# SAHA Project

## raiSe libyAn Higher education health sector for the benefit of local society

## Reference Number: 619002-EPP-1-2020-1-IT-EPPKA2-CBHE-JP KA2 ERASMUS+ CAPACITY BUILDING IN THE FIELD OF HIGHER EDUCATION PROGRAMME

Unimed | University Of Granada | University Of Wes Bohemia | LIMU | University Of Sirte | University Of Tripoli | University Of Zawia | University Of Misurata | University Of SEBHA

# D2.1 New curriculum for postgraduate training in Health Management

**Project Reference Number: 619002-EPP-1-2020-1-IT-EPPKA2-CBHE-JP**

**KA2 ERASMUS+ CAPACITY BUILDING IN THE FIELD OF**
**HIGHER EDUCATION PROGRAMME**

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## Description of Erasmus+ SAHA Project:

In Libya policies are needed in order to face increasing pressures on the sustainability of health systems. Up-to-date and high-quality health data, good health monitoring and healthcare evaluation practices are needed to support nation and regional health policies.

The Erasmus+ CBHE SAHA project emerged as a result of the unfortunate fact that the health management capacity in Libya is reportedly weak, with the shortage of management and admin staff. There is an evident lack of trained health personnel, inadequate ICT infrastructure, equipment and resources for scientific research and training. The sector suffers poor capacity building training programs, lack of reliable data and stored data at local and national level, and low-quality assurance. It endures inadequate teaching methodologies, tools and assessment methods, and rare international exposure of teaching staff.

Therefore, SAHA project aims to support the Libyan Health System, where the government and international community – specifically, the EU and WHO – can have a significant impact on restructuring systems. In addition to that SAHA project contribute the high educational degree in health management at Libyan universities, which is thought to be the foundation of future health management

in Libya, where continuous professional development aids in reforming and reconstructing the health system are also needed.

## General SAHA project goals:

- To promote the modernization, accessibility, and internationalization of higher education in the field of health economics and healthcare management.
- To strengthen education in response to key problems today (employment, economic stability, and growth), especially in the field of healthcare facilities

- To enhance human resources capacities in the field of healthcare management and health economics in Libyan higher education institutions by improving or/and upgrading quality, equity of access, planning, and upgrading the quality of existing courses and enhancing relevance for the labour market and society.
- To enhance the importance of higher education in the area of healthcare administration for the job market and society.

- To promote a reform process in the field of the Libyan health system by

involving Libyan higher education institutions representatives, national and international stakeholders, and public authorities.

- To encourage the voluntary integration of training offerings in the Health Care Management of higher education programs.
- To improve the level of competencies and skills by developing new and innovative performance and healthcare education programs.
- To setting up data centers in all universities in order to reinforce reliability of data and statistics related to health management.

In order to accomplish the above-mentioned objectives, the project is structured as eight main work packages, each one targets specific results and contains a number of tasks and activities to be implemented in order to come up with the required deliverables and outcomes. Thanks to the positive interaction and fruitful cooperation with all the project partners, this report is carried out as a main deliverable of the first Work Package, which will act as the cornerstone for the implementation of the following project activities.

## Overview of this report:

This report is aimed at clearly stating the current situation in regard to the Healthcare Management in Libya, and in relation to the Higher Education

institutions. It also explains the method to design a detailed curriculum based on an accurate selection of the more appropriate contents and best practices to be adopted and implemented by the Postgraduate Training Schools (PGTS) in Health Management in all partner university.

The report is designed to contain an update of Curricular design for the postgraduate training of medical professionals in Health Management in Libya, collecting reliable data through bibliographic research and a questionnaire that has been virtually distributed to the Libyan partner universities and after finished connected them. It also lists the courses available, approved, and willing to design. Then, the report states the needs of each partner university in regard to the teaching methodology, practices and training needs.

Furthermore, to assess the actual situation in an in-depth study that will be carried out by each one of the Higher Education Institutions (HEI) involved, both in EU and LY, as well as in the European documentation about existing curricula in Post Graduate training in health management.

The methods chosen to carry out this report were the use of literature and documentary evidence (bibliographic research) and the use of survey.

Bibliographic research: A bibliography research has been done with the aim of providing an overview of the postgraduate training of medical professionals in Health Management.

# SAHA project partners:

All Libyan Partner Universities have participated in the survey that was distributed and collected online where the implementation of advanced curriculum design for the postgraduate training of medical professionals in Health Management are shown in table 1.

Table 1. The partners of SAHA project.

| No. | Name of University |
|---|---|
| 1 | Mediterranean Universities Union (UNIMED) |
| 2 | University of PAVIA – Italy |
| 3 | University of Granada – Spain |
| 4 | University of West Bohemia – Czech Republic |
| 5 | University of Tripoli (UOT) |
| 6 | Misurata University (MU) |
| 7 | Sebha University (SeU) |
| 8 | Sirte University (SU) |
| 9 | University of Zawia (ZU) |
| 10 | Libyan International Medical University (LIMU) |

## Introduction of Co-leader of WP2 Sirte University (SU):

SU is a Libyan government university. It was founded as a branch of the University of Garyounis (now known as the University of Benghazi) in the year 1989. In 1992, it became an autonomous institution and was then known as Al-Tahaddi University but was later re-named as Sirte University in 2010.

Since it gained its autonomous status, the university has been continuously expanding and has become one of well-recognised higher education institutions in Libya. Starting off with a few schools and academic departments, the university has at present 15 different schools on and off-campus Zamzam and with a total number of students of 11049.

