# Professional Diploma in Hepato-Pancreatico-Biliary Surgery

(According to currently applied credit points bylaws)

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

*Contents*

## Professional Diploma of Hepato-Pancreatico-Biliary Surgery

# A. Basic Information

- **Program Title:** Professional Diploma degree in Hepato-Pancreatico-Biliary Surgery
- **Nature of the program:** Single.
- **Responsible Department:**
  - Department of General Surgery - Faculty of Medicine- Assiut University.
- **Program Academic Director (Head of the Department):**
  - Prof.Dr Mostafa Hamad
- **Coordinator (s):**

**Principle coordinator:**

- Prof.Dr Mostafa Hamad

**Assistant coordinator (s)**

- Dr. Ahmed Taha
- Dr.Tameem Moukhtar
- Dr.Ramy Abdel Rahim
- Dr Beshir Abo El Soud
- Dr Tarek Sabra

- **Internal evaluators:** Dr. Ramy Abdel Rahim
- **External evaluator**: Prof. Dr. Khalid Ali Abou El-Ella ( Professor of Surgery, National Liver Institute, Menoufeyya 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:** 18 **Modules (17** 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 Surgery and Liver Transplant 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 Surgery and Liver Transplant 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 Pathology, Anatomy, and Physiology, related to Hepato-pancreatico-biliary Surgery.

B. Mention essential facts of clinically supportive sciences including basics of clinical pathology and Laboratory Testing and nutrition related to Hepato-pancreatico-biliary Surgery.

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

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

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

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

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 Surgery and Liver Transplant 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 Surgery.

B- Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical situations related to Hepato-pancreatico-biliary Surgery.

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 Surgery.

D- Formulate management plans and alternative decisions in different situations in the field of Hepato-pancreatico-biliary Surgery.

## 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 Surgery.

C. Carry out patient management plans for common conditions related to Hepato-pancreatico-biliary Surgery.

D. Use information technology to support patient care decisions and patient education in common clinical situations related to Hepato-pancreatico-biliary Surgery.

E. Perform competently noninvasive and invasive procedures considered essential for Hepato-pancreatico-biliary Surgery.

F. Provide health care services aimed at preventing health problems related to Hepato-pancreatico-biliary Surgery.

G. Provide patient-focused care in common conditions related to Hepato-pancreatico-biliary Surgery and Liver Transplant, 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 own 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 Surgery***

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 Surgery, 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 CP

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

Compulsory Modules: 98.5%

Elective Module: 2 credit point: 1.5%

| Name | Credit Points CP | % from total |
|---|---|---|
| ▪ Basic modules | 28 | 21.5% |
| ▪ Preoperative Assessment of HPB diseases | 30 | 23% |
| ▪ Operative and Interventional Management of HPB diseases | 30 | 23% |
| ▪ Elective module | 2 | 1.5% |
| ▪ Liver Transplantation | 30 | 23 % |
| ▪ Others ( Computer, …) | 1 | 0.8% |
| ▪ Field training | 29 | 24% |
| Total | 120 | 100% |

**1st Semester: Basic science and elective modules**

- **Duration**: 6 months
- **Contents**: **Track 1:** Basic sciences modules (7 modules)
  **Track 2:** Elective modules

| Modules | CPs | Marks | Hours |
|---|---|---|---|
| 1- Anatomy and Embryology | 7 | 140 | 210 |
| 2- Physiology | 5 | 100 | 150 |
| 3- Pathology | 5 | 100 | 150 |
| 4- Clinical Pathology and Laboratory Testing | 5 | 100 | 150 |
| 5- Statistics and Research methodology | 2 | 40 | 60 |
| 6- Nutrition | 2 | 40 | 60 |
| 7- Evidence Based Medicine | 1 | 20 | 30 |
| 8- Information Technology | 1 | 20 | 30 |
| 9- Elective modules* | 2 | 40 | 60 |
| Total | 30 | 600 | 900 |

* **Elective modules (choose one module of the following):**

- Hospital administration
- Infection control
- Medical Ethics

## 2nd Semester: Preoperative Assessment of Hepato-Pancreatico-Biliary Diseases

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

| Module | General principles of Preoperative care of Hepato-Pancreatico-Biliary diseases | Diagnostic and Basic Interventional Radiology | Therapeutic Modalities in Management of Hepato-Pancreatico-Biliary Tumors | Total |
|---|---|---|---|---|
| CP | 15 | 10 | 5 | 30 |
| Marks | 300 | 200 | 100 | 600 |
| Hours | 450 | 300 | 150 | 900 |

## 3rd Semester: Operative and Interventional Management of Hepato-Pancreatico-Biliary Diseases

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

| Module | Surgical Skills | Laparoscopy | Gastrointestinal Endoscopy | Total |
|---|---|---|---|---|
| CP | 15 | 10 | 5 | 30 |
| Marks | 300 | 200 | 100 | 600 |
| Hours | 450 | 300 | 150 | 900 |

## 4th Semester: Liver Transplantation

- Duration: 6 months.
- Contents: Two tracks

**Track: Liver Transplantation**

| Module | Basic Knowledge and introduction for organ transplantation | Preoperative Management and Assessment | Surgical Skills of liver transplantation | 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: 2360 marks.**
**Speciality Modules: 1800 marks.**
**For speciality Modules**

- Written exam: 40 % [=960 marks].
- Clinical/practical: 30 % [=720 marks].
- Oral exams: 30% [=720 marks].
- Portfolio 25 % of degree for oral exams

# D. Curriculum Structure (modules):

| Code No. | Module Title | CP | Student Workload | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Lecture (1 lecture =3h) | Practical (1 day=6h) | Homework/ Assignment | Test Preparation | Other Private study # | Total Hours |
| **First semester (30 ECTS)** | | | | | | | | |
| **Track 1:** Basic sciences (7 modules) | | | | | | | | |
| 1 | Anatomy and Embryology | 7 | 45 | - | 30 | 105 | 30 | 210 |
| 2 | Physiology | 5 | 30 | - | - | 105 | 15 | 150 |
| 3 | Pathology | 5 | 30 | - | - | 105 | 15 | 150 |
| 4 | Clinical Pathology and Laboratory Testing | 5 | 45 | - | 10 | 95 | - | 150 |
| 5 | Statistics and Research methodology | 2 | 14 | 20 | 6 | 20 | - | 60 |
| 6 | Basic Nutrition | 2 | 24 | 10 | - | 22 | 4 | 60 |
| 7 | Evidence Based Medicine | c | 6 | 9 | 3 | 9 | 3 | 30 |
| 8 | Information Technology | 1 | 2 | 22 | 6 | | - | 30 |
| **Track2:** Elective modules | | | | | | | | |
| 9 | Elective module | 2 | **Student Workload differ according module type** | | | | | 60 |
| **Second semester (30 ECTS)** | | | | | | | | |
| **Track:** Preoperative assessment of Hepato-Pancreatico-Biliary Diseases (3 modules) | | | | | | | | |
| 1 | General Principles of preoperative care of HPB diseases | 15 | 135 | 170 | - | 100 | 45 | 450 |
| 2 | Diagnostic and basic Interventional Radiology | 10 | 80 | 70 | - | 90 | 60 | 300 |
| 3 | Therapeutic Modalities in Management of HPB tumors | 5 | 45 | 15 | - | 50 | 40 | 150 |
| **Third semester (30 ECTS)** | | | | | | | | |
| **Track:** Operative and Interventional Management of Hepato-Pancreatico-Biliary Diseases (3 modules) | | | | | | | | |
| 1 | Surgical Skills | 15 | 45 | 200 | 55 | 90 | 60 | 450 |
| 2 | Laparoscopy | 10 | 30 | 150 | 30 | 60 | 30 | 300 |
| 3 | Gastrointestinal Endoscopy | 5 | 15 | 90 | - | 30 | 15 | 150 |
| **Fourth semester (30 ECTS)** | | | | | | | | |
| **Track:** Liver Transplantation (3 modules) | | | | | | | | |
| 1 | Basic Knowledge and introduction for organ transplantation | 5 | 45 | 45 | 10 | 30 | 20 | 150 |
| 2 | Preoperative Management and Assessment | 10 | 70 | 110 | 30 | 60 | 30 | 300 |
| 3 | Surgical Skills of liver transplantation | 15 | 45 | 200 | 55 | 90 | 60 | 450 |

**Student work load calculation:** One CP = 30 working hours (contact and non-contact).
One lecture = 3 hours = 1/10 CP [**1 CP = 10 lectures**]
One practical day = 6 hours = 1/5 CP [1 CP = 5 practice days]
One day on-duty = 10 hours = 1/3 CP [1 CP = 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 CP = 30 h
1 passive attendance seminar /work shop = 1/5 CP= 6 h
1 passive attendance in specialized conference = 1/2 CP= 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 :**

**Requirements:**

Master degree in Surgery.

**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:<br>Structured essay questions<br>Objective questions:<br>MCQ<br>Problem solving | K & I |
| Clinical:<br>Long/short cases<br>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/Portfolio/Attendance | |
| **First Semester** | | | | | |
| 1. Anatomy and Embryology | **HBS401** | 70 | 60 | 10 for **Portfolio** | 140 |
| 2. Physiology | **HBS403** | 50 | 40 | 10 for **Portfolio** | 100 |
| 3. Pathology | **HBS405** | 50 | 40 | 10 for **Portfolio** | 100 |
| 4. Clinical Pathology and Laboratory Testing | **HBS431** | 50 | 40 | 10 for **Portfolio** | 100 |
| 5. Statistics and Research Methodology.* | **HBS411A#§** | 30 | - | 10 | 40 |
| 6. Basic Nutrition | HBS409A | 25 | 15 | | 40 |
| 7. Evidence Based Medicine* | EDC400A | 10 | - | 10 | 20 |
| 8. Information Technology | HBS411B**§** | - | - | 20 | 20 |
| 9. Elective modules* | | Distribution of the degree according to module type | | | 40 |
| **Second Semester** | | | | | |
| 1. General Principles of preoperative care of Hepato-Pancreatico-Biliary diseases | HBS411C | 120 | 90 | 90 | 300 |
| 2. Diagnostic and basic interventional radiology | HBS428 | 80 | 60 | 60 | 200 |
| 3. Therapeutic modalities in management of Hepato-Pancreatico-Biliary tumors | HBS427 | 40 | 30 | 30 | 100 |
| **Third Semester** | | | | | |
| 1. Surgical Skills | HBS411D | 120 | 90 | 90 | 300 |
| 2. Laparoscopy | HBS411E | 80 | 60 | 60 | 200 |
| 3. Gastrointestinal Endoscopy | HBS411F# | 40 Assignment | 30 | 30 | 100 |
| **Fourth Semester** | | | | | |
| 1. Basic knowledge and introduction for organ transplantation | HBS411G | 40 | 30 | 30 | 100 |
| 2. Preoperative management and assessment | HBS411H | 80 | 60 | 60 | 200 |
| 3. Surgical Skills of liver transplantation | HBS411 I | 120 | 90 | 90 | 300 |

* 25% of the oral exam for assessment of Portfolio in 2nd, 3rd and 4th semesters.

* Evidence based medicine, Information Technology, marks are calculated on attendance and active participation along with practical exams according to module content.

*10 marks for portfolio are added to the 1st four basic sciences module

## 10-Program evaluation

| By whom | Method | sample |
|---|---|---|
| Quality Assurance Unit | Reports<br>Field visits | # |
| External Evaluator (s):According to department council<br>External Examiner (s): According to department council | Reports<br>Field visits | # |
| Stakeholders | Reports<br>Field visits<br>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:** | **Prof Dr Mostafa Hamad** | | |
| ▪ **Program Academic Director:** | **Prof Dr Mostafa Hamad** | | |

# Annex 1, Specifications for Modules

# First semester Modules

# Basic Science Track

1. Anatomy & Embryology.
2. Physiology.
3. Pathology.
4. Clinical Pathology and Laboratory Testing.
5. Statistics and Research methodology
6. Basic Nutrition.
7. Evidence Based Medicine.
8. Information Technology

# Elective Modules Track

One of the following

1. Hospital Administration
2. Infection Control
3. Medical Ethics

# Anatomy Module (I-1)

***Name of department:*** **Anatomy**

***Faculty of medicine Assiut University***

## 1. Module data

- **Module Title: Anatomy**
- **Module code: HBS401**
- **Specialty: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **Total CP= 7 / Total marks: 140 / Total hours 210**

| Credit Points | Hours for student Workload/Semester | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework | Test Preparation | Other Private study (Seminar) | Total Hours |
| 7 CP | 45 | - | 30 | 105 | 30 | 210 |
| Percentage% | 21.4 | - | 14.3% | 50% | 14.3% | 100 |

- **Department (s) delivering the Module: anatomy in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  **Staff members of anatomy Department in conjunction with Surgery 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 anatomy necessary for the Hepato-pancreatico-biliary Surgery.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ Learning | *Methods of Evaluation* |
|---|---|---|
| A1. **Describe Principles of**<br>- Liver anatomy.<br>- Anatomy of Pancreatico-biliary system<br>- Congenital anomalies<br>- Blood supply | -Lectures | -Written and oral examination<br>- 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 Surgery and Liver Transplant. | Didactic (lectures, seminars, tutorial) | -Written and oral examination<br>-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<br>-Written and oral communication | Oral Exam<br>Portfolio |

#### Interpersonal and Communication Skills

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| D2. Work effectively with others | -Observation and supervision<br>-Written and oral communication | Oral Exam<br>Portfolio<br>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 |
| Congenital anomalies | A1 | B1 | - | D1-D4 |
| Liver anatomy | A1 | B1 | - | D1-D4 |
| Pancreatico-biliary anatomy | 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: 140**

- **written = 70**
- **Oral = 60**
- **Portfolio = 10**

## 8. List of references

- **Lectures notes**
- **Essential books**
- Gray's Anatomy of the Human Body (30th Edition)
- *Larsen's human embryology* (5th ed.)
- **Periodicals, Web sites, … etc: None**
- **others: None**

## 9. Signatures

| Module Coordinators | |
|---|---|
| **Module Coordinators:**<br>**Dr Ahmed Taha**<br>**Dr ……..** | **Head of the Department:** |
| **Date: ……** | **Date: ……** |

# Physiology Module (I-2)

***Name of department:*** **Physiology**

***Faculty of medicine Assiut University***

## 1 Module data

- **Module Title: Physiology**
- **Module code: HBS403**
- **Specialty: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **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 (Active participation in Seminar) | Total Hours |
| 5 CP | 30 | - | - | 105 | 15 | 150 |
| Percentage% | 20% | - | - | 70% | 10% | 100 |

- **Department (s) delivering the Module: physiology in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  **Staff members of Physiology Department in conjunction with Surgery 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 Surgery.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ Learning | *Methods of Evaluation* |
|---|---|---|
| A1. **Describe Principles of**<br>- Liver function with details of role of liver in metabolism.<br>- Bile synthesis, secretion and its function.<br>- Endocrine and exocrine functions of the pancreas. | -Lectures | -Written<br>- 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 Surgery and Liver Transplant. | Didactic (lectures, seminars, tutorial) | -Written examination<br>-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<br>-Written and oral communication | Portfolio |

