**
- **Module code:** HBA429A#§
- **Specialty: Professional Diploma in** Hepato-pancreatico-biliary Anesthesia and Intensive Care
- **Total CP= 2 / total marks: 20 / total hours 60**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
1 CP	14 hours (7 lectures)	20 hours	6	20	-	60
Percentage%	23.3%	33.3	10	33.3%		100%

Department (s) delivering the Module : Community Medicine Department and Statistic and Insurance Department.

Coordinator (s):Prof. Farag Mohamed Moftah

Dr. Hesham A. Abdalla

Staff members of :

Community Medicine Department.

Statistic and Insurance Department.

- **Date last reviewed: -May 2019.**
- **General requirements (prerequisites) if any : None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

- The student should acquire the skills of data analysis necessary for research purpose in the Hepato-pancreatico-biliary Anesthesia and Intensive Care
- The aim of this Module is to develop students' skills in statistical data analysis as a tool of research methodology, to select the most appropriate statistical techniques, to apply the statistical method using statistical package(SPSS) and to interpret the results of the used statistical methods.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. A1- Define statistical population – samples. A2- List types of random samples. A3- Define and list types of variables. A4- Describe measurements levels. A5- Recognize types of research questions. A6. Univariate Statistical methods A.7 Multivariate statistical Methods for Associational research questions	-Lectures -Case study	Written Exam - Portfolio

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1- Solve a wide range of problems related to the data analysis in scientific research. B2- Select lines of argument and appropriate judgments in accordance with the data using regression analysis and how to figure out their relation if there any, with applications. B3- Analyze information critically, including published researches or reports using Mathematics and computer science to solve the statistical problems and apply the results in different fields.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Portfolio

C- Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1- Use statistical package to manipulate and analyze medical data. C2- Use sampling software to calculate and select the appropriate sample size. C3- Apply the scientific approach to select the appropriate statistical method.	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Practical skill assesment

D- General and Transferable Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1- Develop Creativity and imagination skills, Self-assessment ability and Critical thinking and analytic ability. D2- Use information to Support the ability of thinking in the field of statistical probability. D3- Think independently, set tasks and solve problems on ethical scientific basis using Mathematics and computer science. D4- Deal with scientific facts and theories to analyze and interpret practical data.	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

4. Module contents (topic s/modules/rotation

Module Matrix

Time Schedule: First semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Basic statistical definitions in medicine	A1 A2		-	D1-D4
Sampling methods and Sample size	A1 A2		-	D1-D4
A brief introduction to SPSS			C1 C2	D1-D4
Key terms related to data analysis	A3 A4		-	
Selecting the appropriate statistical method for data analysis	A4 A5		C3-	D1-D4
Interpreting inferential statistics		B1 B3	-	D1-D4
Statistical methods for difference research questions		B1 B3	C3	D1-D4
Univariate Statistical methods for Associational research questions	A 6	B1 B3	C3	D1-D4
Multivariate statistical Methods for Associational	A7	B2	C3	D1-D4

research questions - Multiple Regression - Logistic Regression				

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Written & oral communication and discussions to assess general and transferable skills
3. Reports, assignments, exercises, and final written exam to assess knowledge and understanding.
4. Regular oral, practical and written quizzes to assess intellectual skills.

6 Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra practical work according to their needs

7. Assessment methods:

i. Assessment tools:

- Practical Assignments

ii. Time schedule: At the end of the Module

iii. Marks: 10

- Written examination

ii. Time schedule: At the end of the Module

iii. Marks: 30

8. List of references

i. **Lectures notes:** There are lectures notes prepared in form of a book

ii. **Essential books:** None

iii. Periodicals, Web sites, … etc: None

iv. **Others Recommended books:**

- Statistical methods for practice and research: a guide to data analysis using SPSS by Ajai S Gaur; Sanjaya S Gaur, 2009.
- Handbook of univariate and multivariate data analysis and interpretation with SPSS by Robert Ho, 2006.

9. Facilities required for teaching and learning

1. Computer Lab
2. Datashow, screen.
3. White board and colored pens

10. Signatures

Module Coordinator	
Dr. ……	**Head of Department: Prof. ……**
Date: ……	**Date: ……**

Evidence based medicine (I-9)

1. Module data

- **Module Title: Evidence Based Medicine**
- **Module code:** EDU400A
- **Speciality: Professional Diploma in Hepato-pancreatico-biliary Anesthesia and Intensive Care.**
- **Total CP= 1 / total marks : 20 / total hours 30**

Credit Points	Hours for student Workload/Semester				
	Lecture	Practical/ Clinical	Test Preparation	Journal club Assignment	Total Hours
1CP	6 hours (6 lectures)	9 hours	9 hours	6 hours	30 hours
Percentage %	20 %	30	30%	20%	100%

- **Department (s) delivering the Module: Education development center**
- **Coordinator (s):**
  - **Module coordinator: Ahmad Makhlouf**
- **Date last reviewed: 8-5-2019**
- **General requirements (prerequisites) if any :**
  - **None**
- **Requirements from the students to achieve Module ILOs are clarified in the joining portfolio.**

2. Module Aims

1. To intensify the flow of knowledge from academic research to clinical practice.
2. Combining interdisciplinary clinical cases with questions of diagnosis and therapy, the Module program tackles the range of questions that occur when searching for information that allows one to base clinical practice on scientific evidence

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ Learning	*Methods of Evaluation*
A1. Define evidence-based medicine and the steps of evidence based practice. A2. Recognize the leaking pipeline of evidence and explain barriers to transfer evidence in clinical practice.	Didactic Team based Journal club	Written and assignment portfolio

B- Intellectual outcomes

ILOs	Methods of teaching/ Learning	Methods of Evaluation
B1. Critically appraise different types of study design, B2. Decide whether or not to incorporate the research findings into clinical practice	Didactic Team based Journal club	Written and assignment portfolio

C- Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1. Formulate clinical questions and make them answerable in a scientific way C2. Search for and select relevant literature for scrutinizing and critical appraisal C3. Evaluate simple numerical results C4. Apply relevant clinical evidence in clinical practice	Didactic Practical Team based Journal club	Written and assignment portfolio

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1. Explain basic principles in adult learning theories in context of EBM teaching D2. Evaluate their own performance	Didactic Practical Team based Journal club	Written and assignment portfolio

4. Module contents (Module Matrix)

Time Schedule: First Part or Second part

Topic	Covered ILOs			
	Knowledge A	**Intellectual B**	**Practical skills C**	**General Skills D**
Introduction to Evidence-based Medicine. Posing questions and running searches in PubMed.	A1,A2	B1	C1	D1
How to search the clinical evidence: More	A2	B1,B2	C1,C2	D1,D2
How to appraise evidence about interventions	A1,A2	B1,B2	C1-C4	D1,D2
How to appraise evidence on harm	A1,A2	B1,B2	C1-C4	D1,D2
How to appraise evidence about diagnostic tests	A1,A2	B1,B2	C1-C4	D1,D2
How to assess evidence from systematic reviews	A1,A2	B1,B2	C1-C4	D1,D2

5. Methods of teaching/learning:

1. Didactic
2. Practical
3. Team based
4. Journal club

6. Methods of teaching/learning: for students with poor achievements

NA

7. Assessment methods:

i. Assessment tools:

Written assignments

An individual **final exam** in which students apply Module concepts for solving problems. Information from clinical research papers will be presented and students will have to identify PICO questions, critically appraise the validity evidence using the guidelines learned, and assess and analyze the findings reported in the studies.

ii. Time schedule: At the end of the first semester

ii. Marks: 20 (10 for written exam(**Assignment**) and 10 for practical).

8. List of references

i. Lectures notes

PowerPoint hand outs

i. Essential books

Guyatt G, Rennie D, Meade MO, Cook DJ, eds. Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice. 2nd Ed. New York, NY: McGraw-Hill; 2008. This resource is freely available to FIU students and faculty when accessed from campus through the following link: http://www.jamaevidence.com/resource/520. Accessed 3/19/2012.

ii. Recommended books

Straus SE, Glasziou P, Richardson WS, Haynes RB. Evidence-Based Medicine. How to practice and teach EBM. Edinburg: Elsevier Churchill Livingstone, Fourth Edition, 2011.

iv. Periodicals, Web sites, etc

v. Others

9. Signatures

Module Coordinator: …….	**Head of the Department: ……**
Date:……	**Date:……..**

Information Technology [1-10]

Name of Department: **Electrical Engineering Department**

Faculty of medicine Assiut University 2019- 2022

1. Module data

- Module Title: Information Technology
- Module code: HBA429B§
- Speciality: Professional Diploma Hepato-pancreatico-biliary Anesthesia and Intensive Care
- **Total CP= 1 / total marks: 20 / total hours 30**

Credit Points	Hours for student Workload/Semester					
	Tutorial	Practical	Homework	Test Preparation	Other Private study	Total Hours
1 CP	2 hours (Tutorial)	22 hours	6	-	-	30
Percentage%	6.7%	73.3%	20%	0%	0%	100%

- **Department (s) delivering the Module: Electrical Engineering Department in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  Staff members of Electrical Engineering Department: Dr. Tarik Kamal Abdelhamid in conjunction with Diploma coordinators.
- **Date last reviewed: June 2019.**
- **General requirements (prerequisites) if any : None**
- **Requirements from the students to achieve module ILOs are clarified in the joining Portfolio.**

2. Module Aims

1- To provide the students with basic and advanced skills in using computer, internet, E-mail, and protection from common security challenges.

2- To enable the students with the formal training to use word processor, Citation Management Tools, PowerPoint, spreadsheet and searching in medical databases.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. **Describe Principles of** A1 Computer essentials A2 Online essentials A3 Word processing A4 Spreadsheets A5 Presentation A6 Citation management tools (mendeley or endnote) A7 it security A8 Hospital information system (his)	- Tutorial	- Portfolio

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1 Apply the essential concepts and skills relating to the use of devices, file creation and management, networks and data security. B2 Design and / or create, modify and prepare presentations using different slide layouts for display and printed distribution on common problems related to his field. B3 Explain how hospital information systems provide information about a patient's health history, Patient's laboratory test information and visit history.	Didactic (Practical, tutorial)	- Portfolio

C- Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1- Identify and protect from common security challenges, and operate safely when online	Practical Work	-Assessment of practical skills
C 2-Use the essential concepts and skills relating to web browsing, effective information search, online communication, e-		

mail and accessing the medical databases.		
C3- Apply practical skills in Using the advanced features of word processing applications to enhance work, improve productivity and save time.		
C4-Use a spreadsheet application, perform tasks associated with developing, formatting, modifying and using a spreadsheet, using standard formulas and functions, and competently create and format graphs or charts.		
C5-Handle a list of references or citations quite easily and effectively and thereby save on time.		
C6- Use Hospital information system (HIS) to allow health care providers to do their jobs effectively.		

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1-Use information technology to use computer, internet, E-mail, protection from common security challenges, word processor, Citation Management Tools, PowerPoint, spreadsheet and searching in medical databases.	Observation and supervision	Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D2- Practice the value of team work by acting in small group D3- Conform adequate cooperation with his/her colleagues D4- Arrange the efforts required to accomplish the tasks in specified time. D5- Organize learning time and resources and set priorities	-Observation and supervision -Written and oral communication	Portfolio

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D6-. Demonstrate the importance of information technology.	Practical and tutorial	Assessment of practical

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D 7- Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating

4. Module contents (topic s/modules/rotation

Module Matrix

Time Schedule: First semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
- Computer essentials	A1	B1	C2-C4	D1-D7
- Online essentials	A2	-	C2	D1-D7
- Word processing	A3	-	C3	D1-D7
- Spreadsheets	A4	-	C4	D1-D7
- Presentation	A5	B2	C2-C4	D1-D7
- Citation management tools (mendeley or endnote)	A6	-	C5	D1-D7
- It security	A7	-	C1	D1-D7
- Hospital information system (his)	A8	B3	C6	D1-D7

5. Methods of teaching/learning:

1. Didactic (Practical and tutorial)

6. Methods of teaching/learning: for students with poor achievements

3. Extra Didactic (Practical and tutorial) according to their needs

7. Assessment methods:

i. Assessment tools:

-Assessment of practical skills

- Portfolio

ii. Time schedule: At the end of the first semester

iii. Marks: 20

8. List of references

- **Lectures notes: None**
- **Essential books: None**
  - **Web sites: ekb and others**
  - **Others: Microsoft windows, Microsoft office application, endnote and Mendeley**

9. Signatures

Module Coordinator	
Module Coordinator: Dr. Tarik kamal abdelhamid	**Head of the Department: ……**
Date: ……	**Date: ……**

Elective Modules Track

1. Hospital Administration
2. Medical Ethics

The specification is in a separate book

Second Semester Modules

Specialty Related Anesthesia Sciences

1. Monitoring
2. Perioperative Emergences
3. Anesthetic Management of HPB Surgeries Part 1
4. Preanesthetic Evaluation

Patient monitoring (II-1)

Name of department: Anesthesia and Intensive Care Department

Faculty of medicine Assiut University 2019-2020

1. Module data

- **Module Title: Patient monitoring**
- **Module code:** HBA429B
- **Specialty: Professional Diploma in the Hepato-pancreatico-biliary Anesthesia and intensive care.**
- **Total CP= 10 / total marks : 200 / total hours 300**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
10 CP	60 hours (20 lectures)	180 hours (30 days)	-	60	-	300
Percentage%	20%	60%		20 %	-	100

- **Department (s) delivering the Module : Anesthesia and Intensive Care Department.**
- **Coordinator (s): Staff members of Anesthesia and Intensive Care Department as annually approved by department councils**
- **Date last reviewed: 5/2019.**
- **General requirements (prerequisites) if any : None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire the facts of monitoring of patient necessary for Hepato-pancreatico-biliary Anesthesia and intensive care.