The university is also trying to enhance self-learning and research culture among its students by building a new and comprehensive library with more than 100000 resource materials. The university has also established a Languages Centre in a hope of improving the standards of English language among its students and to provide pre-sessional English courses for students who have awarded scholarships to do their masters and PhD degrees abroad. In addition, another aim of the languages Centre is to teach languages other than English, namely, Italian, Spanish, and German in the near future.

# International Cooperation Office (ICO-SU):

Sirte University's International Cooperation Office (ICO) is to support the university locally and internationally through the scientific projects e.g., SAHA, Wheel, PAgES, Libya Up, and ENROL. In addition to those international agreements with local and international universities and academic institutes in order to achieve its globalization. ICO is considered as a window to the university. Sirte University member's academic staff, administrative staff, and student are included in the exchanging programmes.

# Overview of work package 2:

| Work package number | 2 |
|---|---|
| Work package type | Curricular design |
| Title | Curricular design for the postgraduate training of medical professionals in Health Management |

SAHA wants to determine a long-term impact on the HE system as well as on the society at large. This last point is of fundamental importance while addressing a top priority such as the one of health in Libya with a particular focus on Higher

education. SAHA project is aimed to offer a well-designed curriculum in Health Economics and Healthcare Management. The curriculum will be implemented in each partner university and will be composed of a cluster of 6 courses, to be located in different Departments/Faculties. These courses will be eligible for both students of Medicine and Health Public as well as students of Economics, depending on each partner decision. Since the construction of a curricular project constitutes a process of meditation and decision-taking which will finally determine the quality of professional preparation of the trainees involved. SAHA partners expect the curricular design for the post graduate training of professionals in health management to be elaborated.

Main goal in this WP is to design a detailed curriculum based on an accurate selection of the more appropriate contents and best practices to be adopted and implemented by the Postgraduate Training Schools (PGTS) in Health Management.

A further passage will be represented by the development of an integration among the different curricula, aiming to foster an increased relationship and a concept of multidisciplinary and holistic approach to health management. In this frame, every LY HEI will have the challenging work of designing at least one own curricular design, upon the Updated need analysis and the collection of best

practices elaborated in WP1, as well as the data collected in the census from WP1 as far as number of needed manpower is concerned. Drafts of the new curricula will be discussed in a coordinating meeting with LY colleagues; the baseline examination of a sample of trainees described under WP1 will take place in the same venue and in the same period, in order to allow the trainees undergoing the examination to take thereafter also part to the works of the meeting, bringing their experience seen "from the other side".

## Objective of this deliverable in the framework of Work Package 2:

**Drafting of a curriculum for the Postgraduate Training Schools (PGTS) in Health Management.**

- Whenever needed, the curricula modernization will entail a modification in the general planning of the PGTS, also in the sense of harmonizing the organization of studies with the one adopted by the EU HEI.

- An integration among the different curricula will follow, to foster an increased relationship and a concept of multidisciplinary and holistic approach to health management.

- The new curricula will be organized in a modular way, in order to simplify their adoption and adaptation to the specific needs of LY. The basic template of the curriculum will be composed by the same modules for all LY Universities; in a deeper analysis it will be then examined a fine tuning according to the specific strategies of each University involved.

## Drafting of the curriculum:

The first step is to develop a curricular cluster design platform that will function as curricular baseline for introducing new courses on health management.

The curriculum will be implemented in each university partner and will be composed by a cluster of 6 courses:

1. Introduction to Health Economics for Healthcare Management

2. Healthcare management

3. Health Economics

4. Business Development

5. Performance Management

6. Telemedicine

## Methodology:

## Reunions:

Despite all the constraints related to the political and sanitary situations in Libya, the meetings held in Sirte and Tripoli succeeded to achieve the following decision and resolutions with specific regards to WP2.

University teams from Pavia and Sirte worked early on the final form of WP2 questionnaire before closure of WP1 in order to finish on the deadline. Sirte SAHA team had met multiple times to discuss the healthcare management Master's degree courses and came up with a draft that included all of the subjects and their credits. The following WP2 meetings:

1- First participation WP2 internal online meetings in Sirte University (7/12/2020). The design of the questionnaire was discussed at the International Cooperation Office at the University of Sirte.

2- Second participation WP2 internal online meetings in Sirte University (11/01/2021). The topics and information contained in the questionnaire were discussed at the International Cooperation Office at the University of Sirte.

3- Third participation WP2 internal online meetings in Sirte University (24/02/2021). The preparation of the study plan for the master's program in healthcare administration was discussed.

4- Fourth participation WP2 internal meetings in Sirte University (13/04/2021). The meeting was held between the members of the Sirte University team in order to present the study plan that had been designed by some team members, during which the contents of the study plan for the Master of Healthcare Administration Program were agreed upon.

5- Fifth participation WP2 online meetings in Sirte University (18/05/2021). The meeting was held between the team of the Sirte University and the Pavia University, during which the mechanism for finalizing the questionnaire was discussed.

6- Sixth participation WP2 online meetings in Sirte University (14/06/2021). The meeting was held between the SAHA Project team of the Sirte University and the Pavia University, during which the contents of the

final version of the questionnaire were discussed, and it was agreed on its presentation at the meeting planned to be held in July at the University of Tripoli.