#### Interpersonal and Communication Skills

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| D2. Work effectively with others | -Observation and supervision<br>-Written and oral communication | Portfolio<br>Check list |

## Professionalism

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

## Systems-Based Practice

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D4. Work effectively in relevant health care delivery settings and systems. | -Observation<br>-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 |
| Liver function with details of liver in metabolism | A1 | B1 | - | D1-D4 |
| Exocrine function of the pancreas | A1 | B1 | - | D1-D4 |
| Endocrine function of the pancreas | A1 | B1 | - | D1-D4 |
| Bile synthesis, secretion and its function | 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:** the first semester

**iii. Marks: 100**

- **Written =50**
- **Oral =40**
- **Portfolio = 10**

## 8. List of references

- **Lectures notes**
- **Essential books**
- **Guyton and hall of medical physiology**
- **Periodicals, Web sites, … etc: None**
- **Others: None**

## 9. Signatures

| Module Coordinators | |
|---|---|
| **Module Coordinators:**<br>**Dr Tarek A. Sabra**<br>**Dr ……** | **Head of the Department:**<br>**……** |
| **Date: ……** | **Date: ……** |

# Pathology Module (I-3)

***Name of Department:*** **Pathology**

***Faculty of medicine Assiut University***

## 1. Module data

- **Module Title: Pathology**
- **Module code: HBS405**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **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 (Active participation in Seminar ) | Total Hours |
| 5 CP | 30 | - | - | 105 | 15 | 150 |
| Percentage% | 20% | - | - | 70% | 10% | 100 |

- **Department (s) delivering the Module: pathology in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  **Staff members of Pathology Department in conjunction with Surgery 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 pathology necessary for the Hepato-pancreatico-biliary Surgery and Liver Transplant.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ Learning | *Methods of Evaluation* |
|---|---|---|
| A1. **Describe the Principles of Pathology of:**<br>– Hepatitis (acute and chronic)<br>– Liver cirrhosis<br>– Pancreatitis (acute and chronic)<br>– Pancreatic tumors<br>- Liver tumours .<br>- Liver cysts (parasitic and non parasitic)<br>- Cholecystitis (acute and chronic)<br>- GB tumours.<br>- Biliary tract disorders.<br>- Biliary tract tumours. | -Lectures | -Written and oral examination<br>- Portfolio |

### B- Intellectual outcomes

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| B1. Correlates the facts of pathology with clinical reasoning, diagnosis and management of common diseases related to the Hepato-pancreatico-biliary Surgery and Liver Transplant. | Didactic (lectures, seminars, tutorial) | -Written and oral examination<br>-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<br>-Written and oral communication | Oral Exam<br>Portfolio |

## Interpersonal and Communication Skills

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

## Professionalism

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

## Systems-Based Practice

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D4.Work effectively in relevant health care delivery settings and systems. | -Observation<br>-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 |
| – Pathology of hepatitis (acute and chronic) | A1 | B1 | - | D1-D4 |
| – Pathology of cirrhosis | A1 | B1 | - | D1-D4 |
| – Pathology of pancreatitis (acute and chronic) | A1 | B1 | - | D1-D4 |
| – Pathological aspects pancreatic tumors | A1 | B1 | - | D1-D4 |
| – Pathology of liver tumours. | A1 | B1 | - | D1-D4 |

| | | | | |
|---|---|---|---|---|
| – Pathology of liver cysts (parasitic and non-parasitic). | A1 | B1 | - | D1-D4 |
| – Pathology of cholecystitis (acute and chronic) | A1 | B1 | - | D1-D4 |
| – Pathology of GB tumors. | A1 | B1 | - | D1-D4 |
| – Pathology of biliary tract disorders. | A1 | B1 | - | D1-D4 |
| – Pathology of biliary tract tumors. | 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:** first semester

**iii. Marks: 100**

- **Written = 50**
- **Oral = 40**
- **Portfolio = 10**

## 8. List of references

- **Lectures notes**
- **Essential books**
  - Robbins and cotran pathologic basis of diseases
  - *Text book of pathology Harsh Mohan*
- **Periodicals, Web sites, … etc: None**
- **Others: None**

## 9. Signatures

| **Module Coordinators** | |
|---|---|
| **Module Coordinators:**<br>**Dr Beshir Abo El Soud**<br>**Dr ……** | **Head of the Department:**<br>**……** |
| **Date: ……** | **Date: ……** |

# Clinical Pathology and Lab testing Module (I-4)

**Name of department: Clinical Pathology**

**Faculty of medicine Assiut University 2019-2020**

## 1. Module data

- **Module Title: Clinical Pathology**
- **Module code: HBS431**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **Total CP= 5 / total marks: 100 / total hours 150**
- **Number of ECTS : 5**

| Credit Points | Hours for student Workload/Semester | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework | Test Preparation | Other Private study | Total Hours |
| 3 CP | 45 | - | 10 | 95 | - | 150 |
| Percentage% | 30% | - | 6.7% | 63.3% | - | 100 |

- **Department (s) delivering the Module: Clinical Pathology in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  **Staff members of Clinical Pathology Department in conjunction with Surgery 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 Surgery.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| A1. Describe Principles of:<br>- Interpretation of liver function tests; Normal, Markers of cholestasis and cholangitis, Synthetic function (INR, clotting factors, albumin, bilirubin).<br>- Measurement of exocrine and endocrine pancreatic function, Markers of pancreatic injury/ inflammation<br>- Tumor markers of hepato-biliary pancreatic tumors | -Lectures | -Written and oral examination<br>- Portfolio |

**B-** Intellectual outcomes

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| B2. Correlates the facts of relevant basic and clinically supportive sciences with clinical reasoning related to the Hepato-pancreatico-biliary Surgery and Liver Transplant | Didactic (lectures, seminars, tutorial) | -Written and oral examination<br>-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<br>-Written and oral communication | Oral Exam<br>Portfolio |

#### Interpersonal and Communication Skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D2. Write a report in common condition mentioned in A.A | -Observation and supervision<br>-Written and oral communication | Oral Exam<br>Portfolio<br>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
## 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 |
| – Measurement of exocrine and endocrine pancreatic function, Markers of pancreatic injury/ inflammation | A | A | - | A-D |
| – Tumor markers of hepato-biliary pancreatic tumors | A | A | - | A-D |

## 5. 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. Assessment methods:

**i. Assessment tools:**

- Written and oral examination
- Portfolio

**ii. Time schedule:** at the first semester

**iii. Marks: 100**

- **Written: 50**
- **Oral: 40**
- **Portfolio = 10**

## 8. List of references

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

## 9. Signatures

| **Module Coordinators** | |
|---|---|
| **Module Coordinators:**<br>**Dr Ramy Abdel Rahim**<br>**Dr ……** | **Head of the Department:**<br>**……** |
| **Date: ……** | **Date: ……** |

# Statistics and Research Methodology (I-5)

***Name of department:***

***Faculty of Medicine Assiut University 2018-2019***

## 1. Module data

- **Module Title: Statistics and Methodology**
- **Module code: HBS411A#§**
- **Specialty: Professional Diploma in** the **Hepato-pancreatico-biliary diseases Medicine,** Hepato-pancreatico-biliary Surgery, Hepato-pancreatico-biliary Anesthesia and Intensive Care
- **Total CP= 2 / total marks 40 / 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 (7lectures) | **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**

- **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 Medicine, Hepato-pancreatico-biliary Surgery, Hepato-pancreatico-biliary and Liver Transplant Anesthesia and Intensive Care
- 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* |
|---|---|---|
| A1- Define statistical population – samples.<br>A2- Lst types of random samples.<br>A3- Define and list types of variables.<br>A4- Describe measurements levels.<br>A5- Recognize types of research questions.<br>A6. Univariate Statistical methods<br>A.7 Multivariate statistical Methods for Associational research questions | -Lectures<br>-Case study | Written Exam<br>- 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.<br>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.<br>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<br>-Portfolio |

### C- Practical skills

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

## 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.<br>D2- Use information to Support the ability of thinking in the field of statistical probability.<br>D3- Think independently, set tasks and solve problems on ethical scientific basis using Mathematics and computer science.<br>D4- Deal with scientific facts and theories to analyze and interpret practical data. | -Observation and supervision<br>-Written and oral communication | Oral Exam<br>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 research questions<br>- Multiple Regression<br>- Logistic Regression | A7 | B2 | C3 | D1-D4 |

## 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: ……** |

# 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: HBS409A**
- **Specialty: Professional Diploma in** the **Hepato-pancreatico-biliary Medicine.**
- **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 Surgery Department 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 Surgery, 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.

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## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

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

| | | |
|---|---|---|
| C2. Apply practical skills in the assessment of nutritional status of patients with hepatic-biliary pancreatic diseases. | - Practical application<br>- Case studies<br>-Individual and group exercises | - Clinical work in outpatient& inpatients clinics<br>-Portfolio<br>-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 and Surgery. | | |

## 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)<br>Observation and supervision<br>Written and oral communications. | -Written and oral examination<br>-Portfolio<br>-Critical appraisal |
| D2. Appraises evidence from scientific articles related to nutrition of patients with hepato-pancreatic0- biliary Surgery.. | | |

### Interpersonal and Communication Skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D3. Maintain therapeutic and ethically sound relationship with patients. | -Observation and supervision<br>-Written and oral communication | Oral Exam<br>Portfolio<br>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<br>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<br>-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-biliary | A1 | B1 | C1-C4 | D1-D9 |

| | | | | |
|---|---|---|---|---|
| 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: ……** |

# Evidence based medicine (I-7)

## 1. Module data

- **Module Title: Evidence Based Medicine**
- **Module code:** EDU400A
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery**
- **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 programme 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.<br>A2. Recognize the leaking pipeline of evidence and explain barriers to transfer evidence in clinical practice. | Didactic<br>Team based<br>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,<br>B2. Decide whether or not to incorporate the research findings into clinical practice | Didactic<br>Team based<br>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<br>C2. Search for and select relevant literature for scrutinizing and critical appraisal<br>C3. Evaluate simple numerical results<br>C4. Apply relevant clinical evidence in clinical practice | Didactic<br>Practical<br>Team based<br>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<br>D2. Evaluate their own performance | Didactic<br>Practical<br>Team based<br>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. Module Methods of teaching/learning:

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

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

NA

## 7. Module 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 [1-8]

***Name of Department:*** **Electrical Engineering Department**

***Faculty of medicine Assiut University 2019- 2022***

## 1. Module data

- **Module Title:** Information Technology
- **Module code:** HBS411B§
- **Speciality:** Professional Diploma in the Hepato-pancreatico-biliary Medicine, Professional Diploma in Hepato-Pancreatico-Biliary Surgery.
- **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**<br>A1 Computer essentials<br>A2 Online essentials<br>A3 Word processing<br>A4 Spreadsheets<br>A5 Presentation<br>A6 Citation management tools (mendeley or endnote)<br>A7 it security<br>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.<br>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.<br>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<br>D3- Conform adequate cooperation with his/her colleagues<br>D4- Arrange the efforts required to accomplish the tasks in specified time.<br>D5- Organize learning time and resources and set priorities | -Observation and supervision<br>-Written and oral communicatio n | 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<br>-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:

5. 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. Module 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. Infection Control
3. Medical Ethics

The specification is in a separate book

## Second Semester Modules

# Preoperative Assessment of Hepato-Pancreatico-Biliary Diseases

1- General Principles of preoperative care of HPB diseases
2- Diagnostic and Basic Interventional Radiology
3- Therapeutic Modalities in Management of HPB Tumors

# General principles of peri-operative care of Hepato-Pancreatico-Biliary Diseases Module (II-1)

***Name of department:*** **Surgery**

***Faculty of medicine Assiut University***

## 1. Module data

- **Module Title: General principles of peri-operative care of Hepato-Pancreatico-Biliary Diseases**
- **Module code: HBS411C**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **Total CP= 150 / total marks : 300 / total hours 450**

| Credit Points | Hours for student Workload/Semester | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework | Test Preparation | Other Private study (Seminar + Workshop) | Total Hours |
| 15 CP | 135 | 170 | - | 100 | 45 | 450 |
| Percentage% | 30% | 37.8% | - | 22.2% | 10% | 100 |

- **Department (s) delivering the Module: Surgery Department in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  **Staff members of Surgery Department as annually approved by department 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 of general principles of perioperative care necessary for the Hepato-pancreatico-biliary Surgery.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ Learning | *Methods of Evaluation* |
|---|---|---|
| A1. **Demonstrate a detailed knowledge of:**<br>**1-The impact of comorbidities and other risk factors on the impact of management of HPB disease.**<br>• Evaluation of the high risk patient in HPB surgery - correlation of ASA and APACHE scores with operative morbidity and mortality in HPB disorders.<br>• Prognostic effect of obstructive jaundice on perioperative morbidity and measures to minimize these effects.<br>• The impact of renal failure on the jaundiced patient and strategies to minimize these effects.<br>• The impact of cirrhosis and portal hypertension, Childs Pugh score on non shunt surgery.<br>• Disorders of coagulation and management.<br>• Minimizing the impact of diabetes and cardiorespiratory disorders on HPB surgery<br>**2. Perioperative complications and critical care management in patients with complex HPB disorders including**:<br>• Preoperative assessment of liver function prior to surgery including.<br>- Hepatic risk for surgical conditions.<br>- Assessment of liver function, portal hypertension.<br>- Volumetric assessment of liver remnant.<br>- Requirements and assessment of portal vein embolization. | Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | - MCQ examination<br>-Oral and written exam<br>-OSCE.<br>Portfolio |

| | | |
|---|---|---|
| • Prophylaxis against common complications.<br>- Understanding of DVT prophylaxis and treatment.<br>- Measures to prevent sepsis.<br>• Neuroendocrine hormonal blockade.<br>• Detailed operative plan based on preoperative Imaging.<br>**3. Management of complications.**<br>• Liver failure, encephalopathy.<br>• Bleeding and coagulation disorders.<br>• Vessel occlusion syndromes: hepatic artery, portal vein hepatic veins.<br>• Biliary, pancreatic and enteric fistula and abdominal collections. | | |
| A2. Describe the principles of:<br>**4. Sepsis**<br>• Acquire a detailed knowledge of the various syndrome of systemic sepsis and its management including multi organ failure and supportive therapy.<br>• Management of abdominal collections and abscesses. Radiological percutaneous techniques for abdominal collections: indications and outcomes.<br>• Approaches to peritoneal sepsis.<br>• Knowledge of the spectrum of organisms involved in sepsis associated with HPB diseases.<br>• Knowledge of common antibiotics used in the treatment of HPB sepsis including indications and toxicity.<br>• Gut enteric organisms - translocation and pathogenesis in HPB sepsis. Selective bowel decontamination.<br>**5. Nutrition**<br>• Nutritional assessment: identification of malnutrition and nutritional risk factors.<br>• Specific metabolic and nutritional problems associated with HPB. | | |

| | | |
|---|---|---|
| Disease: jaundice, pancreatic insufficiency, pancreatic sepsis.<br>• Alterations in metabolism following major hepatic or pancreatic resection.<br>• Indications and timing for perioperative nutrition enteral or parenteral. Methods of administration: jejunostomy, nasoenteric, parenteral.<br>• The role of preoperative nutrition in malignancy, obstructive jaundice and pancreatitis.<br>Principles of dietary immunomodulation.<br>Basic understanding of calorific requirements and protocols in nutrition.<br>• Complications of parenteral and enteral nutrition. | | |
| A3. State update and evidence based Knowledge of:<br>Common conditions mentioned in A.A 1 | | |