3. Intended learning outcomes (ILOs):

A. Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A1. **Describe Principles of :** - Hemodynamic monitoring – Invasive and Non-invasive hemodynamic monitoring. - Arterial line placement (radial and femoral) - Central venous catheterization (femoral, internal jugular and subclavian veins) – Ultrasound guided vascular access. - Right heart catheterization (pulmonary artery catheter placement) - Transesophageal Echocardiography (TEE) - Arterial blood gas analysis and interpretation - Coagulation monitoring including Thromboelastogram (TEG), ROTEM and Sonoclot. - Cardiac output monitoring – PiCCO, TOE, Swan-Ganz. - Intracranial pressure monitoring	Didactic; Lectures Seminars	- OSCE and written exam at the end of the semester. -Assessment of practical skills - Portfolio
A2. State update and evidence-based Knowledge of different modalities of intraoperative and postoperative monitoring techniques.		
A3. Memorize the facts and principles of the relevant basic and clinically supportive sciences related to patient monitoring.		
A4.Mention the basics of quality assurance to ensure good monitoring related to Hepato-pancreatico-biliary and Liver Transplant Anesthesia and intensive care.		

B. Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Correlates the facts of relevant basic and clinically supportive sciences with	-Didactic (lectures,	-Written and clinical

clinical reasoning and practice of patient monitoring.	seminars) -Clinical practice rounds -Senior staff experience	examination. -Portfolio.

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1. Perform the following procedures: - Application of urinary catheter. - Cannulation including Central venous line. - Arterial Cannulation.	-Clinical round with senior staff -Perform under supervision of senior staff. -Clinical rounds and workshops with senior staff. -Perform under supervision of senior staff.	-Procedure presentation -Portfolio - Checklist
C2. Interpret the following invasive diagnostic procedures: - Transesophageal Echocardiography (TEE) - Arterial blood gas. - Coagulation monitoring including Thromboelastogram (TEG), ROTEM and Sonoclot. - Cardiac output monitoring – PiCCO, TOE, Swan-Ganz. - Intracranial pressure monitoring		

D. General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1. Perform practice-based improvement activities using a systematic methodology (audit, logbook)	-Case log -Observation and supervision -Written & oral communication	-Procedure/case presentation - Portfolios
D2. Appraises evidence from scientific studies (journal club)	-Journal clubs - Discussions in seminars and clinical rounds	
D3. Conduct epidemiological Studies and		

surveys.		
D4. Perform data management including data entry and analysis.		
D5. Facilitate learning of junior students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D6. Maintain therapeutic and ethically sound relationship with patients.	- Simulations - Clinical round - Seminars - Lectures - Case presentation	- Global rating - Procedure/case presentation - Portfolios - Checklist
D7 Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
D8 Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
D9. Work effectively with others as a member of a health care team or other professional group.	- Senior staff experience	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
10. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	- OSCE - Patient survey
D11. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		-360o global rating
D12. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		- OSCE - 360o global rating

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D13. Work effectively in relevant health care delivery settings and systems.	Observation -Senior staff experience	- 360o global rating
D14. Practice cost-effective health care and resource allocation that does not compromise quality of care.		-Checklist evaluation of live or recorded performance
D15. Assist patients in dealing with system complexities.		-360o global rating -Patient survey

4. Module contents (topic s/modules/rotation

Module Matrix

Time Schedule: Second semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Hemodynamic monitoring – Invasive and Non-invasive hemodynamic monitoring.	A1-A4	B1	C1,C2	D1-D15
Arterial line placement (radial and femoral)	A1-A4	B1	C1	D1-D15
Central venous catheterization (femoral, internal jugular and subclavian veins) – Ultrasound guided vascular access	A1-A4	B1	C1,C2	D1-D15
Right heart catheterization (pulmonary artery (catheter placement	A1-A4	B1	C2	D1-D15
Transesophageal Echocardiography (TEE)	A1-A4	B1	C2	D1-D15
Arterial blood gas analysis	A1-A4	B1	C1,C2	D1-D15

and interpretation				
Coagulation monitoring including Thromboelastogram (TEG), ROTEM and Sonoclot	A1-A4	B1	C2	D1-D15
Cardiac output monitoring – PiCCO, TOE, Swan-Ganz	A1-A4	B1	C2	D1-D15
Intracranial pressure monitoring	A1-A4	B1	C2	D1-D15

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
1. Written & oral communication
2. Clinical practice rounds
3. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra clinical rounds according to their needs

7. Assessment methods:

i. Assessment tools:

- Written examination
- OSCE
- Portfolio and Logbook

ii. Time schedule: At the end of second semester

iii. Marks: 200 (120 Written Oral 60 , Practical 20)

8. List of references

- Lectures notes

- Essential books: Miller's Anesthesia 8th Edition

- Periodicals, Web sites, … etc: None

- Others: None

9. Signatures

Module Coordinator	
Module Coordinator: ……	**Head of the Department: ……**
Date: ……	**Date: ……..**

Perioperative Emergencies Module (II-2)

Name of department: -Anesthesia and Intensive Care Department

Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Perioperative Emergencies**
- **Module code:** HBA429C
- **Speciality: Professional Diploma in the Hepato-pancreatico- Anesthesia and intensive care.**
- **Total CP= 8 / total marks : 160 / total hours 240**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study (ACLS Module)	Total Hours
8 CP	30	120 H (20 days)	-	70	20	240 H
Percentage%	12.5%	50%	-	29.2%	8.3%	100%

- **Department (s) delivering the Module : Anesthesia department**
- **Coordinator (s): Staff members of Anesthesia and Surgical Intensive Care Department as annually approved by department's council.**
- **Date last reviewed: 5 2019.**
- **General requirements (prerequisites) if any: None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire the facts about perioperative emergencies necessary for the anesthesia and intensive care management for Hepato-pancreatico-biliary Anesthesia and Intensive care.

- To make the students able to deal with medical emergencies safely and effectively as regard their investigations and management.

3. Intended learning outcomes (ILOs):

A. Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A1. **Describe Principles of** – Transfusion medicine – Shock states; Cardiopulmonary resuscitation – Cardiac emergencies and their management – Advanced cardiac life support – Management of the difficult airway	- Didactic - Lectures - Seminars	-Written and oral examination - Portfolio

B. Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Correlates the facts of General Medical Sciences with anesthesia and intensive care management related to the Hepato-pancreatico-biliary and Liver Transplant Anesthesia**.**	- Didactic (lectures, seminars, tutorial) - Clinical practice rounds - Senior staff experience	-Written and oral examination -Portfolio

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1. Identify Appropriately the need for a fluid bolus in an acutely unwell patient	-Didactic; -Lectures -Clinical rounds with senior staff	- Portfolio - Checklist
C2. Select appropriate fluid and volumes during administration of a fluid bolus	-Didactic; -Lectures -Clinical rounds with senior staff	- Portfolio - Checklist
C3. Identify effectively the response to a fluid bolus, and making appropriate clinical decisions based on this response	-Didactic; -Lectures -Clinical rounds with senior staff	- Portfolio - Checklist

C4. Document the response to any fluid challenge administered	-Didactic; -Lectures -Clinical rounds with senior staff	- Portfolio - Checklist
C5. Recognize the significance of major physiological perturbations that define shock.	-Didactic; -Lectures -Clinical rounds with senior staff	- Portfolio - Checklist
C6. Identify rapidly the collapsed patient in terms of ABC, airway, breathing and circulation.	-Didactic; -Lectures -Clinical rounds with senior staff	- Portfolio - Checklist
C7. Perform the following • basic life support competently as defined by Resuscitation Council (UK): effective chest compressions, airway manoeuvres, bag and mask ventilation • competently further steps in advanced life support: IV drugs; safe DC shocks when indicated; central line insertion, external pacing, endotracheal drug administration, identification and rectification of reversible causes of cardiac arrest	-Didactic; -Lectures -Clinical rounds with senior staff -Seminars -Direct observation of procedural skills	- Portfolio - Checklist
D8. Display satisfactory proficiency in performing a relevant clinical examination and assessment of the airway and dentition	-Didactic; -Lectures -Clinical rounds with senior staff -Seminars Direct observation of procedural skills	-Portfolio - Checklist
C10. Identify the following: − Normal appearances and significant abnormalities in radiographs including: • Cervical spine, chest • Head CT and MRI showing clear abnormalities relevant to the airway − Reliably the level of supervision they will require	-Didactic; -Lectures -Clinical rounds with senior staff Seminars	-Portfolio - Checklist
C12. Display •Effective pre-oxygenation, including correct use of the mask, head position and clear explanation to the patient	-Didactic; -Lectures -Clinical rounds with senior staff	-Portfolio - Checklist

• Optimal patient position for airway management, including head tilt, chin lift, jaw thrust • Managing airway with mask and oral/nasopharyngeal airways • Hand ventilation with bag and mask [including self-inflating bag] • Ability to insert and confirmation of placement of a Laryngeal Mask Airway • Correct head positioning, direct laryngoscopy and successful nasal/oral intubation techniques and confirms correct tracheal tube placement • Proper use of bougies • Correct securing and protection of LMAs/tracheal tubes during movement, positioning and transfer • Correctly conducting RSI sequence • Correctly the technique of cricoid pressure •Correct use of advanced airway techniques, including but not limited to: Proseal, LMA supreme, I Gel •Failed intubation drill •Management of 'can't intubate, can't ventilate' scenario •Correct use of oropharyngeal, laryngeal and tracheal suctioning •Small and large bore needle cricothyrotomy and manual jet ventilation •Surgical cricothyrotomy	-Case Based Discussion (CBD) -Direct observation of procedural skills - Simulation	

D. General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D2. Maintain therapeutic and ethically sound relationship with patients.	-Observation and supervision	Oral Exam Portfolio

	-Written and oral communication	Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D3. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Portfolio

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D4. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating

4. Module contents (topics/modules/rotation)

Module Matrix

Time Schedule: Second semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
– Transfusion medicine	A1	B1	A-D	D1-D4
– Shock states; Cardiopulmonary resuscitation	A1	B1	A-F	D1-D4
– Cardiac emergencies and their management	A1	B1	A-H	D1-D4
– Advanced cardiac life support	A1	B1	H	D1-D4
– Management of the difficult airway	A1	B1	I-S	D1-D4

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Assessment methods:

i. Assessment tools:

- Written and oral examination
- Portfolio

ii. Time schedule: At the end of the second semester

iii. Marks: 160 (90 Written , 50 oral, 20 Practical)

8. List of references

- **Lectures notes**
- **Essential books**

Paul L Marino: The ICU Book (3rd Edition ,2007)

Frederic S. Bongard: Current Diagnosis & Treatment in critical care (3rd edition, 2008)

Roberts and Hedges' Clinical Procedures in Emergency Medicine and - Acute Care by James R. Roberts MD FACEP FAAEM FACMT(7th Edition, 2018)

- **Periodicals, Web sites, … etc: None**
- **Others: None**

9. Signatures

Module Coordinator	
Module Coordinator: ……..	**Head of the Department: ……**
Date: ……	**Date: ……**

Anesthetic Management of Hepatobiliary Surgeries Part 1 (II-3)

Name of department: Anesthesia and Surgical Intensive Care Department
Faculty of medicine Assiut University

1. Module data

- **Module Title: Anesthetic Management of Hepatobiliary Surgeries Part 1**
- **Module code:** HBA429D
- **Specialty: Professional Diploma in the Hepato-pancreatico-biliary Anesthesia and intensive care.**
- **Total CP= 10 / total marks: 200 / total hours 300**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
10	40 hours	180 hours	-	80	-	300
Percentage%	13.3%	60%	-	26.7%	-	100%

- **Department (s) delivering the module: *Anesthesia and Intensive Care Department.***
- **Coordinator (s): Staff members of Anesthesia and Intensive Care Department as annually approved by department's council**
- **Date last reviewed: 5/2019.**
- **General requirements (prerequisites) if any : None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire a high level of clinical skills in addition to update medical knowledge as well as clinical experience and competence in the area of anesthesia of Hepatobiliary surgeries**.**

-To Provide candidates with fundamental knowledge of Anesthesia as regards; dealing with patients in operative room and training skills of different anesthetic techniques.

3. Intended learning outcomes (ILOs):

A. Knowledge and understanding

ILOs	Methods of teaching/ Learning	*Methods of Evaluation*
A1. **Describe Principles of :** -- Anesthesia for patients with hepatocellular disease – Risk assessment and perioperative management -- Anesthesia for endoscopic procedures in cirrhotic patients and for other procedures done by interventional radiology -- Anesthetic management of Liver resections – including complex resections with vascular reconstruction -- Liver transplantation (Introduction).	Didactic; Lectures Seminars Training in the operation room Senior Staff Experience	- OSCE and written exam at the end of the semester. -Assessment of practical skills - Portfolio
A2. State update and evidence based Knowledge of different modalities in practice of anesthesia		
A3. Mention the basics of quality assurance to ensure good clinical practice in the field of Anesthesia		
A4. State the impact of common health problems in the field of anesthesia on the society and how good clinical practice improves these problems.		