7- Seventh participation WP2 meeting in Tripoli (14/07/2021). As a result of meeting with participation of the general coordinator of the SAHA Project, Mr. Antonio M. Morone and all Libyan partners where in the afternoon session, PAVIA University and Sirte University (SU) presented the work plan for the WP2 (annex 8). The WP2 aim is to design the SAHA courses for the postgraduate training of medical professionals in Health Management. In this regard, a future questionnaire for the WP2 was presented and discussed among the participants in order to better understand the main issues related to the SAHA courses. The questionnaire was finally approved by all the partners and its circulation was planned.

8- Eight participation WP2 internal meetings in Sirte University (20/07/2021). The meeting during which it was agreed to refer the study plan designed by the Sirte University team members to the general coordinator of the SAHA Project.

9- Ninth participation WP2 internal meetings in Sirte University (17/08/2021). The meeting was held to discuss the responses received

from the Libyan universities participating in the program.

10- Tenth participation WP2 internal meetings in Sirte University (14/09/2021). During this meeting SU team members discussed the contents of the study plan, and the comments received from the partners were considered and included within the final study plan.

11- Eleventh participation WP2 online meetings in Sirte University (26/09/2021). The meeting was held between the SU team members and the University of Pavia to discuss the adoption of the study plan for the Master of Healthcare Administration and the potential to approve it from the Quality assurance Centre in Libya.

Three participation WP2 online meetings in Sirte University (In January 2022). The meetings were held via zoom between the members of the SU team and the University of Pavia, in the presence of the General Coordinator of the SAHA Project, Mr. Antonio M. Morone, to discuss the following matters:

- The mechanism of applying the practical aspect of the Master's Program in Healthcare Administration.
- How to coordinate with the rest of the Libyan universities in the mechanisms for accrediting the structure of the Master of Healthcare Administration.

- Determining the time remaining for the completion of the Work Package 2 related to the Pavia University and the Sirte University, and submitting a final detailed report on this work package.

## Overview of WP2 Questionnaire:

The University of Pavia (UNIPV) and Sirte University (SU) cooperated for the realization of this questionnaire. The questionnaire is aimed at gathering accurate and reliable data in regard to the current situation of the Health Management sector in Libyan universities in Higher Education Institutions. The questionnaire is the starting point of a project aiming at the implementation of advanced curriculum design for the postgraduate training of medical professionals in Health management in the Libyan Partner Universities. The questionnaire is designed in two sections, respectively dealing with: (I) the main and general features of University and (II) the description of some courses of interest, when available. The results of the questionnaire will be carefully analysed to assess the needs and will highly contribute to the design and structure of the framework of the following project's activities.

# Development of SAHA courses and related curriculum:

A questionnaire for profiling the contents of the future SAHA courses was validated during the meeting and it is ready to be submitted to all partners. All partners have also agreed to include students and their representatives into process of discussion and approval of new and upgraded curricula.

All the partners have confirmed their interest, engagement, and availability to develop the SAHA courses and to embed them in already running master programs or to create a completely new master program. After circulating the WP2 questionnaire, all Libyan partners began developing the six healthcare management courses that are part of the SAHA programme.

University teams from Pavia and Sirte received the final WP2 from all Libyan partners with 14/11/2021.

# Results of the WP2 surveys:

# Contents and details of the SAHA courses

## First course: Introduction to Health Economics for Healthcare Management.

| Feature | Description |
|---|---|
| Year and period | 2nd year |
| Number of hours | 44 |
| Credits (CFU/ECTS) | 6 |
| Prerequisites | None |
| Teaching methods | Lectures, Seminars, workshops, presentations, case study, and e learning. |
| Examination methods | Mid-term writing exam<br>Oral exam.<br>Final writing exam. |
| Learning outcomes | This module provides the student with a basic knowledge on the main topics that will be discussed in the following modules. |

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| Program | - Healthcare Management - management of healthcare organizations, grounded on a diversified and international perspective<br><br>- Health Economics - application of the the tools of economics to issues of the organization, delivery, and financing of health care<br><br>- Business Development - presentation of tools and resources to allow students to successfully manage business development and deal-making activities<br><br>- Performance Management - critical discussion of performance management systems at both business unit and corporate level<br><br>- Telemedicine - foundations on Object-Oriented Programming (OOP), Java language and UML notation |
| Materials | Textbooks and teaching materials |

## Second course: Healthcare management.

| Feature | Description |
|---|---|
| Year and period | 2nd year, 1st semester |
| Number of hours | 44 |
| Credits (CFU/ECTS) | 6 |
| Prerequisites | Basic knowledge of management and economic theories. E.g. Porter's five forces framework, pricing theories, agency theory. |
| Teaching methods | Frontal lectures, case studies and seminars. Frontal lectures will be given by the appointed lecturer as well as senior executives working in the healthcare sector. Lecturers will provide both a national and an international perspective to the contents of the module. In order to achieve the knowledge and competencies specified for this module, students will be asked to set groups and practice some teamwork with specific assignments. Case studies will be discussed in class in order to enhance the theory previously discussed. Students will have to understand the given problem by applying the knowledge acquired during lectures and show their decision-making competencies. Ad hoc seminars will extend the contents and knowledge provided in class. |
| Examination methods | The final grade will be based upon the following: <br> - 30 % teamwork; <br> - 30 % case study; |