## B- Intellectual outcomes

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| B1. Correlates the facts & principles of perioperative care of HBP diseases with clinical reasoning, diagnosis and management of common diseases related to the Hepato-pancreatico-biliary Surgery and Liver Transplant. | Didactic (lectures, seminars, tutorial) | -Written and oral examination<br>-Portfolio |
| B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to General principles of peri-operative care of HBP Diseases. | | |
| 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 General principles of peri-operative | | |

| | | |
|---|---|---|
| care of HBP Diseases | | |
| B4-Formulate management plans and alternative decisions in different situations in the field of General principles of peri-operative care of HBP Diseases | | |

## 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 A1 | -Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | OSCE<br>Portfolio<br>- MCQ exam |
| C2. Order the following non invasive/invasive diagnostic procedures<br>-Routine appropriate Lab investigations related to conditions mentioned in A1-A3<br>-Liver function testing.<br>--Routine appropriate Lab investigations related to conditions mentioned in A1<br>-Liver function testing.<br>- Imaging of the liver, biliary tract and pancreas (U/S, CT and MRI)<br>- PET scan<br>- Inraoperative U/S of the liver, biliary tract and pancreas<br>- Liver biopsy<br>- Intraoperative cholangoscopy<br>- Non-operative biliary manipulation (PTC-D and ERCP stenting) to treat biliary tract obstructon<br>- Endoscopic U/S | Clinical round with senior staff<br>Observation<br>Post graduate teaching<br>Hand on workshops | -Procedure presentation<br>Portfolio<br>- Chick lists |
| C3. Interpret the following non invasive/invasive diagnostic procedures<br>- Reading and interpreting imaging of the liver, biliary tract and pancreas on CT, MRI and U/S<br>- Perform and interpret intraoperative U/S of the liver, biliary tract and pancreas | Clinical round with senior staff | Procedure presentation<br>Portfolio<br>- Chick list |

| | | |
|---|---|---|
| - Perform and interpret liver biopsy – laparoscopic or open<br>- Interpret the hematologic and biochemical tests and explain the underlying physiology<br>- Interpret the dynamic tests of liver function<br>- Evaluate liver function and portal hypertension (including Child's and MELD scores and their variations)<br>- Develop a detailed operative strategy for liver resections based on preoperative assessment and imaging | | |
| C4. Perform the following non invasive/invasive diagnostic or therapeutic procedures.<br>(Under supervision)<br><br>- Determine the appropriate abdominal wall incisions for open procedures on the liver, biliary tract and pancreas<br>- Determine the appropriate port site placements and patient positions for laparoscopic procedures on the liver, biliary tract and pancreas and the relative indications for each and the need for a hand-port<br>- Perform laparoscopic and open drainage of liver cyst or abscess (unroofing, resection)<br>- Perform portosystemic shunt – portocaval, mesocaval, splenorenal and their variants<br>- Perform liver resections using a variety of approaches and transection techniques<br>- Manage biliary injuries resulting from cholecystectomy and other trauma<br>- Perform resection and reconstruction for choledochal cysts, RPC and benign strictures<br>- Perform extended cholecystectomy for potential oncologic indication<br>- Perform transduodenal resection of the Ampulla of Vater with reconstruction of the bile and pancreatic ducts<br>- Perform extended resection of the biliary bifurcation with the caudate and ipsilateral lobes of the liver, portal lymphadenectomy and biliary reconstruction | Clinical round with senior staff<br>-Perform under supervision of senior staff | Procedure presentation<br>Portfolio<br>- Chick list |

| | | |
|---|---|---|
| - Perform pancreatoduodenectomy +/- portal vein resection and reconstruction<br>- Perform open and/or laparoscopic procedures for acute pancreatitis<br>- Perform: pseudocystenterostomy, lateral pancreaticojejunostomy with/without limited resection of the head of the pancreas (Frey or Berger procedures), pancreatic resection<br>- Perform distal pancreatectomy and regional lymphadenectomy with and without splenectomy, open and laparoscopic techniques<br>- Perform palliative procedures for unresectable tumors | | |
| C5. Prescribe the following non invasive/invasive therapeutic procedures:<br>-Prescribe proper treatment for conditions in A.1<br>- Anticoagulants | Clinical round with senior staff | -Procedure presentation<br>- Portfolio<br>- Chick list |
| C6. Carry out patient management plans for common conditions related to General principles of peri-operative care of HBP Diseases | Clinical round with senior staff | |
| C7. Use information technology to support patient care decisions and patient education in common clinical situations related to General principles of peri-operative care of HBP Diseases | | |
| C8. Provide health care services aimed at preventing health problems related to General principles of peri-operative care of HBP Diseases like:.<br>- Demonstrate the ability to manage the perioperative assessment and complications of patients with Hepatobiliary disorders.<br>- Develop a detailed perioperative and operative strategy for liver, biliary and pancreatic resections based on preoperative assessment and imaging of the patient with HPB disease.<br>- Assess the overall risk of surgery by recognizing the implications of abnormalities of liver hematologic and biochemical testing on both hepatic and non-hepatic procedures. | | |

| | | |
|---|---|---|
| - Hazards of anesthesia and risk of surgery in hepatic patient.<br>-Hospital acquired infections. | | |
| C9. Provide patient-focused care in common conditions related to General principles of peri-operative care of HBP Diseases, while working with health care professionals, including those from other disciplines like:<br>- Tropical Medicine, Internal Medicine, Clinical pharmacy.<br>- Radiology.<br>- Anaethesia and Intensive care. | | |
| C10. 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<br>-Observation and supervision<br>-Written & oral communication | Procedure/case presentation<br>- Portfolios |
| D2. Appraises evidence from scientific studies(journal club) | -Journal clubs<br>- Discussions in seminars and clinical rounds | |
| D3. **Facilitate learning of junior students and other** health care professionals. | Clinical rounds<br>Senior staff experience | |

### Interpersonal and Communication Skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D4. Maintain therapeutic and ethically sound relationship with patients. | Simulations<br>Clinical round<br>Seminars<br>Lectures | Global rating<br>Procedure/case presentation<br>Portfolios |

| | | |
|---|---|---|
| | Case presentation<br>Hand on workshops | Chick list |
| D5. Elicit information using effective nonverbal, explanatory, questioning, and writing skills. | | |
| D6. Provide information using effective nonverbal, explanatory, questioning, and writing skills. | | |
| D7. Work effectively with others as a member of a health care team or other professional group. | | |
| D8. Present a case in in common problems related to General principles of peri-operative care of HBP Diseases | Clinical round<br>Seminars | Clinical Exam |
| D9. Write a report:<br>- Patients medical report. | Senior staff experience | Chick list |
| D10. Council patients and families about<br>- General principles of perioperative care of HBP diseases<br>- Overall risk, possible morbidity and mortality of HBP diseases. | Clinical round with senior staff | |

**Professionalism**

| **ILOs** | **Methods of teaching/ learning** | **Methods of Evaluation** |
|---|---|---|
| D11. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society | Observation<br>Senior staff experience<br>Case taking | 1. Objective structured clinical examination<br>2. Patient survey |
| D12. 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 |
| D13. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities | | 1. Objective structured clinical examination<br>2. 360o global rating |

## Systems-Based Practice

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D14. Work effectively in relevant health care delivery settings and systems. | -Observation<br>-Senior staff experience | 360o global rating |
| D15. Practice cost-effective health care and resource allocation that does not compromise quality of care. | | 1. Check list evaluation of live or recorded performance |
| D16. Assist patients in dealing with system complexities. | | 1. 360o global rating<br>2. 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 |
| The impact of comorbidities and other risk factors on the impact of management of HPB disease. | A1 | A-D | C1-C10 | D1-D16 |
| Perioperative complications and critical care management in patients with complex HPB disorders | A1-A3 | A-D | C1-C10 | D1-D16 |
| Management of complications | A1-A3 | A-D | C1-C10 | D1-D16 |
| Sepsis | A2,A3 | A-D | C1-C10 | D1-D16 |
| Nutrition | A2,A3 | A-D | C1-C10 | D1-D16 |

## 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 part

**iii. Marks: 300**

- **Written =120**
- **Oral = 90**
- **Practical = 90**
- **Portfolio = 25% of oral exam**

## 8. List of references

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

Blumgart's Surgery of the Liver, Biliary Tract and Pancreas (6th Edition)

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

## 9. Signatures

| Module Coordinator | |
|---|---|
| **Module Coordinator: Dr Ramy Abdel Rahim** | **Head of the Department:** |
| **Date: ……** | **Date: ……** |

# Diagnostic and Basic Interventional Radiology Modules (II-2)

***Name of department: Radiology Department***

***Faculty of medicine Assiut University 2019-2021***

## 1. Module data

- **Module Title: *Diagnostic and Basic Interventional Radiology Modules***
- **Module code: HBS428**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **Number of ECTS : 10**
- **Departments delivering the Module: Radiology Department in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  **Staff members of surgery Department as annually approved by both departments' councils**
- **Date last reviewed: 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 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 pancreatico-biliary diseases and enabling the candidates of making appropriate referrals to a sub-specialist.
2. Provide candidates with fundamental knowledge and skills of imaging in dealing with critically ill patients with pancreatico-biliary diseases.
3-To give opportunities to evaluate and manage pancreatico-biliary diseases.
4-To learn candidates to develop skills for using and interpreting diagnostic tools (as abdominal US, MRCP, EUS, etc--- ).
-The student should acquire the facts of basic Liver Intervention necessary for the **Hepato-pancreatico-biliary Surgery.**

***This module consist of 2 units each 5 CPS***

# Unit 1 Diagnostic Radiology Module

| Credit Points | Hours for student Workload/Semester | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework/ Assignment | Test Preparation | Other Private study (Conference or workshop) | Total Hours |
| 5 CP | 40 | 35 | - | 45 | 30 | 150 |
| Percentage% | 26.7% | 23.3% | - | 30% | 20% | 100% |

## 3. Intended learning outcomes (ILOs):

### A. Knowledge and understanding

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| **A1. Demonstrate the radiological feature by US/CT/MRI of the following diseases:**<br>- Diffuse liver diseases<br>-Fatty liver<br>- Liver cirrhosis<br>-Focal various liver lesions (solid and cystic)<br>-vascular liver disease.<br>- Bile duct obstruction and GB diseases<br>- Pancreatitis (acute & chronic)<br>- Pancreatic focal lesions | Didactic;<br>- Lectures<br>- Seminars<br>Clinical rounds, rotations | - Written, clinical, oral examination<br>- OSCE, OSPE<br>- Portfolio |
| **A2. Describe the principles of:**<br>-Basic and physics of abdominal ultrasound<br>-Indication, contraindication of Abdominal US, CT scan, MRI, angiography and PET scan<br>- Doppler assessment of the porto-systemic circulation<br>- Cholangiography: direct/Indirect cholangiography, Intravenous cholangiography , Spiral CT, MRCP.<br>- Abdominal hepatic angiography | | |
| **A3.** State update and evidence based Knowledge of:<br>Doppler assessment of the porto-systemic circulation<br>CT scan of Normal liver, biliary channels, and pancreas<br>-MRI of normal liver, biliary channels and pancreas and MRCP | | |
| A4. Memorize the facts and principles of the relevant basic and clinically supportive sciences related to imaging of hepatopancreaticobiliary system | | |

| | | |
|---|---|---|
| A5. Discuss the basic ethical and medicolegal principles that should be applied in practice and are relevant to the use of abdominal US, CT, and MRI in diagnosing and guiding therapy of hepato-pancreatico-biliary diseases And means of avoiding excess radiation exposure. | | |
| A6. Mention the basics of quality assurance to ensure good clinical care during using US, CT, and MRI in diagnosing and guided therapy in the field of hepato-pancreatico-biliary diseases. | | |
| A7. State the impact of common health problems in the field of imaging the hepato-pancreatico-biliary diseases 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 related to radiological feature of hepato-pancreatico-biliary diseases. | Lectures<br>US, CT, MRI procedure rooms<br>Observation and practice<br>Senior staff experience | Procedure/case presentation<br>- Portfolio |
| B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to hepato-pancreatico-biliary diseases. | | |
| B3. Design and /or present a case or review (through seminars/journal clubs.) in one or more of common clinical problems and its radiological feature of hepato-pancreatico-biliary diseases. | | |
| B4.Formulate management plans and alternative decisions in different situations mentioned in A1 | | |

## 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 during performing radiological imaging technique A1, A2, A3. | Didactic;<br>- Lectures<br>- Seminars<br>Post graduate teaching<br>Hand on workshops<br>Senior staff experience<br>Clinical rounds, rotations | - Written, clinical, oral examination<br>- OSCE, OSPE<br>- Portfolio |
| C2. Order and Interpret the following non invasive/invasive imaging procedures<br>-Routine appropriate imaging investigations related to conditions mentioned in A1<br>- X ray abdomen.<br>- Abdominal Ultrasonography<br>- CT abdomen<br>- MRCP<br>- Cholangiography<br>-Angiography | | |
| C3. Prescribe the following non invasive/invasive therapeutic procedures:<br>- Prescribe proper treatment for conditions mentioned in A1 | | - |
| C4. Carry out patient management plans for common conditions related to Hepato-pancreatico-biliary diseases. | | |
| C5. Use information technology to support patient care decisions in imaging related to Hepato-pancreatico-biliary diseases. | | |
| C6. Provide health care services aimed at preventing health problems related to imaging inhepato-pancreatico-biliary diseases like:<br>- Allergy from contrast material | | |

| | | |
|---|---|---|
| -Haemorrhage from intervention radiology | | |
| C7. Provide patient-focused care in common conditions related to hepato- pancreatico-biliary diseases, while working with health care professionals, including those from other disciplines. | | |
| C8. Write competently all forms of patient charts and sheets including radiological 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.Use information technology to manage information, access on-line medical information; and support their own education* | -Observation and supervision<br>-Written and oral communication | Oral Exam<br>Portfolio |
| D2.Appraises evidence from scientific studies(journal club) | -Journal clubs<br>- Discussions in seminars and clinical rounds | |
| D3. Facilitate learning of junior students and other health care professionals. | Clinical rounds<br>Senior staff experience | |