B. Intellectual outcomes

ILOs	Methods of teaching/ Learning	Methods of Evaluation
B1. Correlate the facts of relevant basic and clinically supportive sciences with clinical reasoning and management of problems in Anesthetic Management of Hepatobiliary Surgeries part 1	-Didactic (lectures, seminars) -Clinical practice rounds -Senior staff experience	-Written and clinical examination.
B2. Demonstrate an investigatory and analytic thinking approach (problem		

solving) to common clinical situations related to Anesthetic Management of Hepatobiliary Surgeries part 1		
B3. Design and /or present a case or review (through seminars) in one or more of common clinical problems relevant to Anesthetic Management of Hepatobiliary Surgeries part 1		
B4. Formulate management plans and alternative decisions in different situations in the field of Anesthetic Management of Hepatobiliary Surgeries part 1		

C. Practical skills

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C1. Obtain proper history and examine patients in caring and respectful behaviors. C2. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment for common conditions related to Anesthesia. C3. Carry out patient management plans for common conditions mentioned in A1 C4. Use information technology to support patient care decisions and patient education in common clinical situations related to common conditions mentioned in A1. C5. Perform competently non-invasive and invasive procedures considered essential for the Anesthesia of common conditions mentioned in A1 C6. Provide health care services aimed at preventing health problems related to Anesthesia. C7. Provide patient-focused care in common conditions related to Anesthesia, while	-Clinical round with senior staff -Perform under supervision of senior staff. -Clinical rounds and workshops with senior staff. -Perform under supervision of senior staff.	-Procedure presentation -Portofilo - Checklist

working with health care professionals, including those from other disciplines including: - Hepatobiliary and Liver transplant Surgeons - Specialists of Endoscopy -Interventional Radiologist. C8. Write competently all forms of patient charts and sheets including reports evaluating these charts (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records)		

D. General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ Learning	Methods of Evaluation
D1. Perform practice-based improvement activities using a systematic methodology(audit, logbook)	-Case log -Observation and supervision -Written & oral communication	-Procedure/case presentation - Portfolio
D2. Appraises evidence from scientific studies(journal club)	-Journal clubs - Discussions in seminars and clinical rounds	
D3. Conduct epidemiological Studies and surveys.		
D4. Perform data management including data entry and analysis.		
D5. Facilitate learning of junior students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D6. Maintain therapeutic and ethically sound relationship with patients.	- Simulations - Clinical round	- Global rating -

	- Seminars - Lectures - Case presentation	Procedure/case presentation Portfolio - Checklist
D7. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
D8 Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
D9. Work effectively with others as a member of a health care team or other professional group.	- Senior staff experience	

Professionalism

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
D10. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	- Objective structured clinical examination - Patient survey
D11. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		-360o global rating
D12. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		- Objective structured clinical examination - 360o global rating

Systems-Based Practice

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
D13. Work effectively in relevant health care delivery settings and systems.	- Observation -Senior staff experience	- 360o global rating
D14. Practice cost-effective health care and resource allocation that does not compromise quality of care.		-Checklist evaluation of live or recorded

		performance
D15. Assist patients in dealing with system complexities.		-360o global rating -Patient survey

4. Module contents (topic s/modules/rotation)

Module Matrix

Time Schedule: Second semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Anesthesia for patients with hepatocellular disease	A1-A4	B1-B4	C1-C8	D1-D15
Anesthesia for endoscopic procedures in cirrhotic patients and for other procedures done by interventional radiology	A1-A4	B1-B4	C1-C8	D1-D15
Anesthetic management of Liver resections – including complex resections with vascular reconstruction	A1-A4	B1-B4	C1-C8	D1-D15
Introduction to Liver Transplant Surgery	A1-A4	B1-B4	C1-C8	D1-D15

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Clinical practice rounds
5. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra clinical rounds according to their needs

7. Assessment methods:

i. Assessment tools:

1. Written examination
2. OSCE/OSPE
3. Portfolio and Logbook

ii. Time schedule: At the end of the second semester

iii. Marks: 200 (120 written + 80 oral and practical)

8. List of references

- Lectures notes

- Essential books:

Miller's Anesthesia 8th edition

-Periodicals, Web sites, … etc.: None

- Others: None

9. Signatures

Module Coordinator	
Module Coordinator: **…….**	**Head of the Department:** **……**
Date: ……	**Date: ……..**

Preanesthetic Evaluation module (II-4)

Name of department: Anesthesia and Surgical Intensive Care

Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Preanesthetic evaluation**
- **Module code:** HBA429E
- **Speciality: Professional Diploma in the Hepato-pancreatico-biliary Anesthesia and intensive care.**
- **Number of ECTS: 2**

Credit Points	Student Workload/Semester (15 weeks)					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
2 ECTS	10	30 h	-	20	-	60 H
Percentage %	16.7%	50%	-	33.3%	-	100%

- **Department (s) delivering the Module: Anesthesia and Surgical Intensive Care**
- **Coordinator (s): Staff members of Anesthesia and Surgical Intensive Care** as approved by Department's council.
- **Date last reviewed: April 2019.**
- **General requirements (prerequisites) if any: None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

1. The student should acquire the facts of Preoperative assessment and evaluation of a liver transplant recipient.
2. Provide candidates with fundamental knowledge of dealing with patients during pre-operative period.
3. Learn the Work up of patients for transplantation - Preoperative Evaluation, discussion in the multidisciplinary listing meeting

3. Intended learning outcomes (ILOs):

A. Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A1. Describe Principles of - History taking. - Detailed evaluation of cardiovascular function. - Detailed evaluation of physiological and functional reserve. - Guidelines for preoperative laboratory and clinical investigations. - Airway assessment. - Perioperative management of anticoagulants.	-Lectures - Anesthesia clinic	-Written and oral examination - Portfolio
A2. Describe the details of 1- Patient risk factors - ASA physical status - Functional status - Biomarkers 2- Surgical risk 3- Risk assessment tools. 4- Consent and decision making. 5- Pre operative testing		

B. Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Correlates the findings during preoperative evaluation with clinical reasoning, diagnosis and management of anesthesia related risks.	Didactic (lectures, seminars)	-Written and oral examination -Portfolio

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1. Obtain proper history and examine patients in caring and respectful behaviors in clinical diseases and common condition related to anesthesia.	-Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations	OSCE Portfolio - MCQ exam

C2. Interpret diagnostic procedures and appropriate Lab investigations. - Thrombophilia work-up for donor and recipient. -Chest X Ray, ECG, Echocardiography, pulmonary function test. - Dobutamin stress echo for the recipient. -Abdominal Ultrasonography and Doppler for donor and recipient. -Upper and lower endoscopy. -Work up of patients for transplantation - Preoperative Evaluation	-Observation and supervision -anesthesia clinic with senior staff. Written and oral communication	Oral Exam Portfolio
C3. Prescribe the following non invasive/invasive therapeutic procedures: Perioperative management of anticoagulants.	Clinical round with senior staff	-Procedure presentation - Portfolio - Chick list
C4. Carry out patient management plans for common conditions related to conditions mentioned in A1	Clinical round with senior staff	
C5 Use information technology to support patient care decisions and patient education in common clinical situations related to Preanesthetic evaluation.		
C6. Provide health care services aimed at preventing health problems related to Preanethetic evaluation:. - Hazards of anesthesia and risk of surgery .		
C7. Provide patient-focused care in common conditions related Preanesthetic evaluation while working with health care professionals, including those from other disciplines like: - Hepatobiliary pancreatic and liver transplant Medicine - Radiology. - Chest Department. - Cardiology Department.		
C8.Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records)		

D. General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1. Perform practice-based improvement activities using a systematic methodology (audit, Portofolio)	-Observation and supervision -anesthesia clinic with senior staff. Written and oral communication	Oral Exam Portfolio
D2. Appraises evidence from scientific studies(journal club)		
D3. Facilitate learning of junior students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D4. Maintain therapeutic and ethically sound relationship with patients. D5. Elicit information using effective nonverbal, explanatory, questioning, and writing skills. D6. Work effectively with others as a member of a health care team or other professional group. D7.Council patients and families about: - Anesthesia related risk - Perioperative complications - Perioperative medication management.	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D8. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Portfolio
D9. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D10. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating
D11. Practice cost-effective health care and resource allocation that does not compromise quality of care.		1. Check list evaluation of live or recorded performance

4. Module contents (topic s/modules/rotation

Module Matrix

Time Schedule: Second semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Clinical evaluation: - Medical history and review of systems. - Anesthesia directed physical examination.	A1	B1	C1-C8	D1-D11
Risk assessment: 1- Patient risk factors - ASA physical status - Functional status - Biomarkers 2- Surgical risk 3- Risk assessment tools.	A2	B1	C1-C8	D1-D11
Preoperative testing.	A2	B1	C1-C8	D1-D11
Medication management.	A2	B1	C1-C8	D1-D11
Consent and decision making.	A2	B1	C1-C8	D1-D11

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience

5. Anesthesia and pretransplant clinic.

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Assessment methods:

i. Assessment tools:

1. Written and oral examination
2. Portfolio
3. OSCE/OSPE

ii. Time schedule: At the end of the second semester

iii. Marks: 40 (20 written and 20 oral)

8. List of references

- Lectures notes

- Essential books

Miller's Anesthesia 8th Edition

- **Periodicals, Web sites, … etc: None**
- **others: None**

9. Signatures

Module Coordinator	
Module Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……

Third Semester Modules

Anesthetic and Intensive Care Management of HPB Surgeries

1. Liver related Medical Sciences
2. Anesthetic Management of HPB Surgeries Part 2
3. Intensive Care Patient Management

Liver Related Medical Sciences
Module (III-1)

Name of Department: Anesthesia and Surgical Intensive Care
Faculty of medicine - Assiut University (2019-2021).

1. Module data

- **Module Title: Liver Related Medical Sciences.**
- **Module code:** HBA429F
- **Speciallty: Professional Diploma in the Hepato-pancreatico-biliary Anesthesia and intensive care**
- **Number of ECTS: 5**

Credit Points	Student Workload/Semester (15 weeks)					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study (Attendance of workshop or Conference related to hepatology Seminar attendance and/ or presentation, Hospital works)	Total Hours
5 CPS	30	60	-	60	-	150 H
Percentage%	20%	40%	-	40%	-	100%

- **Department (s) delivering the Module:** Anesthesia and Surgical Intensive Care Department.
- **Coordinator (s):**
- **Staff members of Anesthesia and Surgical Intensive Care Department**.
- **Date last reviewed: May 2019.**
- **General requirements (prerequisites) if any: None**
- **Requirements for the students to achieve module ILOs are clarified in the joining Portfolio.**

2. Module Aims

1. To enable candidates to update medical knowledge as well as clinical experience and competence in the area of Liver Related Medical Sciences. .
2. Provide candidates with fundamental knowledge and skills of dealing with critically ill patients with problems in Liver Related Medical Sciences.
3-To give opportunities to evaluate and manage a broad variety of problems related to Hepatology.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ Learning	*Methods of Evaluation*
A1. Describe the etiology, clinical picture, diagnosis and management of the following diseases and clinical conditions: - Acute on chronic liver failure. - Hepatopulmonary syndrome. - Portopulmonary hypertension. - Vascular diseases of the liver (portal, splenic, mesentric vein thrombosis, budd-chiari syndrome, veno-occlusive disease) - Cirrhotic cardiomyopathy.	Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations	- MCQ examination -Oral and written exam -OSCE. Portfolio
A2. Mention the principles of: - Anesthesia and Peri-operative assessment of hepatic patient. -Assessment of surgical risk in liver cirrhosis. - Intensive care and prognosis scoring systems. - Haematological changes in liver disease. -Cardiac diseases and the liver/shock liver. -Liver and Kidney. -Liver support devices and implications		
A3. State update and evidence based Knowledge of : - Acute on top of chronic liver failure. - Guidelines in the management of portal hypertension.		
A4. Memorize the facts and principles of the relevant basic and clinically supportive sciences related to hepatobiliary anesthesia.		
A5. Mention the basic ethical and medicolegal principles relevant to the hepatobiliary anesthesia.		
A6. Mention the basics of quality assurance to ensure good clinical care in hepatobiliary anesthesia.		

A7. Mention the ethical and scientific principles of medical research		
A8. State the impact of common health problems in the field of Liver Related Medical Sciences on the society and how good clinical practices improve these problems.		

B- Intellectual outcomes

ILOs	**Methods of teaching/ Learning**	**Methods of Evaluation**
B1. Correlates the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases in Liver Related Medical Sciences anesthesia.	Clinical rounds Senior staff experience	Procedure/case presentation - Portfolio
B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations in Liver Related Medical Sciences anesthesia.		
B3. Design and /or present a case or review (through seminars/journal clubs.) in one or more of common clinical problems relevant to the field of Liver Related Medical Sciences anesthesia.		
B4.Formulate management plans and alternative decisions in different situations in the field of the Liver Related Medical Sciences anesthesia.		