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| | - 40 % final test. |
| Learning outcomes | This module provides the student with a comprehensive knowledge on the management of healthcare organisations, grounded on a diversified and international perspective. The complexity of healthcare organisations requires managers to develop a set of skills aimed at simultaneously managing clinical performance, staff and financial resources to provide a better outcome for the population as a whole. Therefore, students will learn how to experience ambidexterity in managerial activity in order to improve decision-making in a multi-objective environment. Learning will be based on lectures, teamwork and case studies delivered by lecturers and practitioners working for national and foreign healthcare organisations in order to compare and contrast different managerial approaches. |
| Program | <ul><li>Quality in Healthcare Organizations (8 hrs)<ul><li>Use evidence-based data and research methods to guide organisational transformations and quality assurance</li><li>Compare and contrast routines and innovations fostering quality improvements in different health settings (e.g. primary v secondary care, management of chronic diseases in different health systems)</li></ul></li><li>Performance Management (8 hrs)<ul><li>Rationale for performance measurement and management</li><li>Evolution of performance measurement practice in different health systems</li><li>Individual v organisational performance management</li></ul></li><li>Financial Management in Health (6 hrs)<ul><li>Health care expenses dynamics. An international comparison</li></ul></li></ul> |

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- ○ Managing finance of a health care organisation
- ○ Analysis of the finance-performance linkages
- Commissioning and Licensing (6 hrs)
  - ○ Evidence-based practice in assessing needs, designing services and monitoring outcomes
  - ○ Monitoring the quality of care provided
- Project management (6 hrs)
  - ○ Apply traditional project management tools to the development of a project in health care at different levels of analysis (team, department, organisation, trust, authority, health department)
- Leadership in Healthcare (6 hrs)
  - ○ Leadership versus management within a dynamic professional environment
  - ○ Linking leadership and management practices to structures, cultures and behaviours in the private and public sector healthcare organisations
  - ○ Role of leaders and managers in influencing and motivating teams
  - ○ Team work improvement e.g. use of Emotional intelligence, Coaching and Mentoring and the use of interpersonal skills at work.
- International competition and cross-border healthcare services (4 hrs)
  - ○ Analysis of the EU directive 2011/24/EU on cross-border health care services
  - ○ Screening of the potential for market development
  - ○ Models for international health care partnerships
  - ○ International outsourcing

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| Materials | Textbooks and teaching materials |
| --- | --- |

## Third course: Health Economics.

| Feature | Description |
|---|---|
| Year and period | 1st year, 1st semester |
| Number of hours | 44 |
| Credits (CFU/ECTS) | 6 |
| Prerequisites | Students will need a firm understanding of microeconomic theory and regression analysis in order to follow the lecture materials in this class. |
| Teaching methods | Frontal lectures. Given the epidemiological emergency from COVID-19, all the frontal didactic activities (lessons, exams) might be replaced with telematic ones. |
| Examination methods | There will be a final exam testing students knowledge of the required reading, materials from lectures, and key results of the published papers that were presented in class. |
| Learning outcomes | Health economics applies the tools of economics to issues of the organization, delivery, and financing of health care. The objectives of this course are to: develop an understanding of the relevance of economic concepts to the health and health care sector and to impart an understanding of the role of economic factors in the development of public policy concerning health and health care. |
| Program | 1. Production of Health; <br> 2. The Production, Cost, and Technology of Health Care; <br> 3. Demand for Health Capital; <br> 4. Demand and Supply of Health Insurance; |

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|---|---|
| | 5. Asymmetric Information and Agency and Health Insurance Markets; |
| | 6. Key Players in the Health Care Sector: Long-Term Care, The Physician's Practice, The Pharmaceutical Industry; |
| | 7. Government Intervention in Health Care Markets; |
| | 8. Comparative Health Care Systems. |
| Materials | Textbooks and teaching materials |

## Fourth course: Business Development.

| Feature | Description |
|---|---|
| Year and period | 2nd year, 1st semester |
| Number of hours | 44 |
| Credits (CFU/ECTS) | 6 |
| Prerequisites | None |
| Teaching methods | Lectures, exercises and case studies (guest lectures) |
| Examination methods | <ul><li>Written exam + (group) project work (mandatory for attending students)</li><li>Written exam (for non attending students)</li></ul> |
| Learning outcomes | The aim of the course is to diffuse technical and specific Business Development (BD) competences. The course offers tools and resources to allow students to successfully manage business development and deal-making activities.<br><br>Such tools are getting increasingly required by firms to successfully manage every phase of the business development process (planning, managing and monitoring product and process innovation) as well as analyzing markets to spot potential business opportunities and overseeing the steps required in a negotiation process.<br><br>By the end of the course, students would be able to understand major issues arising from Business Development activities, they will be able to develop detailed plans to solve such issues and will (ideally) have all the necessary tools to bring forward such activities in a professional setting. |

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| Program | Course material is divided in 5 modules:<br><br>1. Business Development: Principles and practices<br>2. The starting point: analyzing the business<br>3. Where are we now? Opportunities, direction and strategy<br>4. Business Model & Business Plan<br>5. Valutazione & Implementation |
| Materials | ● Textbooks and teaching materials |