### Interpersonal and Communication Skills

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| D4. Maintain therapeutic and ethically sound relationship with patients. | Clinical round<br>Seminars<br>Case presentation | Global rating<br>Procedure/case presentation<br>Portfolios<br>Chick list |
| D5. Work effectively with others as a member of a health care team or other professional group. | | |
| D6. Present a case in common problems related to hepato-pancreatico-biliary diseases and show its radiological features. | Clinical round<br>Seminars | Clinical Exam |

| | | |
|---|---|---|
| D7. Write a radiological report in common condition mentioned in A1 | -Observation and supervision<br>-Written and oral communication | Oral Exam<br>Portfolio<br>Check list |
| D8. Council patients and families about:<br>- Pre-procedure instructions.<br>-Post procedure precautions<br>- Prognosis of the medical illness | Clinical rounds with senior staff | |

**Professionalism**

| ILOs | Methods of learning | Methods of Evaluation |
|---|---|---|
| D9. Demonstrate a commitment to ethical principles | Senior Staff Experience | Oral Exam<br>Portfolio |
| D10. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society | Observation<br>Senior staff experience<br>Case taking | 1. Objective structured clinical examination<br>2. Patient survey |

**Systems-Based Practice**

| ILOs | Methods of learning | Methods of Evaluation |
|---|---|---|
| D11. Work effectively in relevant health care delivery settings and systems. | -Observation<br>-Senior staff experience | 360o global rating |
| D12. Assist patients in dealing with system complexities. | | 1. 360o global rating<br>2. Patient survey |

## 4. Unit contents (topic s/modules/rotation

**Unit Matrix**

**Time Schedule: Second semester**

| Topic | Covered ILOs | | | |
|---|---|---|---|---|
| | Knowledge A | Intellectual B | Practical skill C | General Skills D |
| Basic and physics of abdominal ultrasound | A2, A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| -Indication, contraindication of Abdominal US, CT scan, MRI, angiography and PET scan | A2, A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| US of Normal liver, hepato-biliary channels, and pancreas | A1-A7 | B1-B4 | C1-C8 | D1-D12 |
| Doppler assessment of the porto- | A2, A4-A7 | B1-B4 | C1-C8 | D1-D12 |

| | | | | |
|---|---|---|---|---|
| systemic circulation | | | | |
| Echofree, hypoechoic , hyperechoic lesions | A1-A7 | B1-B4 | C1-C8 | D1-D12 |
| US of diffuse and focal pathology of liver, biliary channels and pancreas | A1, A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| CT scan of Normal liver, biliary channels, and pancreas | A1,A3-A7 | B1-B4 | C1-C8 | D1-D12 |
| MRI of normal liver, biliary channels and pancreas | A1,A3-A7 | B1-B4 | C1-C8 | D1-D12 |
| -Arteriography: indication, contraindications, complications, focal lesions, diffuse hepatic diseases, therapeutic infusion | A2A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of Diffuse liver diseases | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of focal liver lesions | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of Hepatic cysts. | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of vascular liver disease. | A1-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of Malignant liver tumors. | A1-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of biliary channels obstruction | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of Pancreatitis (acute& chronic) | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of Gallstone disease and Choledocholithiasis | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of Benign and malignant biliary strictures | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of Cystic lesions of the pancreas | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of Pancreas adenocarcinoma and ampullary cancer | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |
| Radiological features of Neuroendocrine tumors of pancreas | A1,A2,A4-A7 | B1-B4 | C1-C8 | D1-D12 |

## 5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. 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:**

- Oral examination.Written
- OSCE/OSPE
- Portfolio

**ii. Time schedule:** second trimester

**iii. Marks: 100**

## 8. List of references

- **Lectures notes**
- **Recommended books**
  - Hepatology Textbook and Atlas, Editors: Erwin Kuntz, Hans- Dieter Kuntz. Link.spinger.com
  - MRI of the liver. 2nd Edition. Editors: Günther Schneider, Luigi Grazioli, Sanjay Saini. (Spriger-Verlag Italia 2003, 2006 printed in Italy. Library of the Congress Control Number: 2005937525.)
  - Liver imaging: MRI with CT correlation.Editors: Ersan Altun, Mohamed El-azzazi, Ritchard C Semelka. (Print ISBN: 9780470906255 online. 2015 John Wiley & Sons, Inc)
- **Periodicals, Web sites, … etc:**
  American Journal of radiology
- **others: None**

## 9. Signatures

| **Module Coordinators** | |
|---|---|
| **Module Coordinators:**<br>**Dr Beshir Abo El Soud**<br>**Dr ……** | **Head of the Department: Prof Dr Mostafa Hashim** |
| **Date: ……** | **Date: ……** |

## Unit 2 Basic Interventional Radiology module

- **Unit Title: Basic Liver Intervention**
- **Number of ECTS :5**

| Credit Points | Student Workload/Semester (15 weeks) | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework | Test Preparation | Other Private study (Conference or workshop) | Total Hours |
| 5 CP | 40 | 35 | - | 45 | 30 | 150 |
| Percentage% | 26.7% | 23.3% | - | 30% | 20% | 100% |

## 3. intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ learning | *Methods of Evaluation* |
|---|---|---|
| A1. Describe the various interventional procedures related to the hepatic diseases:<br>- Hepatic mass<br>- HCC<br>- Liver Abscess. | Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | Oral and written exam<br>-OSCE.<br>Portfolio |
| A2. Mention the principles of :<br>- PEI (percuatnous ethanol Injection).<br>- Radiofrequency ablation (RFA).<br>- Cryoablation<br>- Liver biopsy<br>- Trans arterial chemoembolization(TACE).<br>- Trans arterial Radioembolization (TARE)<br>- -Microwave Ablation.<br>- -Liver Biopsy.<br>- PTC,PTD. | Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | - MCQ examination<br>-Oral and written exam<br>-OSCE.<br>Portfolio |
| A3. State update and evidence based Knowledge of<br>- PEI (percuatnous ethanol Injection).<br>- Radiofrequency ablation (RFA).<br>- Cryoablation<br>- Liver biopsy<br>- Trans arterial chemoembolization(TACE).<br>- Trans arterial Radioembolization (TARE)<br>- Microwave Ablation.<br>- Liver Biopsy. | | |

| | | |
|---|---|---|
| - PTC,PTD. | | |
| A4.Memorize the facts and principles of the relevant basic and clinically supportive sciences related to Basic Interventional Radiology | | |
| A5. Mention the basic ethical and medicolegal principles relevant to the Basic Interventional Radiology | | |
| A6. Mention the basics of quality assurance to ensure good clinical care in his field. | | |
| A7. Mention the ethical and scientific principles of medical research. | | |
| A8. State the impact of common health problems in the field of Basic Interventional Radiology on the society. | | |

## 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 Basic Interventional Radiology. | Clinical rounds<br>Senior staff experience | Procedure/case presentation<br>- Portfolio |
| B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Basic Interventional Radiology | | |
| B3. Design and present cases , seminars in common problem | | |
| B4-Formulate management plans and alternative decisions in different situations in the field of the Basic Interventional Radiology | | |

## 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;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | OSCE<br>Portfolio<br>- MCQ exam |
| C2. Order the following non invasive/invasive diagnostic procedures | -Didactic;<br>-Lectures | OSCE<br>Portfolio |

| | | |
|---|---|---|
| - Routine Lab investigations related to common conditions in A1.<br>- Abdominal US and Doppler.<br>- MSCT Scan Abdomen.<br>- Dynamic MRI with diffusion on the abdomen.<br>-PET Scan.<br>- Bone Scan. | -Clinical rounds<br>-Seminars<br>-Clinical rotations | - MCQ exam |
| C3. Interpret the following non invasive/invasive diagnostic procedures<br>- Routine Lab investigations related to common conditions in A1<br>- Abdominal US and Doppler.<br>- MSCT Scan Abdomen.<br>- Dynamic MRI with diffusion on the abdomen.<br>-PET Scan.<br>- Bone Scan. | Clinical round with senior staff | Procedure presentation<br>Portfolio<br>- Chick list |
| C4. Perform the following non invasive/invasive therapeutic procedures.<br>- Abdominal US and Doppler US.<br>- Alchol Injection.<br>-Liver biopsy.<br>- Aspiration of Liver Abscess.<br>-Pig tail insertion Under Supervision.<br>- Radiofrequency ablation(RFA) under supervision.<br>-Microwave Ablation under supervision. | Clinical round with senior staff<br>-Perform under supervision of senior staff | Procedure presentation<br>Portfolio<br>- Chick list |
| C5. Prescribe the following non invasive/invasive therapeutic procedures:<br>- Management Post TACE.<br>-Management of liver abscess. | Clinical round with senior staff | -Procedure presentation<br>- Portfolio<br>- Chick list |
| C6. Carry out patient management plans for common conditions related to Advanced Liver Intervention | Clinical round with senior staff | |
| C7. Use information technology to support patient care decisions and patient education in common clinical situations related to Advanced Liver Intervention. | | |
| C8. Provide health care services aimed at preventing health problems related to Advanced Liver Intervention like:.<br>Post biopsy or intervention bleeding<br>Post TACE fever.<br>Pancreatitis.<br>Flare of Hepatitis B post TACE. | | |

| | | |
|---|---|---|
| Post procedure decompensation. | | |
| C9 Provide patient-focused care in common conditions related to Advanced Liver Intervention, while working with health care professionals, including those from other disciplines like:<br>- Hepatopancreatico and liver transplant medical team.<br>-Interventional radiologist.<br>- ICU. | | |
| C10. 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<br>-Observation and supervision<br>-Written & oral communication | Procedure/case presentation<br>- Portfolios |
| D2. Appraises evidence from scientific studies(journal club) | | |
| 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<br>Clinical round<br>Seminars<br>Lectures<br>Case presentation<br>Hand on workshops | Global rating<br>Procedure/case presentation<br>Portfolios<br>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 the seminar. | Clinical round<br>Seminars | Clinical Exam |
| D11. Write report after Radiofrequency or alchol injection. | Senior staff experience | Chick list |
| D12. Council patients and families about:<br>- Post intervention complications.<br>- Post intervention follow up. | 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<br>Senior staff experience<br>Case taking | 1. Objective structured clinical examination<br>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<br>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<br>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<br>2. Patient survey |

## 4. Unit contents (topic s/modules/rotation
## Unit Matrix

**Time Schedule: Fourth Semester**

| Classes /Topic | Covered ILOs | | | |
|---|---|---|---|---|
| | Knowledge | Intellectual | Practical skills | General Skills |
| - Multidisciplinary Team and Barcelona system for HCC staging and management. | A1,A4-A8 | B1-B4 | C1-C10 | D1-D18 |
| - Guidelines for HCC management. | A1,A4-A8 | B1-B4 | C1-C10 | D1-D18 |
| -Liver Abscess. | A2, A4-A8 | B1-B4 | C1-C10 | D1-D18 |
| - Alchol Injection. | A2,A3, A4-A8 | B1-B4 | C1-C10 | D1-D18 |
| Radiofrequency ablation(RFA). | | B1-B4 | C1-C10 | D1-D18 |
| - Trans arterial chemoembolization(TACE). | A2,A3, A4-A8 | B1-B4 | C1-C10 | D1-D18 |
| Trans arterial Radioembolization (TARE) | A2,A3, A4-A8 | B1-B4 | C1-C10 | D1-D18 |
| Microwave Ablation. | A2,A3, A4-A8 | B1-B4 | C1-C10 | D1-D18 |
| Liver Biopsy.<br>PTC,PTD | A2, A4-A8 | B1-B4 | C1-C10 | D1-D18 |
| PTC,PTD | A2,A3, A4-A8 | B1-B4 | C1-C10 | D1-D18 |

## 5 Unit 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. Unit 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. Module assessment methods:

**i. Assessment tools:**

- Oral examination. Written
- OSCE/OSPE
- Portfolio

**ii. Time schedule:** second semester

**iii. Marks: 100**

## 8. List of references

**i. Lectures notes**

**ii. Essential books**

- 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*

**iii.Recommended books:**

- Yamda's Textbook of Gastroenterology, 2 volume set, 6 th Edition, 2015
- Sleisenger and Fordtran's Gastrointestinal and Liver Disease 2 volume - 10 th Edition. 2015
- Liver imaging: MRI with CT correlation.Editors: Ersan Altun, Mohamed El-azzazi, Ritchard C Semelka. (Print ISBN: 9780470906255 online. 2015 John Wiley & Sons, Inc)

**iv- Periodicals, Web sites, … etc:**

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

**v. Others: None.**

## 9. Signatures

| Module Coordinators | |
|---|---|
| **Module Coordinator:**<br>**Dr Beshir Abo El Soud**<br>**Dr …….** | **Head of the Department: Prof Dr Mostafa Hashim** |
| **Date: April, 2019.** | **Date: April, 2019.** |

# Therapeutic Modalities in Management of Hepato-Pancreatico-Biliary Tumors Module (II-3)

***Name of department: Department of Nuclear Medicine***
***Faculty of medicine Assiut University 2019***

## 1. Module data

- **Module Title: Therapeutic modalities in management of hepato-pancreatico-biliary tumors.**
- **Module code: HBS427**
- **Specialty: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **Number of ECTS : 5**

| Credit Points | Hours for student Workload/Semester | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework | Test Preparation | Other Private study | Total Hours |
| 5 CP | 45 | 15 | - | 50 | 40 | 150 |
| Percentage% | 30% | 10% | | 33.3% | 26.7% | 100% |

- **Department (s) delivering the Module : Nuclear Medicine in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  **Staff members of Nuclear Medicine Department in conjunction with General Surgery and Radiology Departments as 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 identify different modalities of chemotherapy and radiotherapy necessary for the management of Hepato-pancreatico-biliary tumors.
- Apply knowledge of mechanism of action of chemotherapy and radiation therapy to recommend an appropriate treatment strategy for the management of individual HBP malignancies.
- Participate regularly in multidisciplinary tumor review conferences.
- Interact with radiologists, medical oncologists, radiation oncologists.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ Learning | *Methods of Evaluation* |
|---|---|---|
| A1. **Describe Principles of**<br>- Overview of hepato-pancreatico-biliary tumors.<br>- Chemotherapy: classes of drugs, mechanisms of action.<br>- Radiotherapy: applied physics and technology, combination protocols with chemotherapy.<br>- Multidisciplinary management. | -Lectures<br>-Laboratory work | -Written and oral examination<br>- Portfolio |

### B- Intellectual outcomes

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| B1. Correlates the facts of identifying different techniques of chemo and radiotherapy with clinical reasoning, diagnosis and management of common Hepato-pancreatico-biliary tumors. | Didactic (lectures, seminars, tutorial) | -Written and oral examination<br>-Portfolio |