C- Practical skills (Patient Care)

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
C1. Obtain proper history and examine patients in caring and respectful behaviors.	-Didactic; -Lectures -Clinical rounds -Seminars -Clinical rotations	OSCE Portfolio - MCQ exam
C2. Order Routine appropriate Lab investigations related to conditions mentioned in A1.	Clinical round with senior	-Procedure presentation

	staff Observation Post graduate teaching Hand on workshops	Portfolio - Chick lists
C3. Interpret the following noninvasive/invasive diagnostic procedures -Abdominal Ultrasonography and Doppler. -Liver function testing.	Clinical round with senior staff	Procedure presentation Portfolio - Chick list
C4. Prescribe the following noninvasive/invasive therapeutic procedures: -Prescribe proper treatment for conditions in A1 - Anticoagulants in vascular liver disease.	Clinical round with senior staff	-Procedure presentation - Portfolio - Chick list
C5. Carry out patient management plans for Liver Related Medical Sciences related to anesthesia.	Clinical round with senior staff	
C6. Use information technology to support patient care decisions and patient education in Liver Related Medical Sciences Anesthesia.		
C7. Provide health care services aimed at preventing health problems caused by Anesthesia in Liver Related Medical Sciences.		
C8. Provide patient-focused care in common conditions in Liver Related Medical Sciences Anethesia, while working with health care professionals, including those from other disciplines like: - Hepatobiliary pancreatic and liver transplant surgery. - Radiology. - Hepatology.		
C9. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records)		

D- General skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1. Perform practice-based improvement activities using a systematic methodology (audit, Portofolio)	-Case log -Observation and supervision -Written & oral communication	Procedure/case presentation - Portfolios
D2. Appraises evidence from scientific studies(journal club)	-Journal clubs - Discussions in seminars and clinical rounds	
D3. Conduct epidemiological Studies and surveys.		
D4. Perform data management including data entry and analysis.		
D5. Facilitate learning of junior students and other health care professionals.	Clinical rounds Senior staff experience	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D6. Maintain therapeutic and ethically sound relationship with patients.	Simulations Clinical round Seminars Lectures Case presentation Hand on workshops	Global rating Procedure/case presentation Portfolios Chick list
D7. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
D8. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		

D9. Work effectively with others as a member of a health care team or other professional group.		
D10. Present a case in in common problems related to Liver Related Medical Sciences.	Clinical round Seminars	
D11 .Write a report - Patients' anesthetic sheet reports - ABGs reports	Senior staff experience	
D12. Council patients and families about - Alternative of anesthetic procedures - Postoperative care of surgical patients	Clinical round with senior staff	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D13. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation Senior staff experience Case taking	1. Objective structured clinical examination 2. Patient survey
D14. Demonstrate a commitment to ethical principles, including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		1. 360o global rating
D15. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		1. Objective structured clinical examination 2. 360o global rating

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D16. Work effectively in relevant health care delivery settings and systems.	Observation Senior staff experience	1. 360o global rating
D17. Practice cost-effective health care and resource allocation that does not compromise quality of		1. Check list evaluation of

care.		live or recorded performance
D18. Assist patients in dealing with system complexities.		1. 360o global rating 2. Patient survey

4. Module contents (topics/modules/rotation)

Module Matrix

Time Schedule: Third semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
- Acute on top of chronic liver Failure	A1,A3,A4-A9	B1-B4	C1-C9	D1-D19
- Hepatopulmonary syndrome.	A1, A4-A9	B1-B4	C1-C9	D1-D19
- Portopulmonary hypertention	A1, A4-A9	B1-B4	C1-C9	D1-D19
- Cirrhotic Cardiomyopathy	A1, A4-A9	B1-B4	C1-C9	D1-D19
- Vascular diseases of the liver. (portal, splenic, mesentric vein thrombosis, budd chiari syndrome, veno occlusive disease)	A1,A3,A4-A9	B1-B4	C1-C9	D1-D19
- Blood diseases and the liver.	A2, A4-A9	B1-B4	C1-C9	D1-D19
- Liver and Kidney.	A2, A4-A9	B1-B4	C1-C9	D1-D19
- liver support devices and implications	A2, A4-A9	B1-B4	-	D1-D19

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication

4. Senior staff experience
5. Workshops and conference
6. Clinical rounds
7. Clinical rotation
8. Postgraduate teaching
9. Outpatient
10. Inpatient
11. Case presentation

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training work according to their needs

7. Assessment methods:

i. Assessment tools:

1. Written and clinical, oral examination
2. Portfolio
3. Objective structure clinical examination (OSCE)
4. Objective structure practical examination (OSPE)
5. Check list evaluation of live or recorded performance

ii. Time schedule: At the end of the third semester

iii. Marks: 100 (60 written + 40 oral and practical)

8. List of references

i. Lectures notes

ii. Essential books

Miller

iii.Recommended books:

- Yamda's Textbook of Gastroenterology, 2 volume set, 6 th Edition, 2015
- Sherlock's Diseases of the Liver and Biliary System, 13th Edition, 2018.
- Zakim and Boyer's Hepatology: A Textbook of Liver Disease, *7th Edition, 2017*
- Sleisenger and Fordtran's Gastrointestinal and Liver Disease 2 volume - 10 th Edition. 2015

IV-Periodicals, Web sites, … etc

EASL (European Association for Study of Liver Diseases).
AASLD (American Association for Study Liver Diseases).

v. Others: None.

9. Signatures

Module Coordinator	
Module Coordinator:	**Head of the Departments:**
Date: May 2019	**Date: May 2019**

Anesthetic Management of Hepatobiliary Surgeries, Part 2 (III-2)

Name of department: Anesthesia and Surgical Intensive Care Department
Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Anesthetic Management of Hepatobiliary Surgeries, Part 2**
- **Module code:** HBA429G
- **Specialty: Professional Diploma in the Hepato-pancreatico-biliary Anesthesia and intensive care**
- **Total CP= 10 / total marks : 200 / total hours 300**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
10 CP	40 hours	180 hours	-	80	-	300
Percentage%	13.3%	60%	-	26.7%	-	100%

- **Department (s) delivering the Module: *Anesthesia and Intensive Care Department.***
- **Coordinator (s): Staff members of Anesthesia and Intensive Care Department as annually approved by department's council.**
- **Date last reviewed: May 2019.**
- **General requirements (prerequisites) if any: None**
- **Requirements from the students to achieve Module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire a high level of clinical skills in addition to update medical knowledge as well as clinical experience and competence in the area of anesthesia of Hepatobiliary surgeries**.**

-To Provide candidates with fundamental knowledge of Anesthesia as regards; dealing with patients in operative room and training skills of different anesthetic techniques.

-To Enable candidates to start professional careers as specialists in Egypt but recognized abroad.

3. Intended learning outcomes (ILOs):

A. Knowledge and understanding

ILOs	Methods of teaching/ Learning	*Methods of Evaluation*
A1. **Describe Principles of :** -- Anesthetic management of Hepaticojejunostomy -- Anesthetic management of Whipples procedure -- Anesthetic management of Portosystemic shunt operations -- Anesthetic management of Biliary atresia	Didactic; Lectures Seminars	- OSCE and written exam at the end of the semester. -Assessment of practical skills - Portfolio
A2. State update and evidence based Knowledge of different modalities in practice of Anesthetic Management of Hepatobiliary Surgeries, Part 2.		
A3. State the impact of common health problems in the field of Anesthetic Management of Hepatobiliary Surgeries, Part 2.on the society and how good clinical practice improves these problems.		
A4. Mention the basics of quality assurance to ensure good clinical practice in the field of Anesthesia		

B. Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Correlate the facts of relevant basic and clinically supportive sciences with clinical reasoning and management of problems in practice of Anesthetic Management of Hepatobiliary Surgeries, Part 2.	-Didactic (lectures, seminars) -Clinical practice rounds -Senior staff experience	-Written and clinical examination. -Portfolio
B2. Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical situations related to Anesthetic Management of		

Hepatobiliary Surgeries, Part 2.		
B3. Design and /or present a case or review (through seminars) in one or more of common clinical problems relevant to the Anesthetic Management of Hepatobiliary Surgeries, Part 2.		
B4. Formulate management plans and alternative decisions in different situations in the field of the Anesthetic Management of Hepatobiliary Surgeries, Part 2.		

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1. Obtain proper history and examine patients in caring and respectful behaviors. C2. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment for common conditions related to Anesthetic Management of Hepatobiliary Surgeries, Part 2. C3. Carry out patient management plans for common conditions related to Anesthetic Management of Hepatobiliary Surgeries, Part 2. C4. Use information technology to support patient care decisions and patient education in common clinical situations related to Anesthetic Management of Hepatobiliary Surgeries, Part 2. C5 Perform competently non-invasive and invasive procedures considered essential for the Anesthetic Management of Hepatobiliary Surgeries, Part 2. C6. Provide health care services aimed at preventing health problems related to Anesthetic Management of Hepatobiliary Surgeries, Part 2.	-Clinical round with senior staff -Perform under supervision of senior staff. -Clinical rounds and workshops with senior staff. -Perform under supervision of senior staff.	-Procedure presentation -portfolio - Checklist

C7. Provide patient-focused care in common conditions related to Anesthesia, while working with health care professionals, including those from other disciplines C8. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets		

D. General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1 Perform practice-based improvement activities using a systematic methodology(audit, lportfolio)	-Case log -Observation and supervision -Written & oral communication	- Procedure/case presentation - Portfolio
D2. Appraises evidence from scientific studies(journal club)	-Journal clubs - Discussions in seminars and clinical rounds	
D3. Conduct epidemiological Studies and surveys.		
D3. Perform data management including data entry and analysis.		
D5. Facilitate learning of junior students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D6 Maintain therapeutic and ethically sound relationship with patients.	- Simulations - Clinical round - Seminars - Lectures - Case presentation	- Global rating - Procedure/case presentation - Portfolio - Checklist
D7. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		

D8. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
D9. Work effectively with others as a member of a health care team or other professional group.	- Senior staff experience	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D10. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	- Objective structured clinical examination - Patient survey
D11. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		-360o global rating
D12. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		- Objective structured clinical examination - 360o global rating

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D13. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	- 360o global rating
D14. Practice cost-effective health care and resource allocation that does not compromise quality of care.		-Checklist evaluation of live or recorded performance
D15. Assist patients in dealing with system complexities.		-360o global rating -Patient survey

4. Module contents (topic s/modules/rotation)

Module Matrix

Time Schedule: Third semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Anaesthetic management of Hepaticojejunostomy	A1-A4	B1-B4	C1-C8	D1-D15
Anaesthetic management of Whipples procedure	A1-A4	B1-B4	C1-C8	D1-D15
Anaesthetic management of Portosystemic shunt operations	A1-A4	B1-B4	C1-C8	D1-D15
Anaesthetic management of Biliary atresia – Anaesthetic management	A1-A4	B1-B4	C1-C8	D1-D15

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Clinical practice rounds
5. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra clinical rounds according to their needs

7.Assessment methods:

i. Assessment tools:

1. Written examination
2. Oral Examination
3. OSCE
4. Portfolio

ii. Time schedule: At the end of the third semester

iii. Marks: 200 (120 written + 80 oral and practical)

8. List of references

- **Lectures notes**
- **Essential books:**
  - Miller's Anesthesia 8th Edition
- **Periodicals, Web sites, … etc.: None**
- **Others: None**

9. Signatures

Module Coordinator	
Module Coordinator:	**Head of the Department:**
Date: ……	**Date: ……**

Intensive Care Patient Management Module (III-3)

Name of department: -Anesthesia and Surgical Intensive Care Department
Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Intensive Care Patient Management**
- **Module code:** HBA429H
- **Specialty: Professional Diploma in the Hepato-pancreatico-biliary Anesthesia and intensive care**
- **Total CP= 15 / total marks: 300 / total hours 450**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
15 CP	60 H	240	30	120 H	-	450 H
Percentage%			-		-	100%
Total marks						

- **Department (s) delivering the Module: Anesthesia department**
- **Coordinator (s): Staff members of Anesthesia department as annually approved by department's council.**
- **Date last reviewed: May 2019.**
- **General requirements (prerequisites) if any: None**
- **Requirements from the students to achieve Module ILOs are clarified in the joining portfolio**

2. Module Aims

-The student should acquire the facts of general Intensive Care Patient Management principles necessary for the intensive care management for Hepato-pancreatico-biliary and Liver Transplant surgery.
- To make the students able to deal with medical emergencies safely and effectively as regard their investigations and management**.**

3. Intended learning outcomes (ILOs):

A. Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A1. **Describe Principles of** – Intensive care management of patients undergoing liver related surgeries – Mechanical ventilation – Renal replacement therapy – ICU care bundles – Tracheostomy. – Sonography in ICU – Plasmapharesis – Intensive Care Management of Patients with Acute-on-Chronic Liver Failure (ACLF). – Arteial Blood Gases	- Didactic - Lectures - Seminars	-Written and oral examination - Portfolio
A2. State update and evidence based Knowledge and ventilatory strategies in – ARDS – Sepsis		
A3. Memorize the facts and principles of the relevant basic and clinically supportive sciences related to Intensive Care.		
A4 Mention the basic ethical and medicolegal principles relevant that should be applied in practice and are related to Intensive Care.		

B. Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Correlates the facts of Intensive care patient management related to the Hepato-pancreatico-biliary and Liver Transplant surgery.	- Didactic (lectures, seminars, tutorial) - Clinical practice rounds	-Written and oral examination -Portfolio

	- Senior staff experience	
B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Intensive care patient management		
B3. Formulate management plans and alternative decisions in different situations in the field of Intensive care patient management.		