## Fifth course: Performance Management.

| Feature | Description |
| --- | --- |
| Year and period | 2nd year, 1st semester |
| Number of hours | 44 |
| Credits (CFU/ECTS) | 6 |
| Prerequisites | Basic knowledge of management, organization and economics theories. E.g. Porter's five forces framework, pricing theories, agency theory. |
| Teaching methods | Frontal lectures, case studies and assignments. Frontal lectures will be given by the appointed lecturer as well as senior executives working in international companies either in class or through webinars. Lecturers will provide both a national and an international perspective to the contents of the module. In order to achieve the knowledge and competencies specified for this module, students will be asked to set groups and practice some teamwork with specific assignments. Case studies will be discussed in class in order to enhance the theory previously discussed. Students will have to understand the given problem by applying the knowledge acquired during lectures and show their decision-making competencies. Ad hoc seminars will extend the contents and knowledge provided during lectures.v |
| Examination methods | Students can choose to opt for either the 30-30-40 grade or the final grade based on written test only, by sending an e-mail to the lecturer's e-mail address within the two following days from the written test. Failing to send the e-mail according to the above stated terms, the |

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|  | student will let the lecturer to choose between one of the two options on the student's behalf. |
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|  | ● 30% case studies and other assessments during the course (the student's assignments will be graded, only if the students delivered at least 50% of the assignments of the module, otherwise the final test will account for 100% of the final mark); |
|  | ● 30% business case presentation on the analysis of a real company's performance management system. The case study presentation is an oral presentation given by a group of (up to five) students on the application of the diamond PMS framework to a real company. Students are supposed to analyse the extent to which the PMS components have been implemented in the case company and to provide an assessment of each of the PMS components as well as its (loose/tight) relationship with other PMS components. The assessment should provide both a discussion of strengths and weaknesses of the actual PMS components and a suggestion for future improvements. Each group is given 20 minutes for the presentation and up to 10 minutes for Q&As.The case study presentation can also be summarised in a report to be sent to the professor by the date of the written test. If different students of the same group are taking the PM exam in different dates, then the report will be emailed by the first exam date; |
|  | ● 40% written test. Written test is intended to assess students' theoretical and practical knowledge. Thus, final test will include four (4) open questions and one (1) exercise/case study on the topics discussed during the lectures or seminars. |
| Learning outcomes | This module aims at analysing and critically discussing performance management systems at both business unit and corporate level. It provides the student with contents covering the analysis of the current state of the art in the field and puts forward a holistic performance management system. Such a comprehensive approach to management |

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| | control provides students with a know-how regarding the design, diagnosis and effective use of performance management systems. In addition, the topic of sustainability management is approached since nowadays organizations could adopt corporate sustainability as a management approach to simultaneously create value for shareholders and for the community, by focusing on the protection of scarce and nonrenewable resources and turning them into an opportunity for efficiency and competitive advantage. |
| Program | Conceptual and empirical sessions will deliver the following: <br> 1. Introduction and analysis of key financial performance <br> 2. Analysis of the 'revolution' in performance measurement <br> 3. Introduction and analysis of the main performance management system frameworks <br> 4. The diamond structure of the performance management system and its components <br> 5. Corporate sustainability: concept, management and reporting |
| Materials | Textbooks and teaching tools |

## Sixth course: Telemedicine

The course is divided into two parts: Foundations of Telemedicine + Telemedicine System Design

| Feature | Description |
|---------|-------------|
| Year and period | 1st year, 1st + 2nd semesters |
| Number of hours | 62 + 66 |
| Credits (CFU/ECTS) | 6 + 9 |
| Prerequisites | Foundation of Telemedicine requires students to have acquired basic knowledge and skills of Informatics (Foundations of Informatics I). |
| | Telemedicine System Design requires students to have successfully passed the Foundation of Telemedicine exam (and have acquired the necessary knowledge and skills). The Telemedicine System Design course indeed requests a solid theoretic and practical background in programming (i.e. variables, expressions, instructions, blocks, functions and methods, logical expressions and control structures) combined with the ability to codify algorithms and implement Object-Oriented applications in Java. Having the course a strong application component and being it based on the same development environment of Foundation of Telemedicine course, it is required to have a knowledge about computers, in terms of operating systems, processes, memory management and virtual memory, I/O channels, network connectivity, ... |
| Teaching methods | Foundation of Telemedicine combines lectures, practical activities and code discussions. In details: <br> ● Lectures will take 35 hours <br> ● Practical activities will take 35 hours |

| | Telemedicine System Design combines lectures, practical activities and code discussions. In details: <br><br> - Lectures will take 45 hours <br> - Practice exercise sessions will take 15 hours <br> - Team-work project will take 45 hours |
|---|---|
| Examination methods | Foundation of Telemedicine's final grade is determined by two individual tests: <br><br> 1. The former is a theoretical test aiming at assessing the knowledge of Object-Oriented Paradigm and Java language. It consists of 15 questions, 9 of which are required to be answered correctly in order to pass. <br> 2. The latter, which is possible to be accessed only after the successful completion of the previous one, is a practical test requiring each student to solve a medium-complexity problem in the lab. Students are asked to develop an application in Java language able to satisfy the requirements. The evaluation accounts for both the ability to adequately use Java language and the quality of the Conceptual Modelling used in the design and implementation of the application. <br><br> The final grade is determined as a weighted average of the theoretical (⅓) and practical (⅔) tests. |
| | Telemedicine System Design's final grade is determined by the evaluation of the team-work project, which is based on Object-Oriented methodologies and technologies learned in the propaedeutic Foundation of Telemedicine course, integrated with the aspects of Concurrent Programming and Team-Work, learned in this course. <br><br> Each group must initially describe the specific features of its project through a report using UML diagrams. Then, each group will share and assign its members tasks and parts of the projects to be individually done, which together compose the final entire project that will be presented through the specification document. |

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| | The evaluation will be based on the specification document, the code used as well as the demonstration of system functioning that will be asked.