### 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;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | OSCE<br>Portfolio<br>- MCQ exam |
| C2. Prescribe the following:<br>- Chemotherapy.<br>- Radiotherapy: applied physics and technology, combination protocols with chemotherapy. | Clinical round with senior staff | -Procedure presentation<br>- Portfolio<br>- Chick list |
| C3. Carry out patient management plans for common conditions related to Therapeutic Modalities in Management of HPB Tumors | Clinical round with senior staff | |

| | | |
|---|---|---|
| C4. Use information technology to support patient care decisions and patient education in common clinical situations related to Therapeutic Modalities in Management of HPB Tumors | | |
| C5. Provide health care services aimed at preventing health problems related to Therapeutic Modalities in Management of HPB Tumors. | | |
| C6. Provide patient-focused care in common conditions related Therapeutic Modalities in Management of HPB Tumors. while working with health care professionals, including those from other disciplines like:<br>-Interventional radiologist.<br>- Nuclear Medicine | | |
| C7. 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.Use information technology to manage information, access on-line medical information; and support their own education | -Observation and supervision<br>-Written and oral communication | Oral Exam<br>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<br>-Written and oral communication | Oral Exam<br>Portfolio<br>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<br>-Senior staff experience | 360o global rating |

## 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 |
| Overview of hepato-pancreatico-biliary tumors. | A1 | B1 | A1-A7 | D1-D4 |
| Chemotherapy | A1 | B1 | A1-A7 | D1-D4 |
| Radiotherapy | A1 | B1 | A1-A7 | D1-D4 |
| Multidisciplinary Management. | A1 | B1 | A1-A7 | 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/Practical
- Portfolio

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

**iii. Marks: 100**

## 8. List of references

- **Lectures notes**
- **Essential books**
- **Periodicals, Web sites, … etc: None**
- **others: None**

## 9. Signatures

| Module Coordinators | |
|---|---|
| **Module Coordinator:**<br>**Dr Ahmed Abd Allah**<br>**Dr Mahmoud Saad**<br>**Dr ……..** | **Head of the Department:**<br>**……** |
| **Date: ……** | **Date: ……** |

## Third Semester Modules

# Operative and Interventional Management of Hepato-Pancreatico-Biliary Diseases

1- Surgical Skills
2- Laparoscopy
3- Gastrointestinal Endoscopy

# Surgical Skills Module (III-1)

***Name of Departments: General Surgery***

***Faculty of medicine Assiut University 2019-2020.***

## 1. Module data

- **Module Title:** Surgical Skills in HPB Surgery
- **Module code: HBS411D**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **Number of ECTS: 15**

| Credit Points | Student Workload/Semester (15 weeks) | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework | Test Preparation | Other Private study (Attendance of workshop or Conference related to Laparoscopy, Seminar attendance and/ or presentation, Hospital works) | Total Hours |
| 10 CP | 45 | 200 | 55 | 90 | 60 | 450 H |
| Percentage% | 10% | 44.5% | 12.2% | 20% | 13.3% | 100% |

- **Department delivering the Module:** General Surgery *Department.*
- **Coordinator: Dr Mahmoud Hassab El Naby**
- **Staff members in Department of General Surgery and liver transplantation team.**
- **Date last reviewed: April 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 acquire a satisfactory level of surgical skills, updated knowledge and decision making capabilities related to different surgical procedures and techniques used in the field of HPB Surgery and Liver Transplantation.
2. Provide candidates with fundamental skills needed for performing basic surgical procedures.
3. To give the scientific background and the surgical knowledge and skills to manage possible complications of surgical procedures. This should include prompt discovery and skillful management of complications.
4. To offer the candidates extensive hand-on practical surgical training in the OR. This should include assisting in several types of surgical procedures as second then first assistant. Afterwards, the candidate will be offered opportunity to be the main operator for a number of operations.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ Learning | *Methods of Evaluation* |
|---|---|---|
| A1. Describe the different types of surgical instruments and equipments and mention the advantages and disadvantages of each<br>A2. Describe the indications and contraindications of surgical procedures in HPB Surgery.<br>A3. Describe the possible complications of HPB surgery and their pathogenesis and proper prevention and treatment.<br>A4. Describe the technical steps of related surgical procedures as cholecystectomy, CBD exploration, Hepatico-jejunostomy, Pancreatectomy, Liver resection etc.<br>A5. Mention the safety precautions during different surgical procedures to guard against complications<br>A6. Mention the preoperative preparation and postoperative care for surgical procedures | Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | - MCQ examination<br>-Oral and written exam<br>-OSCE.<br>Portfolio |

### 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 HPB pathology that needs surgical management.<br>B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common surgical situations that may differ in the surgical management<br>B3. Formulate management plans and alternative decisions in different situations in the field of HPB surgery and its complications | Clinical rounds<br>Senior staff experience | Procedure/case presentation<br>- Portfolio |

## C- Practical skills (Patient Care)

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| C1.Perform basic skills generally needed in surgical procedures<br>C2. Be familiar with the different surgical instruments and equipments and know how to use them properly<br>C3. To obtain good training for the basic steps for HPB surgical procedures<br>C4. To assist in the OR as second or first assistant in different surgical procedures<br>C5. To perform basic HPB surgeries assisted by senior staff<br>C6. To be directly incorporated in the preoperative preparation of HPB surgical procedures<br>C7. To be directly incorporated in the postoperative care of HPB surgical procedures<br>C8.To be able to manage post-operative complications of HPB surgical procedures | -Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-simulator training<br>-OR training<br>-Clinical rotations<br>-hand-on workshops | OSCE<br>Portfolio<br>- MCQ exam<br>-Operative exam<br>-OSCE<br>-Check lists |

## 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)<br>D2. Conduct epidemiological Studies and surveys.<br>D3.Perform data management including data entry and analysis. | -Case log<br>-Observation and supervision<br>-Written & oral communication<br>-Journal clubs<br>- Discussions in seminars and clinical rounds | Procedure/case presentation<br>- Portfolios |

### Interpersonal and Communication Skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D4. Maintain therapeutic and ethically sound relationship with patients.<br>D5. Provide information using effective nonverbal, explanatory, questioning, and writing skills.<br>D6. Work effectively with others as a member of a health care team or other professional group. | Simulations<br>Clinical round<br>Seminars<br>Lectures<br>Case presentation | Global rating<br>Procedure/case presentation<br>Portfolios<br>Chick list |

| | | |
|---|---|---|
| D7.Council patients and families about:<br>• Prognosis of patient.<br>• Alternative approaches<br>• Procedure-related complications<br>• Postoperative Module and follow up | Hand on workshops | |

**Professionalism**

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| D8. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society<br>D9. Demonstrate a commitment to ethical principles, including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices<br>D10. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities | Observation<br>Senior staff experience<br>Case taking | 1. Objective structured clinical examination<br>2. Patient survey |

**Systems-Based Practice**

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D11. Work effectively in relevant health care delivery settings and systems.<br>D12. Practice cost-effective health care and resource allocation that does not compromise quality of care.<br>D13. Assist patients in dealing with system complexities. | Observation<br>Senior staff experience | 1. Check list evaluation of live or recorded performance<br>2. MCQ |

## 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 |
| - History of HPB surgery. | A1 | B1, B2 | C1-C8 | D1 –D13 |
| - Indications for different HPB surgical procedures. | A2 | B1-B3 | C1-C8 | D1 –D13 |
| - Basic surgical Skills | A1 | B1-B3 | C1-C8 | D1 –D13 |
| - Gall Bladder Surgery | A3, A4, A5 | B1-B3 | C1-C8 | D1 –D13 |
| - CBD Surgery | A1 –A6 | B1-B3 | C1-C8 | D1 –D13 |

| | | | | |
|---|---|---|---|---|
| - Pancreatic Surgery | A1 –A6 | B1-B3 | C1-C8 | D1 –D13 |
| - Liver Resection Surgery | A1 –A6 | B1-B3 | C1-C8 | D1 –D13 |
| - Pre and post-operative care of HPB surgery | A6 | B1-B3 | C1-C8 | D1 –D13 |

## 5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Operating Room (OR) attendance and tasks
4. Written & oral communication
5. Senior staff experience
6. Workshops and conference
7. Clinical rounds
8. Clinical rotation
9. Postgraduate teaching
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:**

- Written and clinical, oral examination
- Live OR assessment
- Portfolio
- Objective structure clinical examination (OSCE)
- Objective structure practical examination (OSPE)
- Check list evaluation of live or recorded performance

**ii. Time schedule:** At the third semester

**iii. Marks: 300**

## 8. List of references

**i. Lectures notes**

**ii. Recommended books**

Shackelford's Surgery of the Alimentary Tract, 8th Edition, 2018

-iii- Periodicals, Web sites, … etc

**v. Others: None.**

## 9. Signatures

| Module Coordinator | |
|---|---|
| **Module Coordinator:**<br>**Dr Mahmoud Hassab El Naby** | **Head of the Departments:**<br>**Prof. Hesham A. Reyad** |
| **Date: May, 2019.** | **Date: May, 2019.** |

# Laparoscopy Module (III-2)

***Name of Departments: General Surgery***

***Faculty of medicine Assiut University 2019-2020.***

## 1. Module data

- **Module Title:** Laparoscopic Surgery.
- **Module code: HBS411E**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **Number of ECTS: 10**

| Credit Points | Student Workload/Semester (15 weeks) | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework | Test Preparation | Other Private study (Attendance of workshop or Conference related to Laparoscopy, Seminar attendance and/ or presentation, Hospital works) | Total Hours |
| 10 CP | 1 CP 30 H | 5 CPS 150H | 1 CP 30H | 2 CPS 60H | 1 CP 30H | 300 H |
| Percentage% | 10 % | 50 % | 10 % | 20 % | 10 % | 100% |

- **The department delivers the Module:** General Surgery *Department.*
- **Coordinator: Prof. Mostafa Hamad**
- **Staff members in Department of General Surgery and liver transplantation team.**
- **Date last reviewed: April 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 acquire a satisfactory level of surgical skills, updated knowledge and decision making capabilities related to laparoscopic procedures used in the field of HPB and Liver Transplantation.
2. Provide candidates with fundamental skills needed for performing basic laparoscopic surgical procedures.
3. To demonstrate the ability to provide patient-centered perioperative care related to laparoscopic procedures in the HPB field. This should include the appropriate preoperative and postoperative management of patients undergoinig laparoscopic procedures.
4. To give the scientific background and the surgical knowledge and skills to manage possible complications of laparoscopic procedures. This should include prompt discovery and skilful management of complications.

5. To give a thorough knowledge of the role of laparoscopy in liver transplantation.
6. To give thorough knowledge and hands-on training on laparoscopic instruments and equipments in University Center for Endoscopic Surgery Training (AUCEST) and then in the OR
7. To offer the candidate simulator-based laparoscopic essential skill training in AUCEST.
8. To offer the candidates extensive hand-on practical surgical training in the OR. This should include assisting in several types of laparoscopic procedures as second then first assistant. Afterwards, the candidate will be offered opportunity to be the main operator for a number of basic laparoscopic procedures.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| **ILOs** | **Methods of teaching/ Learning** | ***Methods of Evaluation*** |
|---|---|---|
| A1. Describe the different types of laparoscopic instruments and equipments and mention the advantages and disadvantages of each<br>A2. Describe the indications and contraindications of laparoscopic procedures in HPB and Liver transplantation<br>A3. Describe the complications of laparoscopic surgery and their pathogenesis and proper prevention and treatment.<br>A4. Describe the technical steps of related laparoscopic procedures as cholecystectomy, CBD exploration, Hepatico-jejunostomy, Pancreatectomy, Liver resection etc.<br>A6.Mention the safety precautions during different laparoscopic procedures to guard against complications<br>A6. Mention the preoperative preparation and postoperative care for laparoscopic procedures | Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | - MCQ examination<br>-Oral and written exam<br>-OSCE.<br>Portfolio |

## 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 HPB pathology that needs laparoscopic management.<br>B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common surgical situations that may differ in the surgical management<br>B3. Formulate management plans and alternative decisions in different situations in the field laparoscopic HPB surgery and its complications | Clinical rounds<br>Senior staff experience | Procedure/case presentation<br>- Portfolio |

## C- Practical skills (Patient Care)

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| C1. Perform basic laparoscopic skills generally needed in laparoscopic procedures<br>C2.Be familiar with the different laparoscopic instruments and equipments and know how to use them properly<br>C3.To obtain good training on laparoscopic simulator for the basic steps for laparoscopic procedures<br>C4.To assist in the OR as second or first assistant in different laparoscopic procedures<br>C5.To perform basic laparoscopic procedure assisted by senior staff<br>C6.To be directly incorporated in the preoperative preparation of laparoscopic HPB procedures<br>C7.To be directly incorporated in the postoperative care of HPB laparoscopic procedures<br>C8.To be able to manage post operative complications of HPB laparoscopic procedures | -Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-simulator training<br>-OR training<br>-Clinical rotations<br>-hand-on workshops | OSCE<br>Portfolio<br>- MCQ exam<br>-Operative exam<br>-OSCE<br>-Check lists |

## 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, Portfolio)<br>D2. Conduct epidemiological Studies and | -Case log<br>-Observation and supervision<br>-Written & oral communication | Procedure/case presentation<br>- Portfolios |

| | | |
|---|---|---|
| surveys.<br>D3. Perform data management including data entry and analysis. | -Journal clubs<br>- Discussions in seminars and clinical rounds | |

## Interpersonal and Communication Skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D4. Maintain therapeutic and ethically sound relationship with patients.<br>D5. Provide information using effective nonverbal, explanatory, questioning, and writing skills.<br>D6. Work effectively with others as a member of a health care team or other professional group.<br>D7. Council patients and families about:<br>• Prognosis of patient.<br>• Alternative approaches<br>• Procedure-related complications<br>• Postoperative Module and follow up | Simulations<br>Clinical round<br>Seminars<br>Lectures<br>Case presentation<br>Hand on workshops | Global rating<br>Procedure/case presentation<br>Portfolios<br>Chick list |

## Professionalism

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| D8. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society<br>D9. Demonstrate a commitment to ethical principles, including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices<br>D10. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities | Observation<br>Senior staff experience<br>Case taking | 1. Objective structured clinical examination<br>2. Patient survey |

## Systems-Based Practice

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D11. Work effectively in relevant health care delivery settings and systems.<br>D12. Practice cost-effective health care and resource allocation that does not compromise quality of care.<br>D13. Assist patients in dealing with system complexities. | Observation<br>Senior staff experience | 1. Check list evaluation of live or recorded performance<br>2. MCQ |

## 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 |
| - History and instrumentation of laparoscopic surgery. | A1 | B1,B2 | C1-C8 | D1-D13 |
| - Indications and Contraindications of laparoscopic surgery. | A2 | B1-B3 | C1-C8 | A-M |
| - Complications of laparoscopic surgery and safe laparoscopy | A3 | B1-B3 | C1-C8 | A-M |
| - Basic laparoscopic skills | A1 | B1-B3 | C1-C8 | A-M |
| - Basic laparoscopic techniques. | A1,A4 | B1-B3 | C1-C8 | A-M |
| - Anesthesia for laparoscopic surgery | A2, A3, A5, A6 | B1-B3 | C1-C8 | A-M |
| - Diagnostic laparoscopy. | A1 – A6 | B1-B3 | C1-C8 | A-M |
| - Laparoscopic cholecystectomy | A1 – A6 | B1-B3 | C1-C8 | A-M |
| - Complications of laparoscopic cholecystectomy | A3, A4, A5 | B1-B3 | C1-C8 | A-M |
| - Laparoscopic CBD surgery | A1 – A6 | B1-B3 | C1-C8 | A-M |
| - Pancreatic laparoscoic surgery | A1 – A6 | B1-B3 | C1-C8 | A-M |
| - Laproscopic hepatic surgery | A1 – A6 | B1-B3 | C1-C8 | A-M |
| - Role of laparoscopy in Liver transplantation | A1 – A6 | B1-B3 | C1-C8 | A-M |
| - Pre and post operative care of laparoscopic surgery | A6 | B1-B3 | C1-C8 | A-M |

## 5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Operating Room (OR) attendance and tasks
4. Written & oral communication
5. Senior staff experience
6. Workshops and conference
7. Clinical rounds
8. Clinical rotation
9. Postgraduate teaching
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:**

- Written and clinical, oral examination
- Live OR assessment
- Portfolio
- Objective structure clinical examination (OSCE)
- Objective structure practical examination (OSPE)
- Check list evaluation of live or recorded performance

**ii. Time schedule:** At the third semester

**iii. Marks: 200**

## 8. List of references

**i. Lectures notes**

**ii. Recommended books**

Shackelford's Surgery of the Alimentary Tract, 8th Edition, 2018

-Textbook of Practical Laparoscopic Surgery, 2009

-Mastery of Endoscopic and Laparoscopic Surgery, 4th edition, 2013

**iii- Periodicals, Web sites, … etc**

ESLS (European Sosciety of Laparoscopic Surgery).