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1. Obtain proper history and examine patients in caring and respectful behaviors.	-Didactic (lectures, seminars, tutorial) -Outpatient -Inpatient -Case presentation -Direct observation	- Portfolio - Checklist - (OSCE)
C2. Order the following non-invasive and invasive diagnostic procedures □ CVP (order) □ Arterial blood gases □ Ventilator adjustment □ Investigations	-Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops	-Procedure presentation - Portfolio - Checklist
C3. Interpret the following non-invasive and invasive diagnostic procedures □ Hemodynamic Monitoring □ ABGs	-Clinical round with senior staff -Observation - Post graduate teaching -Hand on workshops	- Portfolio - Checklist
C4. Perform the following non-invasive and invasive diagnostic and therapeutic procedures	-Clinical round with senior staff -Observation	- Portfolio - Checklist

? airway management ? ABG sampling ? CVP measurement ? Ventilator adjustment ? Chest care	Post graduate teaching -Hand on workshops	
C5. Prescribe the following non-invasive and invasive therapeutic procedures : ? Syringe pump adjustment ? Intubation ? NIV &IPPV modes and settings	-Clinical round with senior staff -Perform under supervision of senior staff	- Procedure presentation - Portfolio - Checklist
C6. Carry out patient management plans for common conditions related to Intensive care patient management	-Clinical round with senior staff -Perform under supervision of senior staff	- Portfolio - Checklist
C7. Use information technology to support patient care decisions and patient education in common clinical situations related to Intensive care patient management	-Clinical rounds with senior staff -Seminars -Direct observation of procedural skills	- Portfolio - Checklist
C8 Provide health care services aimed at preventing health problems related Intensive care patient management like: ?Hospital acquired pneumonia ?Ventilator associated respiratory tract infection ?Bed sores ?Deep venous thrombosis ?GIT bleeding ?Psychological disturbances of the patients ?Healthcare associated pneumonia	-Clinical rounds with senior staff -Seminars -Direct observation of procedural skills	- Portfolio - Checklist
C9. Provide patient-focused care in common conditions related to Intensive Care, while working with health care professionals, including those from other disciplines	-Clinical rounds with senior staff -Seminars -Direct observation of procedural skills	-Portfolio - Checklist
C10. Write competently all forms of patient charts and sheets including reports evaluating these charts and	-Didactic; -Clinical rounds with senior staff	-Portfolio - Checklist

sheets.(Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records)		

D. General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D2. Maintain therapeutic and ethically sound relationship with patients.	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list
D3. Maintain therapeutic and ethically sound relationship with patients. Record review (report)	-Observation & supervision -Didactic Simulation	
D4. Elicit information using effective nonverbal, explanatory, questioning, and writing skills		
D5. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
D6. Work effectively with others as a member of a health care team or other professional group.		
D7. Present a case in • Common problems of Intensive Care.		
D8. Write a report • Patients' medical reports • Death report • ABGs • Ventilatory lung mechanics • Hemodynamics	-Senior staff experience	

D9. Council patients and families about • Symptoms of critical illness • Methods of management • How they synchronize with ventilator	-Perform under supervision of senior staff	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D10. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation & supervision -Didactic	-Objective structured clinical examination -Patient survey
D11. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		- 360o global rating
D12. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		-Objective structured clinical examination -360o global rating

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D13 Work effectively in relevant health care delivery settings and systems including good administrative and time management.	-Observation -Senior staff experience	360o global rating
D14. Practice cost-effective health care and resource allocation that does not compromise quality of care.		-Checklist evaluation of live or recorded performance
D15. Assist patients in dealing with system complexities.		-360o global rating - Patient survey

4. Module contents (topic s/modules/rotation
Module Matrix

Time Schedule: Third semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
– Intensive care management of patients undergoing liver related surgeries	A1, A3,A4	B1-B3	C1-C4	D1-D15
– Mechanical ventilation	A1-A4	B1-B3	C2, C4-C10	D1-D15
– Renal replacement therapy	A1, A3,A4	B1-B3	-----	D1-D15
– ICU care bundles	A1-A4	B1-B3	C1-C10	D1-D15
– Tracheostomy	A1, A3,A4	B1-B3	C9	D1-D15
– Ultrasonography in ICU	A1, A3,A4	B1-B3	C9	D1-D15
– Plasmapharesis	A1, A3,A4	B1-B3	-----	D1-D15
– Acid base imbalance	A1, A3,A4	B1-B3	C2-C4	D1-D15
– Intensive Care Management of Patients with Acute-on-Chronic Liver Failure (ACLF).Intensive care and prognosis scoring systems.	A1, A3,A4	B1-B3	C1-C10	D1-D15
– ARDS	A2-A4	B1-B3	C1-C10	D1-D15
– Sepsis	A2-A4	B1-B3	C1-C10	D1-D15

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience
5. Clinical rounds
6. Hand on workshops
7. Perform under supervision of senior staff
8. Simulations
9. Case presentation
10. Inpatient
11. journal club,
12. Critically appraised topic
13. Educational prescription

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Assessment methods:

i. Assessment tools:

1. Oral examination
2. Clinical examination
3. Written examination
4. One MCQ examination
5. Objective structure clinical examination (OSCE)
6. Procedure & case Log b& Portfolios
7. Simulation
8. Record review (report)
9. Patient survey
10. 360o global rating
11. Checklist evaluation of live or recorded performance

ii. Time schedule: At the end of the third semester

iii. Marks: 300 (180 written+ 120 oral and practical)

8. List of references

- **Lectures notes**
- **Essential books**

Paul L Marino: The ICU Book (3rd Edition ,2007)

Frederic S. Bongard: Current Diagnosis & Treatment in critical care (3rd edition, 2008)

Roberts and Hedges' Clinical Procedures in Emergency Medicine and Acute Care by James R. Roberts MD FACEP FAAEM FACMT(7th Edition, 2018)

- **Periodicals, Web sites, … etc: None**
- **others: None**

9. Signatures

Module Coordinator	
Module Coordinator: **…….**	**Head of the Department:** **……**
Date: ……	**Date: ……**

Fourth Semester Modules

Anesthetic and Intensive Care Management of Liver Transplant Surgeries

1- Transplantation Related Medical Sciences
2-Anesthetic Management of Liver Transplant Surgeries
3-Liver Transplant Intensive Care

Transplantation Related Medical Sciences Module (IV-1)

Name of department: Anesthesia and Surgical Intensive Care Department
Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Transplantation Related Medical Sciences.**

Module code: HBA429I

- **Speciality: Professional Diploma in the Hepato-pancreatico-biliary Anesthesia and intensive care**
- **Total CP= 5 / total marks: 100 / total hours 150**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
5 CP	40	-	10	80	20 (Conference	150 H
Percentage%	28.7%	-	6.7%	53.3%	13.3%	100%

- **Department (s) delivering the module : Anesthesia and Surgical Intensive Care Department**
- **Coordinator (s): Staff members of Anesthesia and Surgical Intensive Care Department as annually approved by department's council.**
- **Date last reviewed: May 2019.**
- **General requirements (prerequisites) if any: None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire the facts of Transplantation Related Medical Sciences necessary for the anesthesia and intensive care management for Liver Transplant surgery.

3. Intended learning outcomes (ILOs):

A. Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A1. **Describe Principles of** – liver transplantation (History and evolution) – Concept of living donor transplantation – Organ procurement and donation – basics – Indications, contraindications and outcomes of liver transplantation – an overview – Reperfusion syndrome in clinical liver transplantation – Infectious diseases and transplantation – Understanding and recognizing complications related to liver transplantation and HPB surgeries	- Didactic - Lectures - Seminars	-Written and oral examination - Portfolio

B. Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Correlates the facts of Transplantation related Medical Sciences with anesthesia and intensive care management related to the Liver Transplant surgery**.**	- Didactic (lectures, seminars, tutorial) - Senior staff experience	-Written and oral examination -Portfolio

C. Practical skills = 0

D. General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D2 Maintain therapeutic and ethically sound relationship with patients.	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D3. Demonstrate a commitment to ethical principles	Senior Staff Experience	Oral Exam Portfolio

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D4. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	360o global rating

4. Module contents (topic s/modules/rotation

Module Matrix

Time Schedule: Fourth semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
– liver transplantation (History and evolution)	A1	B1	-	D1-D4
– Concept of living donor transplantation	A1	B1	-	D1-D4
– Organ procurement and donation – basics	A1	B1	-	D1-D4
– Indications, contraindications and outcomes of liver transplantation – an overview	A1	B1	-	D1-D4

– Reperfusion syndrome in clinical liver transplantation	A1	B1	-	D1-D4
– Infectious diseases and transplantation	A1	B1	-	D1-D4
– Understanding and recognizing complications related to liver transplantation and HPB surgeries	A1	B1	-	D1-D4

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

5. Extra Didactic (lectures, seminars, tutorial) according to their needs

7. Assessment methods:

i. Assessment tools:

1. Written and oral examination
2. Portfolio

ii. Time schedule: At the end of the fourth semester

iii. Marks: 100 (60 written and 40 oral)

8. List of references

1. **Lectures notes**
2. **Essential books:** Medical Care of the Liver Transplant Patient, 4th edition, 2012 and its updated version.
3. **Periodicals, Web sites, … etc: None**
4. **Others: None**

9. Signatures

Module Coordinator	
Module Coordinator: ……	**Head of the Department:** ……
Date: ……	**Date:** ……

Anesthetic Management of Liver Transplant Surgeries Module (IV-2)

Name of department: Anesthesia and Surgical Intensive Care Department
Faculty of medicine Assiut University 2019-2021

1. Module data

- ***Module Title: Anesthetic Management of Liver Transplant Surgeries***
- ***Module code: HBA429J***
- ***Speciality: Professional Diploma in the Hepato-pancreatico-biliary Anesthesia and intensive care.***
- ***Total CP= 10/ total marks: 200 / total hours: 300***

Credit Points	*Hours for student Workload/Semester*					
	Lecture	*Practical/ Clinical*	*Homework*	*Test Preparation*	*Other Private study**	*Total Hours*
10 CP	**40**	**180**	**-**	**80**	**-**	**300 H**
Percentage%	**13.3%**	**60%**	**-**	**26.7%**	**-**	**100%**

*** Private works load = 15 hours ; for examples: 2 passive seminars + 2 active seminar or attendance of conference related to Liver Transplantaton.**

- **Department (s) delivering the module: Anesthesia and Surgical Intensive Care department**
- **Coordinator (s): Staff members of Anesthesia and Surgical Intensive Care department as annually approved by department's council.**
- **Date last reviewed: May 2019**
- **General requirements (prerequisites) if any: None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

1. To teach and learn high level of clinical skills, in addition to update medical knowledge as well as clinical experience and competence in the area of Anesthesia for Liver transplant surgeries.
2. Provide candidates with fundamental knowledge of dealing with patients during pre- intra- and postoperative periods.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A1. Describe the etiology, clinical picture, diagnosis and management of the following diseases and clinical conditions: - Acute liver failure.	- Didactic - Lectures - Seminars	-Written and oral examination - Portfolio
A2. Describe Principles of: − Anaesthetic management of Donor Hepatectomy − Anaesthesia for liver transplantation in adults – preoperative evaluation and perioperative management − Anaesthesia for retrieval in cadaveric transplantation − Use of Cell Saver and Rapid Infusion System − Anaesthetic management of Split liver transplantation − Anaesthetic management of Auxiliary liver transplantation − Anaesthetic management of Paediatric liver transplantation − Anaesthetic management of Acute liver failure presenting for liver transplantation	- Didactic - Lectures - Seminars	-Written and oral examination - Portfolio
A3. State update and evidence based Knowledge of: - Anesthetic management of Acute liver failure presenting for liver transplantation Anesthesia for liver transplantation in adults – preoperative evaluation and perioperative management.		

B- Intellectual outcomes

ILOs	Methods of teaching/ Learning	Methods of Evaluation
B1. Correlates the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases related to Anesthetic Management of Liver Transplant Surgeries.	- Clinical rounds - Senior staff experience	-Written and oral examination -Portfolio
B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Anesthetic Management of Liver Transplant Surgeries.		
B3. Design and /or present a case or review (through seminars/journal clubs.) in one or more of common clinical problems relevant to the field of Anesthetic Management of Liver Transplant Surgeries.		
B4.Formulate management plans and alternative decisions in different situations in the field of the Anesthetic Management of Liver Transplant Surgeries.		

C- Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1. Obtain proper history and examine patients in caring and respectful behaviors.	-Didactic; -Lectures -Clinical rounds with senior staff	- OSCE - Portfolio - MCQ exam
C2. Order and interpret routine appropriate Lab investigations related to Anesthetic Management of Liver Transplant Surgeries.	-Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops	-Procedure presentation Portfolio - Chick lists
C3. Order and Interpret the following	-Clinical round	Procedure

noninvasive/invasive diagnostic procedures - Chest x-ray - ECG - Arterial blood gas - Liver function testing.	with senior staff	presentation Portfolio - Chick list
C4. Perform the following noninvasive and invasive diagnostic and therapeutic procedures - Airway management - Local anesthetic techniques - Arterial line placement (radial and femoral) - Central venous catheterization (femoral, internal jugular and subclavian veins) – Ultrasound guided vascular access. - Use of Cell Saver and Rapid Infusion System	-Clinical round with senior staff -Perform under supervision of senior staff.	-Procedure presentation - Portfolio - Chick list
C5. Practice the interpretation of - Transesophageal Echocardiography (TEE) - Arterial blood gas. - Coagulation monitoring including Thromboelastogram (TEG), ROTEM and Sonoclot. - Cardiac output monitoring – PiCCO, TOE, Swan-Ganz. - Intracranial pressure monitoring	-Clinical round with senior staff -Perform under supervision of senior staff.	
C6. Carry out patient management plans for common conditions related to Anesthetic Management of Liver Transplant Surgeries.		
C7. Use information technology to support patient care decisions and patient education in common clinical situations related to Anesthetic Management of Liver Transplant Surgeries...		
C8. Provide health care services aimed at preventing health problems related to Anesthetic Management of Liver Transplant Surgeries.		
C9. Provide patient-focused care in common conditions related to anesthesia, while		

working with health care professionals, including those from other disciplines like: - Hepatobiliary pancreatic and liver transplant surgery. - Radiology. - Hepatology.		
C10. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.		