Finally, each student will be subject to a comparative practical test where he or she will be asked to implement some functional modifications on a copy of the group project. |
| | The overall Telemedicine grade will be assigned after the completion of both Foundation of Telemedicine and Telemedicine System design courses. It is composed by a weighted average of the two parts where the former accounts for 6 credits and the latter for 9 credits. |
| Learning outcomes | Foundation of Telemedicine introduces the Object-Oriented Paradigm and Concept Modelling, which will be used in all the phases of software development: from the analysis, to the design, to the implementation of medium-complexity applications.

The aim of the course is to provide students with the necessary knowledge and skills to grow good capabilities in the development of Object-Oriented Software.
Moreover, the course is propaedeutic to the Telemedicine System Design course. |
| | Telemedicine System Design course provides students with an overview of methods and techniques useful for the implementation of multi-component distributed systems for information elaboration, with a specific focus on Telemedicine. The course introduces a simple environment supporting the exchange of asynchronous messages in distributed systems and provides some applications to illustrate how it is possible to achieve integration of modules running in distinct systems. Moreover, the course illustrates the technologies supporting teamwork, which is already part of the professional reality of those working with Software Design.Students are therefore required to use these methods and techniques to develop a prototype of an application written in Java language. Students would |

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| | organize themselves in groups adopting an "agile" approach, similar to that used in workplaces. |
| | Foundation of Telemedicine's program include: <br><br> ● Object-Oriented Programming (OOP) <br> ● Java language <br> ● UML notation |
| Program | Telemedicine System Design combines methodological and technological components. Since the very beginning the program alternates theoretical lectures, where the methodological concepts (i.e. Object-Orientation, Team Work, Distributed Systems, Agents...) are exposed, and practice exercise sessions, where students are expected to apply them by elaborating proposed examples and developing their own project. <br><br> ● Versioning and Teamwork Systems. <br> A generic introduction of versioning and teamwork systems is provided. Then, the model adopted by GIT, which is a standard in professional environments, is deeply explained through some working examples done in class.GIT will be constantly used during the entire semester as an instrument to both distribute exercises and codes to work on and to share team-work projects among groups. <br> ● Development environment <br> The Software environment specifically implemented for the course and used by students for the implementation of their prototypes of multi-agent Distributed Systems is illustrated. Some reviews of the OOP with a specific reference to Java language are included, being them functional to deepen some functional aspects of the project implementation. <br> ● Concurrent Programming <br> Concurrent Programming principles are explained, reviewing concepts from Foundation of Telemedicine course. The concepts of Process is introduced and compared with that of Thread. Finally, |

| | | |
|---|---|---|
| **SAHA: raiSe libyAn Higher education heAlth sector for the benefit of local society.** | there will be explained primitives that will be used to coordinate the executions of various Threads within an application with concurrent programming written in Java.<br>● Practice exercise sessions<br>For each topic it is planned the illustration of some examples.In particular, some system applications will be provided with the double purpose to analyze the code and to illustrate the functionalities of the application library enabling the interaction with a broker, for the exchange of messages. Also, they represent the basis for a review of Java language and software programming principles. | |
| Materials | Foundation of Telemedicine course is based on the use of Java language. In order to learn the syntax, it is recommended the use of a book and the on-line documentation. Regarding the book, one of the following is suggested:<br><br>● Walter Savitch. Programmazione di base e avanzata con Java. PEARSON<br>● Arnold Ken, Gosling James, Holmes David. Il linguaggio Java. Manuale ufficiale. Pearson Education Italia<br>● Craig Larman. Applicare UML e i pattern. PEARSON | |
| | Textbooks and teaching tools | |

# WP2 Proposal for course design in each partner institution

**i. LIMU:** Completely new <u>Master in Healthcare Management</u> (to be accredited)

Course leader: **Sabri Elkerghli**

<u>**Faculty of Business Administration**</u>

**Libyan International Medical University**

**Faculty of Business Administration**

**Dr. Sabri Elkrghli**

**Date: 15 / 10 / 2022**

| Healthcare Management Programme   MSc (HC) |
| --- |

## 1.1 **An Introduction**

Master Programme in Healthcare Management is one of the academic programs offered by Faculty of Business Administration at Libyan International Medical University. This scientific programme was designed in accordance with a number of benchmarks, standards and references. Libyan Higher Education Law (501) for the year (2010), and curriculums of some

leading international Healthcare Management programmes were used in developing this programme, taking into account the particularity of the Libyan business environment and its labor market needs.

The programme will be delivered using modern educational techniques such as Problem -Based Learning (PBL), Team-Based Learning TBL, and Case-Based Learning CBL. Hence, the focus will be on the student as s source of knowledge production more than being passive learner.

In order for the student to be awarded MSc Degree in Healthcare Management, he MUST successfully pass (10) Modules with (8) ECTS Credits each. Additionally, a thesis counts for (16) ECTS Credits must be submitted. An official defense (viva) will take place afterwards.

The process of undertaking such programme ranges between 3 – 6 semesters depending on the following: number of semesters per academic year; number of courses on offer per term; student's academic performance; and the selected mode of study whether it is part-time or full-time.

The graduates of such programme will be ready to be engaged in the healthcare labor market as practitioners at public and private healthcare institutions, or as academicians at higher education institutions.