SAGES (Sosciety of American GastroIntesitinal and Endoscopic Surgeons).

**v. Others: None.**

## 9. Signatures

| Module Coordinator | |
|---|---|
| **Module Coordinator:**<br>**Prof. Mostafa Hamad** | **Head of the Departments:**<br>**Prof. Hesham A. Reyad** |
| **Date: May, 2019.** | **Date: May, 2019.** |

# Gastrointestinal Endoscopy Module (III-3)

***Name of department: Unit of GIT Endoscopy, Al Rajhy Liver Hospital***
***Faculty of medicine Assiut University 2018-2019***

## 1. Module data

- **Module Title: Gastrointestinal Endoscopy.**
- **Module code: HBS411F#**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **Number of ECTS : 5**

| Credit Points | Hours for student Workload/Semester | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework | Test Preparation | Other Private study Workshop | Total Hours |
| 5 CP | 15 | 90 | - | 30 | 15 | 150 |
| Percentage% | 10% | 60% | | 20% | 10% | 100% |

- **Department (s) delivering the Module: Staff members in Unit of GIT Endoscopy in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  **Staff members of Tropical Medicine, Internal Medicine and General Surgery Departments as approved by 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 identify different techniques and role of upper endoscopy and colonoscopy as therapeutic and diagnostic methods for management of HPB diseases along with basic skills in ERCP and EUS.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ Learning | *Methods of Evaluation* |
|---|---|---|
| A1. **Describe Principles of**<br>- Understanding specific indications, contraindications, diagnostic and therapeutic alternatives of endoscopic procedures.<br>- Role of Endoscopy in Management of | -Lectures<br>-Simulator | -Written and oral examination<br>- Portfolio |

| | | |
|---|---|---|
| HPB diseases.<br>- Performing upper endoscopy and colonoscopy procedures safely and interpret the findings and integrate them into medical or endoscopic therapy<br>- Acknowledge limitation of Endoscopic procedures. | | |

## B- Intellectual outcomes

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| B1. Correlates the facts of the usage of endoscopy with diagnosis and treatment of HPB diseases. | Didactic (lectures, seminars, tutorial) | -Written and oral examination<br>-Portfolio |

## C- Practical skills

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| C1. Perform upper endoscopy and colonoscopy completely and expeditiously including possessing a thorough understanding of their diagnostic and therapeutic roles.<br>C2 Identifying risk factors and complications of procedures and how to recognize and minimize them.<br>C3. Basic skills of ERCP and EUS. | Hands-on training sessions | -Written and oral examination<br>-Portfolio<br>- Work in Endoscopt room |

## 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<br>-Written and oral communication | Oral Exam<br>Portfolio |

### Interpersonal and Communication Skills

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| D2. Write endoscopic report. | -Observation and supervision<br>-Written and oral communication | Oral Exam<br>Portfolio<br>Check list |

**Professionalism**

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

**Systems-Based Practice**

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

## 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 |
| Upper Endoscopy | A1 | B1 | C1-C3 | D1-D4 |
| Colonoscopy | A1 | B1 | C1-C3 | D1-D4 |
| ERCP and EUS | A1 | B1 | C1-C3 | D1-D4 |

## 5. Methods of teaching/learning:

1 Didactic (lectures, seminars, tutorial)
2 Observation and supervision
3 Written & oral communication
4 Work shop and Hands-on Training sessions
5 Senior staff experience

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

Extra Didactic (lectures, seminars, tutorial) according to their needs
Hands-on Training sessions according to their needs

## 7. Module assessment methods:

**i. Assessment tools:**

- Written and oral examination/ OSPE
- Portfolio

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

**iii. Marks: 100**

## 8. List of references

- **Lectures notes and videos**
- **Essential books**

Essential books: Clinical Gastrointestinal Endoscopy 3rd Edition 2018(https://www.elsevier.com/books/clinical-gastrointestinal-endoscopy/chandrasekhara/978-0-323-41509-5)

- Practical Gastrointestinal Endoscopy: The Fundamentals, 6th Edition, 2011.

- Atlas of GIT endpscopy (The 5th Edition of the Atlas for GI Endoscopy (Fascinating Images for Clinical Education; FICE) 2012

- ERCP and EUS: A Case-Based Approach:. Editors: **Lee**, Linda S. (Ed.)

**Periodicals, Web sites, … etc**: Gastrointestinal Endoscopy (https://www.journals.elsevier.com/gastrointestinal-endoscopy)

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

## 9. Signatures

| **Module Coordinator** | |
|---|---|
| **Module Coordinator:**<br>**Dr Ahmed Abd Allah**<br>**Dr Mahmoud Saad** | **Head of Endoscpy unit:**<br>**Prof Dr Laila Abdel Baki** |
| **Date: ……** | **Date: ……** |

# Fourth Semester Modules

# Liver Transplantation

1- Basic Knowledge and Introduction for Organ Transplantation

2- Preoperative Management and Assessment

3- Surgical Skills

# Basic Knowledge and Introduction for Organ Transplantation Module (IV-1)

***Name of Departments: Surgery Department.***

***Faculty of medicine Assiut University 2019-2020.***

## 1. Module data

- **Module Title: Basic Knowledge and Introduction for Organ Transplantation module.**
- **Module code: HBS411G**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **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 liver transplantation, Seminar attendance and/ or presentation, Hospital works) | Total Hours |
| **5 CP** | 45 | 45 | 10 | 30 | 20 | 150 H |
| **Percentage%** | 30% | 30% | 6.7% | 20% | 13.3% | 100% |

- **Department (s) delivering the Module:** Surgery.
- **Coordinator (s): Dr Ahmed Taha**
- **Staff members in Surgery Department.**
- **Date last reviewed: April 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 acquire a 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 Liver Transplantation Surgery.
2. Provide candidates with fundamental knowledge and skills of dealing with critically ill patients with problems related to Liver Transplantation.
3-To demonstrate the ability to provide patient-centered care that is appropriate, compassionate, and effective for treatment of problems related to Liver Transplantation and the promotion of health.
5-To give opportunities to evaluate and manage a broad variety of problems related to Liver Transplantation.
6- To understand the indications, contraindications and referral criteria for liver transplantation.
7- To recognize the pre-transplant work-up for the recipient and donor.

## 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:<br>- Acute and chronic liver failure.<br>- Hepatocellular carcinoma and other liver tumors. | Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | - MCQ examination<br>-Oral and written exam<br>-OSCE.<br>Portfolio |
| A2. Demonstrate the principles of:<br>- Brain death, organ procurement and preservation.<br>- Indications for liver transplantation.<br>- Outcomes and complications of transplantation.<br>- Immunosuppression, drugs, mechanisms of action, toxicities and combination therapy.<br>- Organ allocation. | | |
| A3. State update and evidence based Knowledge of :<br>Hepatocellular carcinoma and other liver tumors.<br>Brain death, organ procurement and preservation.<br>Immunosuppression | | |
| A4. Mention the basic ethical and medicolegal principles relevant to the Basic Knowledge and Introduction for Organ Transplantation. | | |
| A5. Mention the basics of quality assurance to ensure good clinical care in Basic Knowledge and Introduction for Organ Transplantation. | | |

## 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 Liver Transplantation. | Clinical rounds<br>Senior staff experience | Procedure/case presentation<br>- Portfolio |
| B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Liver Transplantation. | | |
| 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 | | |

| | | |
|---|---|---|
| Transplantation. | | |
| B4.Formulate management plans and alternative decisions in different situations in the field of the Liver Transplantation. | | |

## 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 in clinical diseases and common condition related to A1. | -Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | OSCE<br>Portfolio<br>- MCQ exam |
| C2. Order non invasive/invasive diagnostic procedures relevant to the field of Liver Transplantation | Clinical round with senior staff<br>Observation<br>Post graduate teaching<br>Hand on workshops | -Procedure presentation<br>Portfolio<br>- Chick lists |
| C3. Interpret non invasive/invasive diagnostic procedures relevant to the field of Liver Transplantation | Clinical round with senior staff | Procedure presentation<br>Portfolio<br>- Chick list |
| C4. Perform non invasive/invasive diagnostic or therapeutic procedures relevant to the field of Liver Transplantation. | Clinical round with senior staff<br>-Perform under supervision of senior staff | Procedure presentation<br>Portfolio<br>- Chick list |
| C5. Prescribe non invasive/invasive therapeutic procedures relevant to the field of Liver Transplantation. | Clinical round with senior staff | -Procedure presentation<br>- Portfolio<br>- Chick list |
| C6. Carry out patient management plans for common conditions related to Liver Transplantation. | Clinical round with senior staff | |
| C7. Use information technology to support patient care | | |

| | | |
|---|---|---|
| decisions and patient education in common clinical situations related to Liver Transplantation | | |
| C8. Provide health care services aimed at preventing health problems related to Liver Transplantation | | |
| C9. Provide patient-focused care in common conditions related to Liver Transplant while working with health care professionals, including those from other disciplines like:<br>- Hepatobiliary pancreatic and liver transplant Medicine.<br>- Radiology.<br>- Anaesthesia and Intensive care.<br>- Chest Department.<br>- Cardiology Department.<br>-ENT Department.<br>- Psychatric Department.<br>- Dental Department.<br>- Haematology and Nephrology Departments in some cases. | | |
| C10.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<br>-Observation and supervision<br>-Written & oral communication | Procedure/case presentation<br>- Portfolios |
| D2. Appraises evidence from scientific studies(journal club) | -Journal clubs<br>- 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<br>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<br>Clinical round<br>Seminars<br>Lectures<br>Case presentation<br>Hand on workshops | Global rating<br>Procedure/case presentation<br>Portfolios<br>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 Transplant surgery. | Clinical round<br>Seminars | Clinical Exam |
| D11. Write a report :<br>- Patients pre -transplant medical report.<br>-Patient consultation report. | Senior staff experience | Chick list |
| D12. Council patients and families about:<br>- Prognosis of patient.<br>- Preparation for liver transplantation.<br>- Blood grouping.<br>- The need for extensive lab work up and imaging pretransplant.<br>- The need for consultation with different departments for patient and donor safety.<br>- Close follow up in the liver transplant clinic during preparation.<br>-Treatment modalities for bridging and downstaging in HCC pre transplant.<br>-Nutrition in liver transplant candidate. | 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<br>Senior staff experience<br>Case taking | 1. Objective structured clinical examination<br>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<br>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<br>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<br>2. Patient survey |

## 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 |
| Brain death, organ procurement | A2, A4,A5 | B1-B4 | C1-C10 | D1-D18 |

| | | | | |
|---|---|---|---|---|
| and preservation. | | | | |
| Indications for liver transplantation. | A2, C | B1-B4 | C1-C10 | D1-D18 |
| Acute and chronic liver failure. | A1,A3A5 | B1-B4 | C1-C10 | D1-D18 |
| Hepatocellular carcinoma and other liver tumors. | A1,A3 -A5 | B1-B4 | C1-C10 | D1-D18 |
| Outcomes and complications of transplantation. | A2, A4,A5 | B1-B4 | C1-C10 | D1-D18 |
| Immunosuppression, drugs, mechanisms of action, toxicities and combination therapy. | A1,A3-A5 | B1-B4 | C1-C10 | D1-D18 |
| Organ allocation. | A2, A4,A5 | 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
5. Workshops and conference
6. Clinical rounds
7. Clinical rotation
8. Postgraduate teaching
9. Outpatient/ Inpatient
10. 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:**

- Written and clinical, oral examination
- Portfolio
- Objective structure clinical examination (OSCE)
- Objective structure practical examination (OSPE)
- Check list evaluation of live or recorded performance

**ii. Time schedule:** Forth semester

**iii. Marks: 100**

## 8. List of references

**i. Lectures notes**

**ii. Essential books**

Medical Care of the Liver Transplant Patient, 4th edition, 2012 and its updated version.

iii. **Recommended books**

Liver Transplantation - Technical Issues and Complications.

**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: Dr Ahmed Taha** | **Head of the Departments: Prof Dr Hesham A. Reyad** |
| **Date: April, 2019.** | **Date: April, 2019.** |

# Pre-operative management and Assessment of Liver Transplantation (IV-2)

***Name of department: Surgery Department.***
***Faculty of medicine Assiut University***

## 1. Module data

- **Module Title: pre-operative management and Assessment of Liver Transplantation of liver transplantation**
- **Module code: HBS411H**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **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 (Workshop/ conference ) | Total Hours |
| 10 CP | 50 hours (10 lectures) | 25 hours | - | 150 | 75 | 300 |
| Percentage% | 16.7% | 8.3% | - | 50% | 25% | 100% |

- **Department (s) delivering the Module: Surgery Department in conjunction with Diploma coordinators.**
- **Coordinator (s):**
  **Staff members of Surgery Department as annually approved by department 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 of general principles of pre-operative management necessary for the Liver Transplant surgery.