D- General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1. Perform practice-based improvement activities using a systematic methodology.	-Case log -Observation and supervision -Written & oral communication	Procedure/case presentation - Portfolios
D2. Appraises evidence from scientific studies(journal club)	-Journal clubs - Discussions in seminars and clinical rounds	
D3 Conduct epidemiological Studies and surveys.		
D4. Perform data management including data entry and analysis.		
D5. Facilitate learning of junior students and other health care professionals.	-Clinical rounds -Senior staff experience	

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D6. Maintain therapeutic and ethically sound relationship with patients.	-Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on	-Global rating -Procedure/case presentation -Portfolios -Checklist

	workshops	
D7. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
D8. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
D9 Work effectively with others as a member of a health care team or other professional group.		
D10. Present a case in in common problems related to Anesthetic Management of Liver Transplant Surgeries.	-Clinical round -Seminars	
D11 .Write a report - Patients' anesthetic sheet reports - ABGs reports	-Senior staff experience	
D12. Council patients and families about – Alternative of anesthetic procedures – Postoperative care of surgical patients	-Clinical round with senior staff	

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D13. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation Senior staff experience Case taking	1. Objective structured clinical examination 2. Patient survey
D14. Demonstrate a commitment to ethical principles, including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		1. 360o global rating
D15. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		1. Objective structured clinical examination 2. 360o global rating

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D16. Work effectively in relevant health care delivery settings and systems.	Observation Senior staff experience	1. 360o global rating

D17. Practice cost-effective health care and resource allocation that does not compromise quality of care.		1. Check list evaluation of live or recorded performance
D18. Assist patients in dealing with system complexities.		1. 360o global rating 2. Patient survey

4. Module contents (topics/modules/rotation)
Module Matrix

Time Schedule: Forth semester

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
– Acute liver failure	A1, A3	B1-B4	C1-C10	D1-D18
– Anaesthetic management of Donor Hepatectomy	A1	B1-B4	C1-C10	D1-D18
– Anaesthesia for liver transplantation in adults – preoperative evaluation and perioperative management	A2, A3	B1-B4	C1-C10	D1-D18
– Anaesthesia for retrieval in cadaveric transplantation	A1	B1-B4	C1-C10	D1-D18
– Use of Cell Saver and Rapid Infusion System	A1	B1-B4	C1-C10	D1-D18
– Anaesthetic management of Split	A1	B1-B4	C1-C10	D1-D18

liver transplantation				
– Anaesthetic management of Auxiliary liver transplantation	A1	B1-B4	C1-C10	D1-D18
– Anaesthetic management of Paediatric liver transplantation	A1	B1-B4	C1-C10	D1-D18
– Anaesthetic management of Acute liver failure presenting for liver transplantation	A1	B1-B4	C1-C10	D1-D18

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Assessment methods:

i. Assessment tools:

- Written and oral examination
- Portfolio
- Objective structure clinical examination (OSCE)
- Objective structure practical examination (OSPE)

ii. Time schedule: At the end of the forth semester

iii. Marks: 200 (120 Written + 50 oral +30 Practical)

8. List of references

- Lectures notes

- Essential books:

Miller Anesthesia, 6th edition

- Recommended books:

- Liver Anesthesiology and Critical Care Medicine, Editors: Wagener, Gebhard (Ed.)(2018)

- Oxford Textbook of Transplant Anaesthesia and Critical Care (Oxford Textbook in Anaesthesia) 1st Edition by Ernesto A. Pretto Jr. (Editor), Gianni Biancofiore (Editor), Andre DeWolf (Editor)
- Medical Care of the Liver Transplant Patient, 4th edition

-Periodicals, Web sites, … etc:

- British journal of anesthesia
- Anesthesia and analgesia
- Anesthesiology
- Canadian journal of anesthesia
- EASL (European Association for Study of Liver Diseases).
- AASLD (American Association for Study Liver Diseases).

- Others: None

9. Signatures

Module Coordinator	
Module Coordinator: **…….**	**Head of the Department:** **……**
Date: ……	**Date: ……**

Liver Transplant
Intensive Care Module (IV-3)

Name of department: --Anesthesia and Surgical Intensive Care Department
Faculty of medicine Assiut University 2019-2021

1. Module data

- **Module Title: Liver Transplant Intensive Care**
- **Module code:** HBA429K
- **Speciality: Professional Diploma in the Hepato-pancreatico-biliary Anesthesia and intensive care.**
- **Total CP= 15 / total marks: 300 / total hours 450**

Credit Points	Hours for student Workload/Semester					
	Lecture	Practical/ Clinical	Homework	Test Preparation	Other Private study	Total Hours
15 CP	60	240	30	120	-	450 H
Percentage%	13.3%	53.3%	6.7%	26.7%	-	100%

- **Department (s) delivering the module: Anesthesia and Surgical Intensive Care department**
- **Coordinator (s): Staff members of Anesthesia and Surgical Intensive Care department as annually approved by department's council.**
- **Date last reviewed: May 2015.**
- **General requirements (prerequisites) if any: None**
- **Requirements from the students to achieve module ILOs are clarified in the joining portfolio.**

2. Module Aims

-The student should acquire the facts of Liver Transplant Intensive Care management principles necessary for Hepato-pancreatico-biliary and Liver Transplant surgery.
- To teach and learn high level of clinical skills, in addition to update medical knowledge as well as clinical experience and competence in the area of Liver Transplant Intensive Care management.

3. Intended learning outcomes (ILOs):

A. Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A1. **Describe Principles of** – Post-operative circulatory instability, hemodynamic monitoring and stabilization – Fluid and electrolyte management – Post-operative ventilatory support and weaning from mechanical ventilation – Assessment of graft function – Immunosuppression – Infection prophylaxis – Post-LT nutrition therapy – Early post-operative complications – Postoperative pain control in transplant patients	- Didactic - Lectures - Seminars	-Written and oral examination - Portfolio
A2. Memorize the facts and principles of the relevant basic and clinically supportive sciences related to **Liver Transplant** Intensive Care.		
A3. Mention the basic ethical and medicolegal principles relevant that should be applied in practice and related to Liver Transplant Intensive Care.		

B. Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
B1. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Liver Transplant Intensive Care.	- Didactic (lectures, seminars, tutorial) - Clinical practice rounds - Senior staff	-Written and oral examination -Portfolio

	experience	
B2. Formulate management plans and alternative decisions in different situations in the field of Liver Transplant Intensive Care.		

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
C1. Obtain proper history and examine patients in caring and respectful behaviors.	-Didactic (lectures, seminars, tutorial) -Outpatient -Inpatient -Case presentation -Direct observation	- Portfolio - Checklist - Objective structure clinical examination (OSCE)
C2. Order the following non-invasive and invasive diagnostic procedures □ CVP (order) □ Arterial blood gases □ Ventilator adjustment □ Investigations	-Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops	-Procedure presentation - - Portfolio - Checklist
C3. Interpret the following non-invasive and invasive diagnostic procedures □ Hemodynamic Monitoring □ ABGs	-Clinical round with senior staff -Observation - Post graduate teaching -Hand on workshops	- - Portfolio - Checklist
C4. Perform the following non-invasive and invasive diagnostic and therapeutic procedures □ airway management □ ABG sampling □ CVP measurement □ Ventilator adjustment □ CRRT processing □ Chest care	-Clinical round with senior staff -Observation Post graduate teaching -Hand on workshops	- - Portfolio - Checklist

C5. Prescribe the following non-invasive and invasive therapeutic procedures : - Syringe pump adjustment - Intubation - NIV &IPPV modes and settings	-Clinical round with senior staff -Perform under supervision of senior staff	- Procedure presentation - - Portfolio - Checklist
C6. Carry out patient management plans for common conditions related to liver transplant Intensive Care as: - Post-Operative Circulatory Instability, Hemodynamic Monitoring And Stabilization - Fluid And Electrolyte Management - Post-Operative Ventilatory Support And Weaning From Mechanical Ventilation - Assessment Of Graft Function - Immunosuppression - Infection Prophylaxis - Post-LT Nutrition Therapy	-Clinical round with senior staff -Perform under supervision of senior staff	- - Portfolio - Checklist
C7. Use information technology to support patient care decisions and patient education in common clinical situations related to liver transplant Intensive Care.	-Clinical rounds with senior staff -Seminars -Direct observation of procedural skills	- - Portfolio - Checklist
C8. Provide health care services aimed at preventing health problems related Intensive Care like: -Hospital acquired pneumonia -Ventilator associated respiratory tract infection -Bed sores -Deep venous thrombosis -GIT bleeding -Psychological disturbances of the patients -Healthcare associated pneumonia	-Clinical rounds with senior staff -Seminars -Direct observation of procedural skills	- Portfolio - Checklist
C9. Provide patient-focused care in common conditions related to Intensive Care, while working with health care professionals, including those from other disciplines	-Clinical rounds with senior staff -Seminars -Direct observation of procedural skills	-Portfolio - Checklist
C10. Write competently all forms of	-Didactic;	-- Portfolio

patient charts and sheets including reports evaluating these charts and sheets.(Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records)	-Clinical rounds with senior staff	- Checklist

D. General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
D1.Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral Exam Portfolio

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
D2. Maintain therapeutic and ethically sound relationship with patients.	-Observation and supervision -Written and oral communication	Oral Exam Portfolio Check list
D3. Maintain therapeutic and ethically sound relationship with patients. Record review (report)	-Observation & supervision -Didactic Simulation	
D4. Elicit information using effective nonverbal, explanatory, questioning, and writing skills		
D5. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
D6. Work effectively with others as a member of a health care team or other professional group.		

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
D7. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation & supervision -Didactic	-Objective structured clinical examination -Patient survey
D8. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		- 360o global rating
D9. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		-Objective structured clinical examination -360o global rating

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D10. Work effectively in relevant health care delivery settings and systems including good administrative and time management.	-Observation -Senior staff experience	360o global rating
D11. Practice cost-effective health care and resource allocation that does not compromise quality of care.		-Checklist evaluation of live or recorded performance
D12. Assist patients in dealing with system complexities.		-360o global rating - Patient survey

4. Module contents (topic s/modules/rotation

Module Matrix

Time Schedule: Forth semester

Topic	Covered ILOs			
	Knowledge A	**Intellectual B**	**Practical skill C**	**General Skills D**
– Post-operative circulatory instability, hemodynamic monitoring and stabilization	A1-A3	B1,B2	C1-C10	D1-D12
– Fluid and electrolyte management	A1-A3	B1,B2	C1-C10	D1-D12
– Post-operative ventilatory support and weaning from mechanical ventilation	A1-A3	B1,B2	C1-C10	D1-D12
– Assessment of graft function	A1-A3	B1,B2	C6	D1-D12
– Immunosuppression protocols	A1-A3	B1,B2	C6	D1-D12
– Infection prophylaxis	A1-A3	B1,B2	C6	D1-D12
– Post-LT nutrition therapy	A1-A3	B1,B2	C1-C10	D1-D12
– Early post-operative complications	A1-A3	B1,B2	C1-C10	D1-D12
– Postoperative pain control in transplant patients	A1-A3	B1,B2	--	D1-D12

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience
5. Clinical rounds
6. Hand on workshops
7. Perform under supervision of senior staff
8. Simulations
9. Case presentation
10. Inpatient
11. journal club,
12. Critically appraised topic
13. Educational prescription

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra Laboratory work according to their needs

7. Assessment methods:

i. Assessment tools:

1. Oral examination
2. Clinical examination
3. Written examination
4. One MCQ examination
5. Objective structure clinical examination (OSCE)
6. Procedure & case Log & Portfolios
7. Simulation
8. Record review (report)
9. Patient survey
10. 360o global rating
11. Check list evaluation of live or recorded performance

ii. Time schedule: At the end of the forth Semester

iii. Marks: 300 (180 written + 80 oral + 40 Practical)

8. List of references

- Lectures notes

- Essential books

- Liver Anesthesiology and Critical Care Medicine, Editors: Wagener, Gebhard (Ed.)(2018)
- Oxford Textbook of Transplant Anaesthesia and Critical Care (Oxford Textbook in Anaesthesia) 1st Edition by Ernesto A. Pretto Jr. (Editor), Gianni Biancofiore (Editor), Andre DeWolf (Editor)
- Medical Care of the Liver Transplant Patient, 4th edition

- Periodicals, Web sites, … etc: None

- Others: None

9. Signatures

Module Coordinator	
Module Coordinator: **…….**	**Head of the Department:** **……**
Date: ……	**Date: ……**

ANNEX 2
Program Academic Reference Standards (ARS)

1- Graduate attributes for Professional Diploma degree in Hepato Pancreatico-Biliary Anesthesia & Intensive care

***The Graduate (after re training and Professional Diploma degree years of study) must*:**

1- Have the capability to be a scholar, understanding and applying basics, methods and tools of scientific research and clinical audit in Hepato Pancreatico-Biliary Anesthesia & Intensive care.

2- Appraise and utilise scientific knowledge to continuously update and improve clinical practice in related to Hepato Pancreatico-Biliary Anesthesia & Intensive care.

3- Acquire sufficient medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care in the field of Hepato Pancreatico-Biliary Anesthesia & Intensive care.

4- Provide patient care that is appropriate, effective and compassionate for dealing with common health problems and health promotion using evidence-based and updated information.

5- Identify and share to solve health problems in his speciality.

6- Acquire all competencies –including the use of recent technologies- that enable him to provide safe, scientific, and ethical and evidence based clinical care including update use of new technology in Hepato Pancreatico-Biliary Anesthesia & Intensive care.

7- Demonstrate interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.

8- Function as supervisor, and trainer in relation to colleagues, medical students and other health professions.

9- Acquire decision making capabilities in different situations related to Hepato Pancreatico-Biliary Anesthesia & Intensive care.

10- Show responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.

11- Be aware of public health and health policy issues and share in system-based improvement of health care.

12- Show appropriate attitudes and professionalism.

13- Demonstrate skills of lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages in Hepato Pancreatico-Biliary Anesthesia & Intensive care
or one of its subspecialties.

2- Competency based Standards for Professional Diploma degree graduates

2.1- Knowledge and understanding

By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of

2-1-A- Established basic, biomedical, clinical, epidemiological and behavioral sciences related conditions, problem and topics.

2-1-B- The relation between good clinical care of common health problems in the Hepato Pancreatico-Biliary Anesthesia & Intensive care and the welfare of society.

2-1-C- Up to date and recent developments in common problems related to Hepato Pancreatico-Biliary Anesthesia & Intensive care.