1.2 **Programme Objectives**

The master's programme in health management aims to prepare and qualify human cadres working in the health sector to be able to manage this sector efficiently in accordance with recognized scientific standards, which is reflected in the improvement and development of the

performance of individuals and institutions working in this sector. Hence, the general objectives of this programme are to enable students to:

1. Define concepts of healthcare management discipline;
2. Identify management functions used in healthcare management;
3. Apply management functions to solve real-world problem in healthcare institutions;
4. Develop skills in using technology in healthcare management education;
5. Evaluate management functions applied in healthcare institutions;
6. Solve problems and propose solutions for real-world healthcare challenges;
7. Produce report using clear methodological and statistical techniques suitable for healthcare field.

1.3 **Programme Admission's Requirements:**

The general conditions for joining such programme consist of the following:

1. The applicant should possess a BSc Degree or equivalent in medical-related disciplines with average grade point of Good (65%) awarded by a recognized and accredited national / international higher education institution.
2. The applicant should provide English Language Proficiency certificate.
3. Full attendance and participation in all academic / practical workshops designed for the programme. The applicant MUST attend (4) workshops during the period of the study.
4. The scientific committee will assess the applicant's previous background (certificate, specialty, transcripts…etc), and decide on the required supplementary courses (foundational courses) needed to bridging the educational gap, if any, and prepare the student to join this programme (MSc Programme in Healthcare Management). The maximum number of foundational courses is (8) courses.

**Table of Modules**

| Seq. | Term | Module Name | Code | ECTS Credits | Prerequisite | Instructor | Academic Rank |
|------|------|-------------|------|--------------|--------------|------------|---------------|
| 1 | 1 | Introduction to Health Economics and Healthcare Management (SAHA Course) | 0050 | 8 | None | Dr. Issa Ali | Associate Professor |
| 2 | 1 | Healthcare Management (SAHA Course) | 0052 | 8 | None | Mr. Abdelbaset Elghriani | Lecturer |
| 3 | 1 | Healthcare Psychology | 0054 | 8 | None | Dr. Saida Elhodiri | Lecturer |
| 4 | 2 | Health Economics (SAHA Course) | 0051 | 8 | 0050 | Dr. Issa Ali | Associate Professor |
| 5 | 2 | Essentials of Nutrition | 0053 | 8 | None | Dr. Ali Elmabsout | Full Professor |
| 6 | 2 | Telemedicine (SAHA Course) | 0056 | 8 | None | Dr. Abdulla Elmansouri | Full Professor |
| 7 | 3 | Performance Management (SAHA Course) | 0057 | 8 | None | Dr. Ali Omar | Assistant Professor |
| 8 | 3 | Business Development (SAHA Course) | 0055 | 8 | 0050+0052 | Dr. Sabri Elkrghli | Associate Professor |
| 9 | 3 | Strategic Management | 0058 | 8 | None | Dr. Sabri Elkrghli | Associate Professor |
| 10 | 4 | Research Methodology | 0059 | 8 | Permission | Dr. Sabri Elkrghli | Associate Professor |
| 11 | 4 | Dissertation / Report | 0060 | 16 | Permission | | |
| | | **Total of Credits** | | **96** | | | |

1.4 **Workshops**

As a part of the study requirements, the applicant is required to join at least four workshops (4 hours per training session) during his study. Below are the main workshops on offer:

1. Academic / Technical Writing

2. Reading Skills
3. Presentation Skills
4. Sustainable Development
5. Essentials of Time Management
6. Essentials of Meeting Management
7. Research Publishing
8. Volunteering Work
9. Disasters and Crises Management
10. Data Analysis (SPSS)

1.5 **Dissertation / Report**

Dissertation / Report is the last requirement before awarding the MSc Degree in Healthcare Management. At this stage, the applicant is required to conduct a solid practical project under the supervision of one of the faculty's academic staff specialized in Healthcare Management. The applicant has the option of doing a practical project on a specific applied job / function he practically participated at one of the local Healthcare Institutions of his own choice. This step is essential requirement that would be useful for providing the student with excellent practical skills upon finishing the programme. The applicant also has the right to prepare solid theoretical academic research if he wants to join the academia upon graduation as a staff member at one of the local higher education institutions. The student also has a third option to conduct joint theoretical/practical research (favorable) to obtain advanced skills suitable for both: the theory and the practice in healthcare management field.

In all cases, the student has to defend his project at the viva time taking place at the end of the study.

**ii. MISURATA –** upgrade of the Master in Business Administration (already accredited)

Course leader**: Alsadeg Alfetouri**

**Faculty of Economics open also for the students at the Faculty of Nursing and Health Sciences**

**Table of modules**

| No | Module Name | Lecturer Name | Academic Rank |
|----|-------------|---------------|---------------|
| 1 | Introduction to Health Economics and Healthcare Management (SAHA Course) | Dr. Alsadek Mustafa | Assistant Professor |
| 2 | Health Economics (SAHA Course) | Dr. Abdulhamid A .Elmagsabi | Associate Professor |
| 3 | Healthcare Management (SAHA Course) | Dr. Alsadek Mustafa | Assistant Professor |
| 4 | Business Development (SAHA Course) | Dr. Hasin Haman | Assistant Professor |
| 5 | Telemedicine (SAHA Course) | Dr. Omar Danfour | Assistant Professor |
| 6 | Performance Management (SAHA Course) | Dr. Mohamed Khalil | Assistant Professor |
| 7 | Research Methods | Dr. Ibrahim Kamba | Assistant Professor |
| 8 | Applied Statistics | Dr. Ibrahim Hnaish | Associate Professor |
| 9 | Elective Course 1 | Dr. Ibrahim Kamba | Assistant Professor |
| 10 | Elective Course 2 | Dr. Yousef Endara | Assistant Professor |

| 11 | Disertation / Thesis | Supervisor | ---- |
| --- | --- | --- | --- |

| No | Module Name |
|----|-------------|
| 1 | Health Quality Management |
| 2 | Health Insurance Management |
| 3 | Crisis Management |
| 4 | Work Ethics |
| 5 | Supply Chain Management |
| 6 | Human Resource Management |
| 7 | Strategic Management |