## 3. Intended learning outcomes (ILOs):

### A- Knowledge and understanding

| ILOs | Methods of teaching/ Learning | *Methods of Evaluation* |
|---|---|---|
| A1. **Describe Principles of**<br>**1. Patient evaluation**<br>• Current indications and contraindications and timing for transplantation.<br>• Evaluation of the high-risk patient in LT - correlation of CHILD and MELD scores with operative morbidity and mortality in LT.<br>• Transplantation for Hepatitis B, C fulminant hepatic failure, primary biliary cirrhosis, primary sclerosing cholangitis and autoimmune hepatitis. Transplantation for primary liver malignancy. Transplantation for Budd-Chiari syndrome.<br>• Patient evaluation (pediatric) Transplantation of cholestatic and metabolic liver diseases in pediatrics. Transplantation for ped. Liver malignancies.<br>**2. Special considerations in patient evaluation**<br>• Ethical considerations in liver transplantation:<br>DONATION AND PROCUREMENT OF ORGANS<br>Deceased Donor Organs<br>Definition of Death<br>Family Veto of Organ Donor Cards<br>Required Request and Presumed Consent Laws<br>Live Liver Donation<br>PSYCHIATRIC ASSESSMENT OF LIVER TRANSPLANT CANDIDATES<br>Mood disorders<br>Addiction | -Lectures | -Written and oral examination<br>- Portfolio |

| | | |
|---|---|---|
| T0bacco smoking<br>Personality disorders and etc ..<br>**3- pretransplantation evaluation**<br>Renal, Cardiac, infectious diseases<br>Role of the clinical nurse co-ordinator.<br>Radiological evaluation in transplantation.<br>Nutritional aspects of liver transplantation.<br>Management of portal hypertension bleeding.<br>Portopulmonary hypertension and hepatopulmonary syndrome. | | |

## B- Intellectual outcomes

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| B1 Correlates the facts & principles of preoperative management of LT surgery in clinical reasoning, diagnosis and management of common diseases related to the Hepato-pancreatico-biliary diseases and Liver Transplant surgery. | Didactic (lectures, seminars, tutorial) | -Written and oral examination<br>-Portfolio |

## 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 in clinical diseases and common condition related to A.A. | -Didactic;<br>-Lectures<br>-Clinical rounds<br>-Seminars<br>-Clinical rotations | OSCE<br>Portfolio<br>- MCQ exam |
| C2. Order the following non invasive/invasive diagnostic procedures<br>-Routine appropriate Lab investigations related to the conditions mentioned in A.A.<br>-Hepatitis markers and markers for other viruses for donor and recipient.<br>- Tumor markers for donor and recipient.<br>- Iron study for donor and recipient.<br>- Thrombophilia work-up for donor and recipient.<br>-Chest X Ray, ECG, Echocardiography, pulmonary | Clinical round with senior staff<br>Observation<br>Post graduate teaching<br>Hand on workshops | -Procedure presentation<br>Portfolio<br>- Chick lists |

| | | |
|---|---|---|
| function test for donor and recipient.<br>- Dobutamin stress echo for the recipient.<br>-Imaging for donor (CT Abdomen, MRCP)<br>-Abdominal Ultrasonography and<br>Doppler for donor and recipient.<br>- Carotid Doppler for recipient.<br>-CT abdomen for donor and recipient.<br>- Dynamic MRI with diffusion for<br>recipients in HCC.<br>-Upper and lower endoscopy.<br>- Metastatic work up for HCC patient (Bone scan, PET Scan, Whole body MRI, CT chest, CT brain).<br>- Breast US and Mammography for female more than 45 years.<br>-Consultation for donor and recipient.<br>- Liver biopsy for donor. | | |
| C3. Interpret the following non invasive/invasive diagnostic procedures<br>Routine appropriate Lab investigations<br>related to the conditions mentioned in<br>A.A.<br>-Hepatitis markers and markers for other viruses for donor and recipient.<br>- Tumor markers for donor and recipient.<br>- Iron study for donor and recipient.<br>- Thrombophilia work-up for donor and recipient.<br>-Chest X Ray, ECG, Echocardiography, pulmonary function test for donor and recipient.<br>- Dobutamin stress echo for the recipient.<br>-Imaging for donor (CT Abdomen, MRCP)<br>-Abdominal Ultrasonography and<br>Doppler for donor and recipient.<br>- Carotid Doppler for recipient.<br>-CT abdomen for donor and recipient.<br>- Dynamic MRI with diffusion for<br>recipients in HCC.<br>-Upper and lower endoscopy.<br>- Metastatic work up for HCC patient (Bone scan, PET Scan, Whole body MRI, CT chest, CT brain).<br>- Breast US and Mammography for female more than 45 years.<br>-Consultation for donor and recipient. | Clinical round with senior staff | Procedure presentation<br>Portfolio<br>- Chick list |

| | | |
|---|---|---|
| - Liver biopsy for donor. | | |
| C4. Perform the following non invasive/invasive diagnostic or therapeutic procedures.<br>- Abdominal US.<br>- Liver Biopsy for donor.<br>- Alcohol injection. | Clinical round with senior staff<br>-Perform under supervision of senior staff | Procedure presentation<br>Portfolio<br>- Chick list |
| C5. Prescribe the following non invasive/invasive therapeutic procedures:<br>-Prescribe proper treatment for conditions in A.A<br>- Anticoagulants in vascular liver disease. | Clinical round with senior staff | -Procedure presentation<br>- Portfolio<br>- Chick list |
| C6. Carry out patient management plans for common conditions related to Liver Transplant Medicine. | Clinical round with senior staff | |
| C7. Use information technology to support patient care decisions and patient education in common clinical situations related to Liver Transplant Medicine | | |
| C8. Provide health care services aimed at preventing health problems related to Liver Transplant Medicine like:.<br>-Delayed diagnosis of neoplastic liver diseases.<br>- Hazards of anesthesia and risk of surgery in hepatic patient.<br>-Hospital acquired infections.<br>- Transmission of malignancies and infection through donor organs. | | |
| C9. Provide patient-focused care in common conditions related to Liver Transplant Surgery while working with health care professionals, including those from other disciplines like:<br>- Hepatobiliary pancreatic and liver transplant Medicine<br>- Radiology.<br>- Anaesthesia and Intensive care.<br>- Chest Department.<br>- Cardiology Department.<br>-ENT Department.<br>- Psychatric Department.<br>- Dental Department. | | |

| | | |
|---|---|---|
| - Haematology and Nephrology Departments in some cases. | | |
| C10. 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.Use information technology to manage information, access on-line medical information; and support their own education | -Observation and supervision<br>-Written and oral communication | Oral Exam<br>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<br>-Written and oral communication | Oral Exam<br>Portfolio<br>Check list |
| D3.-Elicit information using effective nonverbal, explanatory, questioning, and writing skills | | |
| D4. 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 |
|---|---|---|
| D5. Demonstrate a commitment to ethical principles | Senior Staff Experience | Oral Exam<br>Portfolio |

## Systems-Based Practice

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D6 Work effectively in relevant health care delivery settings and systems. | -Observation<br>-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 |
| **Patient evaluation** | A1 | B1 | C1-C10 | D1-D6 |
| **Special considerations in patient evaluation** | A1 | B1 | C1-C10 | D1-D6 |
| **Pretransplantation evaluation** | A1 | B1 | C1-C10 | D1-D6 |

## 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 part

**iii. Marks: 200**

## 8. List of references

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

**Transplantation of the liver 3rd edition.**

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

## 9. Signatures

| Module Coordinator | |
|---|---|
| **Module Coordinator: Dr Tarek Sabra** | **Head of the Department: Prof Dr Hesham A. Reyad** |
| **Date: ……** | **Date: ……** |

# Surgical skills of liver transplantation (IV-3)

***Name of Departments: General Surgery***

***Faculty of medicine Assiut University 2019-2020.***

## 1. Module data

- **Module Title:** Surgical skills of liver transplantation
- **Module code: HBS411 I**
- **Speciality: Professional Diploma in** the **Hepato-pancreatico-biliary Surgery.**
- **Number of ECTS: 15**

| Credit Points | Student Workload/Semester (15 weeks) | | | | | |
|---|---|---|---|---|---|---|
| | Lecture | Practical/ Clinical | Homework | Test Preparation | Other Private study (Attendance of workshop or Conference related to liver transplantation, Seminar attendance and/ or presentation, Hospital works) | Total Hours |
| 15 CP | 3 CP 90 H | 6 CPS 180H | 2.2 CP 65H | 2.3 CPS 70H | 1.5 CP 45H | 450 H |
| Percentage% | 20 % | 40 % | 14.5 % | 15.5 % | 10 % | 100% |

- **Department delivering the Module:** Surgery *Department.*
- **Coordinator: Dr Tameem Moukhtar**
- **Staff members in Department of Surgery and liver transplantation team.**
- **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 acquire a satisfactory level of surgical skills, updated knowledge of different surgical techniques and operative decision capabilities related to liver transplantation.
2. Provide candidates with fundamental skills needed in assisting and performing liver transplant surgery
3. Provide the candidates with the knowledge and surgical techniques essential to ensure the safety of donors and recipients during surgery
4. Enable candidates to understand the surgical details of different transplant procedures
5. To give opportunities to evaluate and manage difficult intraoperative situations during liver transplant surgery
6. To offer the candidates hand-on practical surgical training in the OR. This should include assisting in donor and recipient transplant surgery as second then first assistant.

## 3. Intended learning outcomes (ILOs):

## A- Knowledge and understanding

| ILOs | Methods of teaching/ Learning | *Methods of Evaluation* |
|---|---|---|
| A1. Describe the different types of instruments and equipment used in liver transplant surgery<br>A2. Describe principles of vascular anastomosis<br>A3. Describe principles of microvascular anastomosis<br>A4. Describe principles of biliary anastomoses in liver transplant<br>A5. Describe the principles of inflow and outflow reconstruction in liver transplant surgery<br>A6. Describe the technical steps of different transplant procedures including donor surgery, recipient surgery, Backtable , harvesting cadaveric graft<br>A7. Describe the intraoperative complications of transplant surgery and how to deal with them.<br>A8. Mention the safety precautions during different transplant procedures to guard against complications | Didactic;<br>-Lectures<br>-Seminars<br>-OR training | - MCQ examination<br>-Oral and written exam<br>-OSCE.<br>Portfolio |

## B- Intellectual outcomes

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| B1. Correlates the facts of relevant basic sciences especially anatomy with operative findings, interperetation and decision making in liver transplant surgery<br>B2. Demonstrate an investigatory and analytic thinking (problem solving) approaches to different surgical situations that may require different surgical techniques in liver transplant surgery<br>B3.Formulate surgical technical plans and alternative decisions in different situations during liver transplant surgery | OR training | -oral exam<br>- Portfolio |

## C- Practical skills (Patient Care)

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| C1. Be familiar with the different instruments and equipment and know how to use them properly<br>C2. To assist in the OR as second or first assistant in donor and recipient surgery | -Didactic;<br>-Lectures<br>-Clinical rounds | OSCE<br>Portfolio<br>- MCQ exam<br>-Operative |

| | | |
|---|---|---|
| C3. Simulator training of vascular and microvascular anastomosis<br>C4. Use of intraoperative US to confirm the vascular anatomy of the liver and interpret its findings in addition to other preoperative radiology to make operative decisions<br>C5.Use of intraoperative Doppler to assess the vascular anastomses after completion of implantation | -Seminars<br>-simulator training<br>-OR training<br>-Clinical rotations<br>-hand-on workshops | exam<br>-OSCE<br>-Check lists |

## 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)<br>D2. Conduct epidemiological Studies and surveys.<br>D3. Perform data management including data entry and analysis.<br>D4. Appraises evidence from scientific studies | -Case log<br>-Observation and supervision<br>-Written & oral communication<br>-Journal clubs<br>- Discussions in seminars and clinical rounds | Procedure/ case presentation<br>- Portfolios |

### Interpersonal and Communication Skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D5. Maintain therapeutic and ethically sound relationship with patients.<br>D6. Provide information using effective nonverbal, explanatory, questioning, and writing skills.<br>D7. Work effectively with others as a member of a health care team or other professional group.<br>D8.Council patients and families about:<br>Prognosis of patient.<br>Alternative approaches<br>Procedure-related complications<br>Postoperative Module and follow up | Simulations<br>Clinical round<br>Seminars<br>Lectures<br>Case presentation<br>Hand on workshops | Global rating<br>Procedure/case presentation<br>Portfolios<br>Chick list |

### Professionalism

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|---|---|
| D9. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society<br>D10. Demonstrate a commitment to ethical principles, including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices<br>D11- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities | Observation<br>Senior staff experience<br>Case taking | 1. OSCE<br>2. Patient survey |

**Systems-Based Practice**

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|---|
| D12. Work effectively in relevant health care delivery settings and systems.<br>D13. Practice cost-effective health care and resource allocation that does not compromise quality of care.<br>D14. Assist patients in dealing with system complexities. | Observation<br>Senior staff experience | 1. Check list evaluation of live or recorded performance<br>2. MCQ |

## 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 |
| - Principles of vascular anastomosis | A2 | B1-B3 | C1-C3 | D1=D14 |
| - Principles of microvascular anastomosis | A3 | B1-B3 | C1-C3 | D1=D14 |
| - Principles of biliary anastomosis | A4 | B1-B3 | C1,C4 | D1=D14 |
| - Donor surgery | A6,A7.A8 | B1-B3 | C1-C5 | D1=D14 |
| - Recipient hepatecomy | A6,A7.A8 | B1-B3 | C1-C5 | D1=D14 |
| - Inflow and outflow reconstruction | A1,A2,A5,A6, A7,A8 | B1-B3 | C1-C5 | D1=D14 |
| - Harvesting cadaveric graft | A1,A6 | B1-B3 | C1,C2 | D1=D14 |
| - Split liver transplantion | A1-A8 | B1-B3 | C1,C2 | D1=D14 |
| - Pediatric liver transplantation | A1-A8 | B1-B3 | C1,C2 | D1=D14 |
| - Dual liver transplantation | A1-A8 | B1-B3 | C1,C2 | D1=D14 |
| - Operative and post operative | A1,A2,A5,A6 | B1-B3 | C1,C2,C5 | D1=D14 |

| | | | | | |
|---|---|---|---|---|---|
| | management of portal vein thrombosis | | | | |
| - | Transplantation of BCS | A1--A6 | B1-B3 | A-E | D1=D14 |
| - | Management of HAS and HAT | A1, A3,A7,A8 | B1-B3 | A-E | D1=D14 |
| - | Management of outflow obstruction | A1,A2,A7,A8 | B1-B3 | A-E | D1=D14 |
| - | Management of post transplant portal vein thrombosis | A1,A2,A3,A8 | B1-B3 | A-E | D1=D14 |

## 5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Operating Room (OR) attendance and tasks
4. Written & oral communication
5. Senior staff experience
6. Workshops and conference
7. Postgraduate teaching
8. Outpatient/ Inpatient
9. 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:**

- Written and clinical, oral examination
- Live OR assessment
- Portfolio
- Objective structure clinical examination (OSCE)
- Objective structure practical examination (OSPE)
- Check list evaluation of live or recorded performance

**ii. Time schedule:** At the 4th semester

**iii. Marks: 300**

## 8. List of references

**i. Lectures notes**

**ii. Recommended books**

- Living donor liver transplantation, surgical techniques and innovations. Kiouchi Tanaka et al. 2003
- Living donor liver transplantation. Sheung Tat Fan. 2nd editon , 2011
- Liver transplantation. Dilip Chakravarty. 1st edition, 2010

**iii- Periodicals, Web sites, … etc**

Liver transplantation

Transplant proceedings

**v. Others: None.**

## 9. Signatures

| Module Coordinator | |
|---|---|
| **Module Coordinator:**<br>**Dr. Tameem Mukhtar Fathy Ibraheem** | **Head of the Departments:**<br>**Prof. Hesham A. Reyad** |
| **Date: May, 2019.** | **Date: May, 2019.** |

# ANNEX 2
# Program Academic Reference Standards (ARS)

## *1- Graduate attributes for Professional Diploma degree in* HPB Surgery.

***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 HPB Surgery.

**2-** Appraise and utilise scientific knowledge to continuously update and improve clinical practice in related HPB Surgery.