2-1-D- Ethical and medicolegal principles relevant to practice in Hepato Pancreatico-Biliary Anesthesia & Intensive care.

2-1-E -Quality assurance principles related to the good medical practice in Hepato Pancreatico-Biliary Anesthesia & Intensive care.

2-1-F- Ethical and scientific basics of medical research.

2.2- Intellectual skills:

By the end of the program, the graduate should be able to demonstrate the following:

2-2-A- Correlation of different relevant sciences in the problem solving and management of common diseases of Hepato Pancreatico-Biliary Anesthesia & Intensive care.

2-2-B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to Hepato Pancreatico-Biliary Anesthesia & Intensive care.

2.2- C- Demonstrating systematic approach in studying clinical problems relevant to Hepato Pancreatico-Biliary Anesthesia & Intensive care.

2-2-D- Making alternative decisions in different situations in Hepato Pancreatico-Biliary Anesthesia & Intensive care.

2.3- Clinical skills

By the end of the program, the graduate should be able to

2-3-A - Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

2-3-B- Demonstrate patient care skills relevant to Hepato Pancreatico-Biliary Anesthesia & Intensive care for patients with common diseases and problems.

2-3- C- Write and evaluate reports for situations related to the field of Hepato Pancreatico-Biliary Anesthesia & Intensive care.

2.4- General skills

By the end of the program, the graduate should be able to

- ***Competency-based outcomes for Practice-based Learning and Improvement***

2-4-A- Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management.

2-4-B- Use all information sources and technology to improve his practice.

2-4-C- Demonstrate skills of teaching and evaluating others.

- ***Competency-based objectives for Interpersonal and Communication Skills***

2-4-D- Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.

- ***Competency-based objectives for Professionalism***

2-4-E- Demonstrate professionalism behaviors, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

- ***Competency-based objectives for Systems-based Practice***

2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.

2-4-g- Demonstrate skills of effective time management.

2-4-H- Demonstrate skills of self and continuous learning.

Annex 3, Methods of teaching/learning

Annex 3, Methods of teaching/learning

	Patient Care	Medical knowledge	Practice-based learning/ Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Didactic (lectures, seminars, tutorial)	X	X		X	X	X
journal club,	X	X	X			
Educational prescription	X	X	X	X	X	X
Present a case (true or simulated) in a grand round	X	X	X	X	X	
Observation and supervision	X		X	X	X	X
conferences		X	X	X		X
Written assignments	X	X	X	X	X	X
Oral assignments	X	X	X	X	X	X

Teaching methods for knowledge

- Didactic (lectures, seminars, tutorial)
- journal club
- Critically appraised topic
- Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- Present a case (true or simulated) in a grand round
- Others

Teaching methods for patient care

- Observation and supervision /Completed tasks procedure/case logs
- On-the-job" training without structured teaching is not sufficient for this skill (checklists).
- Simulation is increasingly used as an effective method for skill/ teamwork training.

Teaching methods for other skills

- Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).
- Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)
- Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes both didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

Annex 4, Assessment methods

Annex 4, ILOs evaluation methods.

Method	Practical Skills	K	Intellectual	General skills			
	Patient Care	K	I	Practice-based learning/ Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Record review	X	X	X		X	X	X
Checklist	X				X		
Global rating	X	X	X	X	X	X	X
Simulations	X	X	X	X	X	X	
Portfolios	X	X	X	X	X		
Standardized oral examination	X	X	X	X	X		X
Written examination	X	X	X	X			X
Procedure/ case log	X	X					
OSCE	X	X	X	X	X	X	X

Annex 4, Glossary of Professional Diploma Degree doctors assessment methods

- Record Review – Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.
- Chart Stimulated Recall – Uses the Professional Diploma doctor's patient records in an oral examination to assess clinical decision-making.
- Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.
- Standardized Patients (SP) – Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate Professional Diploma doctor's performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the Professional Diploma doctor's performance.
- Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the Professional Diploma doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the Professional Diploma doctors.
- Procedure or Case Logs – Professional Diploma doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by a Professional Diploma doctors.

- ❖ Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.
- ❖ Models: are simulations using mannequins or various anatomic structures to assess procedural skills and interpret clinical findings. Both are useful to assess practice performance and provide constructive feedback.
- ❖ 360 Global Rating Evaluations – Professional Diploma doctors, faculty, nurses, clerks, and other clinical staff evaluate Professional Diploma doctors from different perspectives using similar rating forms.
- ❖ Portfolios – A portfolio is a set of project reports that are prepared by the MSc doctors to document projects completed during the Professional Diploma study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.
- ❖ Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.
- ❖ Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.
- ❖ Procedure or Case Logs – Professional Diploma data. Logs are useful to document educational experiences and deficiencies.
- ❖ PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by Professional Diploma doctors.

Annex 5, Program evaluation tools

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits Questionnaires	#
Senior students	Questionnaires	#
Alumni	Questionnaires	#

Annex 6, Program Correlations:

مصفوفة توافق المعايير القومية القياسية العامة لبرامج الدراسات العليا مع المعايير الأكاديمية المعتمدة من كلية الطب – جامعة أسيوط لدرجة الدبلومة المهنية في التخدير والعناية المركزة الجراحية لحالات الكبد والبنكرياس والجهاز المراري

I- General Academic Reference Standards (GARS) versus Program ARS

1- Graduate attributes

Faculty ARS	NAQAAE General ARS for Postgraduate programs
1- Have the capability to be a scholar, understanding and applying basics, methods and tools of scientific research and clinical audit in Hepato-pancreatico-biliary Anesthesia and Intensive Care.	1– إجادة تطبيق أساسيات و منهجيات البحث العلمي واستخدام أدواته المختلفة
2- Appraise and utilise scientific knowledge to continuously update and improve clinical practice in Hepato-pancreatico-biliary Anesthesia and Intensive Care.	2–تطبيق المنهج التحليلي واستخدامه في مجال التخصص
3- Acquire sufficient medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care in Hepato-pancreatico-biliary Anesthesia and Intensive Care.	3–تطبيق المعارف المتخصصة و دمجها مع المعارف ذات العلاقة في ممارسته المهنية
4- Provide patient care that is appropriate, effective and compassionate for dealing with common health problems and health promotion using evidence-based and update information.	4–إظهار وعيا بالمشاكل الجارية و الرؤى الحديثة في مجال التخصص
5- Identify and share to solve health problems in Hepato-pancreatico-biliary Anesthesia and Intensive Care.	5–تحديد المشكلات المهنية و إيجاد حلولا لها
6- Acquire all competencies that enable him to provide safe, scientific, ethical and evidence based clinical care including update use of new technology in Hepato-pancreatico-biliary Anesthesia and Intensive Care.	6–إتقان نطاق مناسب من المهارات المهنية المتخصصة، واستخدام الوسائل التكنولوجيةالمناسبة بما يخدم ممارسته المهنية

7- Demonstrate interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public. 8- Function as supervisor, and trainer in relation to colleagues, medical students and other health professions.	7–التواصل بفاعلية و القدرة على قيادة فرق العمل
9- Acquire decision making capabilities in different situations related to Hepato-pancreatico-biliary Anesthesia and Intensive Care.	8–اتخاذ القرار في سياقات مهنية مختلفة
10- Show responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.	9– توظيف الموارد المتاحة بما يحقق أعلي استفادة و الحفاظ عليها
11- Be aware of public health and health policy issues and share in system-based improvement of health care.	10–إظهار الوعي بدوره في تنمية المجتمع و الحفاظ على البيئة في ضوء المتغيرات العالمية و الإقليمية
12- Show appropriate attitudes and professionalism.	11–التصرف بما يعكس الالتزام بالنزاهة و المصداقية و الالتزام بقواعد المهنة
13- Demonstrate skills of lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages in Hepato-pancreatico-biliary Anesthesia and Intensive Care *or* one of its subspecialties.	12–تنمية ذاته أكاديميا و مهنيا و قادرا علي التعلم المستمر

2. Academic standard

Faculty ARS	NAQAAE General ARS for Postgraduate programs
2.1.A -Established basic, biomedical, clinical, epidemiological and behavioral sciences related conditions, problems and topics.	2-1-أ-النظريات و الأساسيات المتعلقة بمجال التعلم وكذا في المجالات ذات العلاقة.
2.1.B- The relation between good clinical care of common health problems in Hepato-pancreatico-biliary Anesthesia and Intensive Care and the welfare of society.	2-1-ب-التأثير المتبادل بين الممارسة المهنية وانعكاسها علي البيئة.
2.1. C- Up to date and recent developments in common problems related to Hepato-pancreatico-biliary Anesthesia and Intensive Care.	2-1-ج-التطورات العلمية في مجال التخصص.
2.1. D- Ethical and medico-legal principles relevant to practice in the Hepato-pancreatico-biliary Anesthesia and Intensive Care..	2-1-د-المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص.
2.1. E-Quality assurance principles related to the good medical practice in Hepato-pancreatico-biliary Anesthesia and Intensive Care.	2-1-هـ- مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. F- Ethical and scientific basics of medical research.	2-1-و- أساسيات وأخلاقيات البحث العلمي
2.2. A-Correlation of different relevant sciences in the problem solving and management of common diseases of Hepato-pancreatico-biliary Anesthesia and Intensive Care. 2.2. B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to Hepato-pancreatico-biliary Anesthesia and Intensive Care.	2-2-أ- تحليل و تقييم المعلومات في مجال التخصص والقياس عليها لحل المشاكل

2.2. B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related Hepato-pancreatico-biliary Anesthesia and Intensive Care.	2-2-ب- حل المشاكل المتخصصة مع عدم توافر بعض المعطيات
2.2. A-Correlation of different relevant sciences in the problem solving and management of common diseases of Hepato-pancreatico-biliary Anesthesia and Intensive Care.	2-2-ج- الربط بين المعارف المختلفة لحل المشاكل المهنية
2.2. C- Demonstrating systematic approach in studying clinical problems relevant to the Hepato-pancreatico-biliary Anesthesia and Intensive Care.	2-2-د- إجراء دراسة بحثية و /أو كتابة دراسة علمية منهجية حول مشكلة بحثية
2.4.A-Demonstrate practice-based learning and Improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	2-2هـ- تقييم المخاطر في الممارسات المهنية في مجال التخصص
2.4.A-Demonstrate practice-based learning and Improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific improvements in patient evidence, care and risk management	2-2-و- التخطيط لتطوير الأداء في مجال التخصص
2.2.D- Making alternative decisions in different situations in the field of Hepato-pancreatico-biliary Anesthesia and Intensive Care..	2-2-ز- اتخاذ القرارات المهنية في سياقات مهنية متنوعة
2.3.A- provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. 2.3.B- Demonstrate patient care skills relevant to Hepato-pancreatico-biliary Anesthesia and	2-3-أ- إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص

Intensive Care for patients with common diseases and problems.	
2.3.C- Write and evaluate reports for Situation related to Hepato-pancreatico-biliary Anesthesia and Intensive Care..	2-3-ب- كتابة و تقييم التقارير المهنية
2.3.A- provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. 2.3.B- Demonstrate patient care skills relevant to that Hepato-pancreatico-biliary Anesthesia and Intensive Care for patients with common diseases and problems.	2-3-ج- تقييم الطرق و الأدوات القائمة في مجال التخصص
2.4.D- Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.	2-4-أ-التواصل الفعال بأنواعه المختلفة
2.4.A-Demonstrate practice-based learning and improvement skills that investigation and involves evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management 2.4.B- Use all information sources and technology to improve his practice.	2-4-ب- استخدام تكنولوجيا المعلومات بما يخدم الممارسة المهنية
2.4.A-Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management 2.4.B- Use all information sources and technology to improve his practice. 2.4.E-Demonstrate professionalism	2-4-ج- التقييم الذاتي وتحديد احتياجاته التعلمية الشخصية

behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	
2.4.A-Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, , improvements in patient care and risk management.	2-4-د- استخدام المصادر المختلفة للحصول على المعلومات و المعارف
2.4. C- Demonstrate skills of teaching and evaluating others.	2-4-هـ- وضع قواعد ومؤشرات تقييم أداء الآخرين
2.4. F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.	2-4-و- العمل في فريق ، وقيادة فرق في سياقات مهنية مختلفة
2.4.G- Demonstrate skills of effective time management.	2-4-ز- إدارة الوقت بكفاءة
2.4.H- Demonstrate skills of self and continuou learning.	2-4-ح- التعلم الذاتي و المستمر

Comparison between ARS and ILOS for Professional Diploma degree in Hepato-pancreatico-biliary Anesthesia and Intensive Care

(ARS)	(ILOs)
2-1- Knowledge and understanding	***2-1- Knowledge and understanding***
2-1-A- Established basic, biomedical, clinical, epidemiological and behavioral sciences related conditions, problem and topics.	**2-1-A**- Explain the essential facts and principles of relevant basic sciences including, Anatomy , Physiology , Microbiology and Pharmacology related to Hepato-pancreatico-biliary Anesthesia and Intensive Care. **2-1-B-** Mention essential facts of clinically supportive sciences including Basics of Nutrition, Clinical Pathology nutrition and infection control related to Hepato-pancreatico-biliary Anesthesia and Intensive Care. **2-1-C-** Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of the common diseases and situations related to Hepato-pancreatico-biliary Anesthesia and Intensive Care.
2-1-B The relation between good clinical care of common health problem in the Hepato-pancreatico-biliary Anesthesia and Intensive Care and the welfare of society.	**2-1-H-** State the impact of common health problems in the field of Hepato-pancreatico-biliary Anesthesia and Intensive Care on the society and how good clinical practice improve these problems.
2-1-C- Up to date and recent developments in common problems related to the field of Hepato-pancreatico-biliary Anesthesia and Intensive Care.	**2-1-C-** Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of the common diseases and situations related to Hepato-pancreatico-biliary Anesthesia and Intensive Care. **2-1-D-** Give the recent and update developments in the pathogenesis, diagnosis, prevention and treatment of common diseases related to Hepato-pancreatico-biliary Anesthesia and Intensive Care.
2-1-D- Ethical and medicolegal Principles relevant to practice in the Hepato-pancreatico-biliary	**2-1-E-** Mention the basic ethical and medicolegal principles that should be applied in practice and are relevant to the field of Hepato-