**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 HPB Surgery.

**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 HPB Surgery.

**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 HPB Surgery and Liver Transplant.

**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 HPB Surgery 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 HPB Surgery and Liver Transplant and the welfare of society.

**2-1-C-** Up to date and recent developments in common problems related to HPB Surgery.

**2-1-D-** Ethical and medicolegal principles relevant to practice in HPB Surgery

**2-1-E -**Quality assurance principles related to the good medical practice in HPB Surgery.

**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 HPB Surgery.

**2-2-B-** Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to HPB Surgery.

**2.2- C-** Demonstrating systematic approach in studying clinical problems relevant to HPB Surgery.

**2-2-D-** Making alternative decisions in different situations in HPB Surgery.

***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 HPB Surgery.
for patients with common diseases and problems.

**2-3- C**- Write and evaluate reports for situations related to the field of HPB and Liver HPB Surgery.

***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

| | 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<br>Field visits | # |
| External Evaluator (s):According to department council<br>External Examiner (s): According to department council | Reports<br>Field visits | # |
| Stakeholders | Reports<br>Field visits<br>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 جراحة الكبد و البنكرياس و الجهاز 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 HPB Surgery. | 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 HPB Surgery. | 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 HPB Surgery. | 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 HPB Surgery. | 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 HPB Surgery. | 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.<br>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 HPB Surgery. | 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 HPB Surgery. | 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 HPB Surgery 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 HPB Surgery. | 2-1-ج-التطورات العلمية في مجال التخصص. |
| 2.1. D- Ethical and medico-legal principles relevant to practice in the HPB Surgery. | 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 HPB Surgery. | 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 HPB Surgery.<br>2.2. B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to HPB Surgery . | 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 to HPB Surgery. | 2-2-ب- حل المشاكل المتخصصة مع عدم توافر بعض المعطيات |

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| 2.2. A-Correlation of different relevant sciences in the problem solving and management of common diseases of HPB Surgery. | 2-2-ج- الربط بين المعارف المختلفة لحل المشاكل المهنية |
| 2.2. C- Demonstrating systematic approach in studying clinical problems relevant to the HPB Surgery. | 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 HPB Surgery. | 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.<br><br>2.3.B- Demonstrate patient care skills relevant to HPB Surgery for patients with common diseases and problems. | 2-3-أ- إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص |
| 2.3.C- Write and evaluate reports for Situation related to HPB Surgery. | 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 | 2-3-ج- تقييم الطرق و الأدوات القائمة في مجال التخصص |

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| health.<br>2.3.B- Demonstrate patient care skills relevant to that HPB Surgery.for patients with common diseases and problems. | |
| 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<br>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<br><br>2.4.B- Use all information sources and technology to improve his practice.<br><br>2.4.E-Demonstrate professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. | 2-4-ج- التقييم الذاتي وتحديد احتياجاته التعلمية الشخصية |
| 2.4.A-Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal | 2-4-د- استخدام المصادر المختلفة للحصول على المعلومات و المعارف |

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| and assimilation of scientific evidence, , improvements in patient care and risk management. | |
| 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* HPB Surgery

| *(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 and - Pathology related to HPB Surgery.<br>**2-1-B-** Mention essential facts of clinically supportive sciences including Basics of Clinical pathology , Nutrition - related to HPB Surgery.<br>**2-1-C-** Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of the common diseases and situations related to HPB Surgery. |
| **2-1-B** The relation between good clinical care of common health problem in the HPB Surgery. and the welfare of society. | **2-1-H-** State the impact of common health problems in the field of HPB Surgery.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 HPB Surgery. | **2-1-C-** Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of the common diseases and situations related to HPB Surgery.<br>**2-1-D-** Give the recent and update developments in the pathogenesis, diagnosis, prevention and treatment of common diseases related to HPB Surgery. |
| **2-1-D-** Ethical and medicolegal Principles relevant to practice in the Field. | **2-1-E-** Mention the basic ethical and medicolegal principles that should be applied in practice and are relevant to the field of HPB Surgery. |
| **2-1-E**-Quality assurance principles related to the good medical practice in the HPB Surgery. field. | **2-1-F-** Mention the basics and standards of quality assurance to ensure good clinical practice in the field HPB Surgery. |
| **2-1-F-** Ethical and scientific basics of medical research. | I. **2-1-G-** Mention the ethical and scientific principles of medical research methodology ,information technology and evidence based |

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|---|---|
| | medicine |
| ***2-2- Intellectual skills*:** | ***2-2- Intellectual skills:*** |
| **2-2-A-**Correlation of different relevant sciences in the problem solving and management of common diseases of the HPB Surgery. | **2-2-A-** Correlate the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases of the HPB Surgery. |
| **2-2-B-**Problem solving skills based on data analysis and evaluation (even in the absence of some) for common clinical situations related to HPB Surgery. | **2-2-B-** Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical situations related HPB Surgery. |
| **2-2-C-** Demonstrating systematic approach in studding clinical problems relevant to the HPB Surgery. 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 HPB Surgery. field. |
| **2-2-D** Making alternative decisions in different situations in the field of the HPB Surgery. | **2-2-D-** Formulate management plans and alternative decisions in different situations in the field of the HPB Surgery. |
| ***2-3- Clinical skills:*** | ***2/3/1/Practical skills (Patient Care :)*** |
| **2-3-A-** Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.<br><br>**2-3-B-** Demonstrate patient care skills relevant to that HPB Surgery.for patients with common diseases and problems. | **2-3-1-A-** Obtain proper history and examine patients in caring and respectful behaviors.<br>**2-3-1-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 HPB Surgery and Liver Transplant.<br>**2-3-1-C-** Carry out patient management plans for common conditions related to HPB Surgery.<br>**2-3-1-D-** Use information technology to support patient care decisions and patient education in common clinical situations related to HPB Surgery.<br>**2-3-1-E-** Perform competently noninvasive and invasive procedures considered essential for the HPB Surgery.<br>**2-3-1-F-** Provide health care services aimed at preventing health problems related to HPB Surgery. |

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| | **2-3-1-G-** Provide patient-focused care in common conditions related to HPB Surgery. 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 HPB Surgery. | **-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*** | ***2/3/2 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 and risk management | **2-3-2-A-** Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).<br>**2-3-2-B-** Appraises evidence from scientific studies.<br>**2-3-2-C-** Conduct epidemiological studies and surveys. |
| **2-4-B-** Use all information sources and technology to improve his practice. | **2-3-2-C-** Conduct epidemiological studies and surveys.<br>**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.<br>**2-3-2-G-** Elicit information using effective nonverbal, explanatory, questioning, and writing skills.<br>**2-3-2-H-** Provide information using effective nonverbal, explanatory, questioning, and writing skills.<br>**2-3-2-I-** Work effectively with others as a member of a health care team or other professional group. |

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|---|---|
| **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.<br>**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.<br>**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<br>**2-3-2-N-** Practice cost-effective health care and resource allocation that does not compromise quality of care.<br>**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 & Embryology | ✓ | | | | | | | |
| 2. Physiology | ✓ | | | | | | | |
| 3. Pathology | ✓ | | | | | | | |
| 4. Clinical Pathology and Laboratory Testing | | ✓ | | | | | | |
| 5. Statistics and Research Methodology | | | | | | | ✓ | |
| 6. Basic Nutrition | | ✓ | | | | | | |
| 7. Evidence Based Medicine | | | | ✓ | | | ✓ | |
| 8. Information Technology | | | | | | | ✓ | |
| **Semester 2:** Preoperative Assessment of Hepato- Bancreatico- Biliary Diseases | | | | | | | | |
| 1. General principles of preoperative care of Hepato-Bancreatico-Biliary diseases | | | ✓ | ✓ | | | | |
| 2. Diagnostic and Basic Interventional Radiology | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Therapeutic modalities in management of Hepato-Bancreatico-Biliary tumors. | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| **Semester 3:** Operative and Interventional Management of Hepato- Bancreatico- Biliary Diseases | | | | | | | | |
| 1. Surgical Skills | | | ✓ | | ✓ | | ✓ | |
| 2. Laparoscopy | | | ✓ | | ✓ | | ✓ | |
| 3. Gastrointestinal Endoscopy | | ✓ | | | ✓ | | | ✓ |
| **Semester 4:** Liver Transplantation | | | | | | | | |
| 1. Basic Knowledge and Introduction for Organ Transplantation | | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| 2. Preoperative Management and Assessment | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Surgical Skills of liver transplant | | | ✓ | | ✓ | | ✓ | |

**Intellectual**

| Module | Program covered ILOs | | | |
|---|---|---|---|---|
| | 2/2/A | 2/2/B | 2/2/C | 2/2/D |
| **Semester 1:** Basic Sciences + Elective Module | | | | |
| 1- Anatomy & Embryology | ✓ | | | |
| 2- Physiology | ✓ | | | |
| 3- Pathology | ✓ | | | |
| 4- Clinical Pathology and Laboratory Testing | ✓ | | | |
| 5- Statistics and Research Methodology | | ✓ | | |
| 6- Basic Nutrition | ✓ | | | |
| 7- Evidence Based Medicine | | ✓ | ✓ | |
| 8- Information Technology | | | ✓ | |
| **Semester 2:** Preoperative Assessment of Hepato- Bancreatico- Biliary Diseases | | | | |
| 1- General principles of preoperative care of HPB diseases | ✓ | ✓ | ✓ | ✓ |
| 2- Diagnostic and Basic Interventional Radiology | ✓ | ✓ | ✓ | ✓ |
| 3- Therapeutic modalities in management of Hepato- Bancreatico- Biliary tumors. | ✓ | | | |
| **Semester 3:** Operative and Interventional Management of Hepato- Bancreatico- Biliary Diseases | | | | |
| 1- Surgical Skills | ✓ | ✓ | | ✓ |
| 2- Laparoscopy | ✓ | ✓ | | ✓ |
| 3- Gastrointestinal Endoscopy | ✓ | | | |
| **Semester 4:** Liver Transplantation | | | | |
| 1- Basic Knowledge and Introduction for Organ Transplantation | ✓ | ✓ | ✓ | ✓ |
| 2- Preoperative Management and Assessment | ✓ | | | |
| 3- Surgical Skills of liver transplantation | ✓ | ✓ | | ✓ |

**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 & Embryology | | | | | | | | |
| 2. Physiology | | | | | | | | |
| 3. Pathology | | | | | | | | |
| 4. Clinical Pathology and Laboratory Testing | | | | | | | | |
| 5. Statistics and Research Methodology | | | | | | | | ✓ |
| 6. Basic Nutrition | ✓ | ✓ | ✓ | | ✓ | | | ✓ |
| 7. Evidence Based Medicine | | ✓ | | ✓ | | | | |
| 8. Information Technology | | | | ✓ | | | | ✓ |
| **Semester 2:** Preoperative Assessment of HPB Diseases | | | | | | | | |
| 1. General principles of preoperative care of HPB diseases | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. Diagnostic and Basic Interventional Radiology | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Therapeutic modalities in management of HPB tumors. | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ |
| **Semester 3:** Operative and Interventional Management of HPB Diseases | | | | | | | | |
| 1. Surgical Skills of liver transplant | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. Laparoscopy | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Gastrointestinal Endoscopy) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Semester 4:** Liver Transplantation | | | | | | | | |
| 1. Basic Knowledge and Introduction for Organ Transplantation | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. Preoperative Management and Assessment | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Surgical Skills of liver transplant | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

**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 & Embryology | | | | ✓ | | | | |
| 2. Physiology | | | | ✓ | | | | |
| 3. Pathology | | | | ✓ | | | | |
| 4. Clinical Pathology and Laboratory Testing | | | | ✓ | | | | ✓ |
| 5. Statistics and Research Methodology | ✓ | | ✓ | | | | | |
| 6. Basic Nutrition | | ✓ | | | | ✓ | | ✓ |
| 7. Evidence Based Medicine | ✓ | ✓ | | | | | | |
| 8. Information Technology | | | | ✓ | | | | |
| **Semester 2:** Preoperative Assessment of Hepato- Bancreatico- Biliary Diseases | | | | | | | | |
| 1. General principles of preoperative care of Hepato-Bancreatico-Biliary diseases | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. Diagnostic and Basic Interventional Radiology | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Therapeutic modalities in management of Hepato-Bancreatico-Biliary tumors. | | | | ✓ | | | | |
| **Semester 3:** Operative and Interventional Management of Hepato- Bancreatico- Biliary Diseases | | | | | | | | |
| 1. Surgical Skills | ✓ | | ✓ | ✓ | | ✓ | | ✓ |
| 2. Laparoscopy | ✓ | | ✓ | ✓ | | ✓ | | ✓ |
| 3. Gastrointestinal Endoscopy | | | | | | | ✓ | ✓ |
| **Semester 4:** Liver Transplantation | | | | | | | | |
| 1. Basic Knowledge and Introduction for Organ Transplantation | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. Preoperative Management and Assessment | | | | ✓ | | ✓ | ✓ | |
| 3. Surgical Skills of liver transplant | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |

**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 & Embryology | ✓ | | ✓ | | ✓ | | |
| 2. Physiology | ✓ | | ✓ | | ✓ | | |
| 3. Pathology | ✓ | | ✓ | | ✓ | | |
| 4. Clinical Pathology and Laboratory Testing | | | ✓ | | ✓ | | |
| 5. Statistics and Research Methodology | | | | | | | ✓ |
| 6. Basic Nutrition | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 7. Evidence Based Medicine | | | | | | | |
| 8. Information Technology | ✓ | ✓ | | | | ✓ | |
| **Semester 2:** Preoperative Assessment of Hepato- Bancreatico- Biliary Diseases | | | | | | | |
| 1. General principles of preoperative care of HPB diseases | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. Diagnostic and Basic Interventional Radiology | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Therapeutic modalities in management of HPB tumors. | | | ✓ | | ✓ | | |
| **Semester 3:** Operative and Interventional Management of Hepato- Bancreatico- Biliary Diseases | | | | | | | |
| 1. Surgical Skills | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. Laparoscopy | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Gastrointestinal Endoscopy | | | | ✓ | | ✓ | |
| **Semester 4:** Liver Transplantation | | | | | | | |
| 1. Basic Knowledge and Introduction for Organ Transplantation | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. Preoperative Management and Assessment | ✓ | | ✓ | | ✓ | | |
| 3. Surgical Skills Surgical Skills of liver transplant | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

# (End of the program specifications)