Anesthesia and Intensive Care field.	pancreatico-biliary Anesthesia and Intensive Care.
2-1-E-Quality assurance principles related to the good medical practice in the Hepato-pancreatico-biliary Anesthesia and Intensive Care.field.	**2-1-F-** Mention the basics and standards of quality assurance to ensure good clinical practice in the field of Hepato-pancreatico-biliary Anesthesia and Intensive Care.
2-1-F- Ethical and scientific basics of medical research.	**2-1-G-** Mention the ethical and scientific principles of medical research methodology, information technology and evidence based medicine**.**
***2-2- Intellectual skills*:** **2-2-A-**Correlation of different relevant sciences in the problem solving and management of common diseases of the Hepato-pancreatico-biliary Anesthesia and Intensive Care.	***2-2- Intellectual skills:*** **2-2-A-** Correlate the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases of the Hepato-pancreatico-biliary Anesthesia and Intensive Care.
2-2-B-Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to Hepato-pancreatico-biliary Anesthesia and Intensive Care.	**2-2-B-** Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical situations related to Hepato-pancreatico-biliary Anesthesia and Intensive Care.
2-2-C- Demonstrating systematic approach in studding clinical problems relevant to the Hepato-pancreatico-biliary Anesthesia and Intensive Care field.	**2-2-C-** Design and /or present a case or review (through seminars/journal clubs.) in one or more of common clinical problems relevant to the Hepato-pancreatico-biliary Anesthesia and Intensive Care field.
2-2-D Making alternative decisions in different situations in the field of the Hepato-pancreatico-biliary Anesthesia and Intensive Care.	**2-2-D-** Formulate management plans and alternative decisions in different situations in the field of the Hepato-pancreatico-biliary Anesthesia and Intensive Care.
2-3- Clinical skills: **2-3-A-** Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the	***2/3/1/Practical skills (Patient Care :)*** **2-3-1-A-** Obtain proper history and examine patients in caring and respectful behaviors. **2-3-1-B-** Make informed decisions about diagnostic and therapeutic interventions based on

promotion of health. **2-3-B-** Demonstrate patient care skills relevant to that Hepato-pancreatico-biliary Anesthesia and Intensive Care for patients with common diseases and problems.	patient information and preferences, up-to-date scientific evidence, and clinical judgment for common conditions related to Hepato-pancreatico-biliary Anesthesia and Intensive Care. **2-3-1-C-** Carry out patient management plans for common conditions related to Hepato-pancreatico-biliary Anesthesia and Intensive Care. **2-3-1-D-** Use information technology to support patient care decisions and patient education in common clinical situations related to Hepato-pancreatico-biliary Anesthesia and Intensive Care. **2-3-1-E-** Perform competently noninvasive and invasive procedures considered essential for the Hepato-pancreatico-biliary Anesthesia and Intensive Care. **2-3-1-F-** Provide health care services aimed at preventing health problems related to Hepato-pancreatico-biliary Anesthesia and Intensive Care. **2-3-1-G-** Provide patient-focused care in common conditions related to Hepato-pancreatico-biliary Anesthesia and Intensive Care. while working with health care professionals, including those from other disciplines.
2-3-C- Write and evaluate reports for situations related to the field of Hepato-pancreatico-biliary Anesthesia and Intensive Care.	**-3-1-H** Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets. (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records).
2-4- General skills **2-4-A-** Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care	***2/3/2 General skills*** **2-3-2-A-** Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks). **2-3-2-B-** Appraises evidence from scientific studies. **2-3-2-C-** Conduct epidemiological studies and surveys.

and risk management	
2-4-B- Use all information sources and technology to improve his practice.	**2-3-2-C-** Conduct epidemiological studies and surveys. **2-3-2-D**.Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.
2-4-C- Demonstrate skills of teaching and evaluating others.	**2-3-2-E-** Facilitate learning of students other health care professionals including their evaluation and assessment.
2-4-D- Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.	**2-3-2-F-** Maintain therapeutic and ethically sound relationship with patients. **2-3-2-G-** Elicit information using effective nonverbal, explanatory, questioning, and writing skills. **2-3-2-H-** Provide information using effective nonverbal, explanatory, questioning, and writing skills. **2-3-2-I-** Work effectively with others as a member of a health care team or other professional group.
2-4-E-Demonstrate professionalism behaviors, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	**2-3-2-J-** Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society. **2-3-2-K**- Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices. **2-3-2-L**-Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.	**2-3-2-M**-Work effectively in relevant health care delivery settings and systems including good administrative and time management **2-3-2-N-** Practice cost-effective health care and resource allocation that does not compromise quality of care. **2-3-2-O**- Assist patients in dealing with system complexities.
2-4-G- Demonstrate skills of effective time management	**2-3-2-M**-Work effectively in relevant health care delivery settings and systems including good administrative and time management
2-4-H- Demonstrate skills of self and continuous learning.	**2-3-2-A-** Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).

III- Program matrix

Knowledge and Understanding

Module	Program covered ILOs							
	2/1/A	2/1/B	2/1/C	2/1/D	2/1/E	2/1/F	2/1/G	2/1/H
Semester 1: Basic Sciences + Elective Module								
1. Anatomy	✓							
2. Physiology	✓							
3. Microbiology	✓							
4. Pharmacology	✓							
5. Clinical Pathology and Laboratory Testing		✓						
6. Basic Nutrition		✓						
7. Basic and Advanced Infection Control in hepatic patient		✓					✓	
8. Statistics and research methdology							✓	
9. Evidence Based Medicine				✓			✓	
10. Information Technology							✓	
Semester 2: Specialty Related Anesthesia Sciences								
1- Patient monitoring.	✓	✓	✓	✓		✓		
2- Perioperative Emergences.			✓					
3- Anesthetic Management of HPB Surgeries Part 1.			✓	✓		✓		✓
4. Preanesthetic Evaluation			✓	✓				
Semester 3: Anesthetic and Intensive Care Management of HPB Surgeries								
1. Liver Related Medical Sciences	✓	✓	✓	✓	✓	✓	✓	✓
2. Anesthetic Management of HPB Surgeries Part 2			✓	✓		✓		✓
3. Intensive care Patient Management	✓	✓	✓	✓	✓			
Semester 4: Anesthetic and Intensive Care Management of Liver Transplant Surgeries								
1. Transplantation Related Medical Sciences			✓					
2. Anesthetic Management of Liver Transplant Surgeries			✓	✓				
3. Liver Transplant Intensive Care	✓	✓	✓		✓			

Intellectual

rse	Program covered ILOs			
	2/2/A	2/2/B	2/2/C	2/2/D
Semester 1: Basic Sciences + Elective Module				
1. Anatomy	✓			
2. Physiology	✓			
3. Microbiology	✓			
4. Pharmacology	✓			
5. Clinical Pathology and Laboratory Testing	✓			
6. Basic Nutrition	✓			
7. Basic and Advanced Infection Control in hepatic patient	✓			
8. Statistics and research methdology		✓		
9. Evidence Based Medicine		✓	✓	
10. Information Technology			✓	
Semester 2: Specialty Related Anesthesia Sciences				
1- Patient monitoring.	✓			
2- Perioperative Emergences.	✓			
3- Anesthetic Management of HPB Surgeries Part 1.	✓	✓	✓	✓
4. Preanesthetic Evaluation	✓			
Semester 3: Anesthetic and Intensive Care Management of HPB Surgeries				
1. Liver Related Medical Sciences	✓	✓	✓	✓
2. Anesthetic Management of HPB Surgeries Part 2	✓	✓	✓	✓
3. Intensive care Patient Management	✓		✓	✓
Semester 4: Anesthetic and Intensive Care Management of Liver Transplant Surgeries				
1. Transplantation Related Medical Sciences	✓			
2. Anesthetic Management of Liver Transplant Surgeries		✓	✓	✓
3. Liver Transplant Intensive Care	✓	✓		✓

Practical Skills (Patient Care

Module	Program covered ILOs							
	2/3/1/A	2/3/1/B	2/3/1/C	2/3/1/D	2/3/1/E	2/3/1/F	2/3/1/G	2/3/1/H
Semester 1: Basic Sciences + Elective Module								
1. Anatomy								
2. Physiology								
3. Microbiology								
4. Pharmacology								
5. Clinical Pathology and Laboratory Testing								
6. Basic Nutrition	✓	✓	✓		✓			✓
7. Basic and Advanced Infection Control in hepatic patient	✓	✓	✓		✓			✓
8. Statistics and research methdology								✓
9. Evidence Based Medicine		✓		✓				
10. Information Technology				✓				✓
Semester 2: Specialty Related Anesthesia Sciences								
1- Patient monitoring.		✓			✓			
2- Perioperative Emergences	✓	✓	✓		✓			✓
3- Anesthetic Management of HPB Surgeries Part 1.	✓	✓	✓	✓	✓	✓	✓	✓
4. Preanesthetic Evaluation	✓	✓	✓	✓	✓	✓	✓	✓
Semester 3: Anesthetic and Intensive Care Management of HPB Surgeries								
1. Liver Related Medical Sciences	✓	✓	✓	✓	✓	✓	✓	✓
2. Anesthetic Management of HPB Surgeries Part 2	✓	✓	✓	✓	✓	✓	✓	✓
3. Intensive care Patient Managemen	✓	✓	✓	✓	✓	✓	✓	✓
Semester 4: Anesthetic and Intensive Care Management of Liver Transplant Surgeries								
1. Transplantation Related Medical Sciences				✓		✓		
2. Anesthetic Management of Liver Transplant Surgeries	✓	✓	✓	✓	✓	✓	✓	✓
3. Liver Transplant Intensive Care				✓		✓	✓	✓

General Skills

Module	Program covered ILOs							
	2/3/2/A	2/3/2/B	2/3/2/C	2/3/2/D	2/3/2/E	2/3/2/F	2/3/2/G	2/3/2/H
Semester 1: Basic Sciences + Elective Module								
1. Anatomy				✓				
2. Physiology				✓				
3. Microbiology				✓				✓
4. Pharmacology				✓				✓
5. Clinical Pathology and Laboratory Testing				✓				✓
6. Basic Nutrition		✓				✓		✓
7. Basic and Advanced Infection Control in hepatic patient					✓			✓
8. Statistics and research methodology	✓		✓					
9. Evidence Based Medicine	✓	✓						
10. Information Technology				✓				
Semester 2: Specialty Related Anesthesia Sciences								
1- Patient monitoring.	✓	✓	✓	✓	✓	✓	✓	
2- Perioperative Emergence.				✓		✓		
3- Anesthetic Management of HPB Surgeries Part 1.	✓	✓	✓	✓	✓	✓	✓	✓
4. Preanesthetic Evaluation	✓	✓			✓	✓	✓	✓
Semester 3: Anesthetic and Intensive Care Management of HPB Surgeries								
1. Liver Related Medical Sciences	✓	✓	✓	✓	✓	✓	✓	✓
2. Anesthetic Management of HPB Surgeries Part 2	✓	✓	✓	✓	✓	✓	✓	✓
3. Intensive care Patient Managemen				✓	✓	✓	✓	✓
Semester 4: Anesthetic and Intensive Care Management of Liver Transplant Surgeries								
1. Transplantation Related Medical Sciences				✓		✓		
2. Anesthetic Management of Liver Transplant Surgeries	✓	✓	✓	✓	✓	✓	✓	✓
3. Liver Transplant Intensive Care	✓	✓	✓	✓	✓	✓	✓	✓

General Skills (cont.)

Module	Program covered ILOs						
	2/3/2/I	2/3/2/J	2/3/2/K	2/3/2/L	2/3/2/M	2/3/2/N	2/3/2/O
Semester 1: Basic Sciences + Elective Module							
1. Anatomy	✓		✓		✓		
2. Physiology	✓		✓		✓		
3. Microbiology			✓		✓		
4. Pharmacology			✓		✓		
5. Clinical Pathology and Laboratory Testing			✓		✓		
6. Basic Nutrition	✓	✓	✓	✓	✓		
7. Basic and Advanced Infection Control in hepatic patient			✓		✓		
8. Statistics and reseach methodology							
9. Evidence Based Medicine							
10. Information Technology	✓	✓				✓	
Semester 2: Specialty Related Anesthesia Sciences							
1- Patient monitoring.	✓	✓	✓	✓	✓	✓	✓
2- Perioperative Emergence.			✓		✓		
3- Anesthetic Management of HPB Surgeries Part 1.	✓	✓	✓	✓	✓	✓	✓
4- Preanesthetic Evaluation	✓	✓	✓		✓	✓	
Semester 3: Anesthetic and Intensive Care Management of HPB Surgeries							
1. Liver Related Medical Sciences	✓	✓	✓	✓	✓	✓	✓
2. Anesthetic Management of HPB Surgeries Part 2	✓	✓	✓	✓	✓	✓	✓
3. Intensive care Patient Managemen	✓	✓	✓	✓	✓	✓	✓
Semester 4: Anesthetic and Intensive Care Management of Liver Transplant Surgeries							
1. Transplantation Related Medical Sciences	✓	✓	✓	✓	✓	✓	✓
2. Anesthetic Management of Liver Transplant Surgeries	✓		✓		✓		
3. Liver Transplant Intensive Care	✓	✓	✓	✓	✓	✓	✓

(End of the program specifications)