## Master Courses in Health Management

### 1. Mandatory Courses:

| No | Course Code | Course Name | ECTS | Credits Number |
|----|-------------|-------------|------|----------------|
| 1 | HM661 | Introduction to Healt Economics and Healtcare Management | 12 | 4 |
| 2 | HM662 | Health Economics | 9 | 3 |
| 3 | HM663 | Healthcare Management | 9 | 3 |

| | | | | |
|---|---|---|---|---|
| 4 | HM664 | Business Development | 9 | 3 |
| 5 | HM665 | Telemedicine | 9 | 3 |
| 6 | HM666 | Performance Management | 9 | 3 |
| 7 | GE810 | Research Methodelegy | 9 | 3 |
| 8 | GE820 | Applied Statistics | 9 | 3 |
| 9 | HM... | Elective Courses | 9 | 3 |
| 10 | HM... | Elective Courses | 9 | 3 |
| 11 | HM 830 | Disertation / Thesis | 18 | 6 |
| **Total** | | | 109 | 37 |

## 2. Elective Courses: The Student Chooses Two Courses Only (06 Credits)

| No | Course Code | Course Name | Credits Number | |
|----|-------------|-------------|----------------|---|
| 1 | HM761 | Health Quality Management | 9 | 3 |
| 2 | HM762 | Crisis Management | 9 | 3 |
| 3 | HM763 | Work Ethics | 9 | 3 |
| 4 | HM764 | Analysis and Development of Heathcare Policies | 9 | 3 |
| | | **Total** | 12 | |

## The Optimal Study Plan for a Student Program Structure by Semesters

- **Semester 1**

| No | Course Code | Course Name | Hours Number | Credits Number |
|----|-------------|-------------|--------------|----------------|
| 1 | HM661 | Introduction to Healt Economics and Healtcare Management | 4 | 4 |
| 2 | HM664 | Business Development | 3 | 3 |
| 3 | HM---- | Elective Course | 3 | 3 |
| **Total** | | | **10** | **10** |

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- **Semester 2**

| No | Course Code | Course Name | Hours Number | Credits Number |
|----|-------------|-------------|--------------|----------------|
| 1 | HM662 | Health Economics | 3 | 3 |
| 2 | HM663 | Healthcare Management | 3 | 3 |
| 3 | HM665 | Telemedicine | 3 | 3 |
| 4 | GE820 | Applied Statistics | 3 | 3 |
| **Total** | | | 12 | 12 |

- **Semester 3**

| No | Course Code | Course Name | Hours Number | Credits Number |
|----|-------------|-------------|--------------|----------------|
| 1 | HM666 | Performance Management | 3 | 3 |
| 2 | GE810 | Research Methodelegy | 3 | 3 |
| 3 | HM---- | Elective Course | 3 | 3 |
| **Total** | | | **09** | **09** |

- **Semester 4**

| No | Course Code | Course Name | Hours Number | Credits Number |
|----|-------------|-------------|--------------|----------------|
| 1 | HM 830 | Disertation / Thesis | 6 | 6 |
| **Total** | | | **06** | **06** |

**iii. SABHA**: <u>new Master in Health Management</u> (to be accredited)

Course leader: **Ibrahim Massoud**

**<u>Faculty of Health and Medicine</u>**

**<u>Study Plan (Master of Healthcare Management): Program Structure and Organisation</u>**

| Seq. | Module Name | Module code | ECTS Credits | Prerequisites-descriptions | Teaching Saff |
|------|-------------|-------------|--------------|----------------------------|---------------|
| 1 | Introduction to Health Economics and Health Management (SAHA Course) | HM901 | 8 | None | Dr. Mohammed Aboulgasim |
| 2 | Healthcare Management (SAHA Course) | HM902 | 8 | None | Dr. Abdlrhman Alsonosi |
| 3 | Bio Statistic | HM903 | 8 | None | Dr. Hafid Amhmed |
| 4 | Health Management Information system | HM904 | 8 | None | Dr. Hasan Alkhadafe |
| 5 | Healthcare Economic (SAHA Course) | HM905 | 8 | None | Dr. Mousbah Ahmouda |
| 6 | Research Methodology | Hr900 | 8 | None | Dr. Mohamed Erhayem |
| 7 | Managerial Accounting | HM906 | 8 | None | Dr. Alsunousi Albahloul |
| 8 | Telemedicine (SAHA Course) | HM907 | 8 | HM904 | Dr. Tajdida Magayr |
| 9 | Performance Management (SAHA Course) | HM908 | 8 | HM901, HM902,HM906 | Dr. Salem Alfagira |
| 10 | Business Development (SAHA Course) | HM909 | 8 | None | Dr. Abdelmenam Shebah |
| 11 | Dissertation/ Thesis | HM910 | 16 | Permission | |
| | Total of Credits | | 96 | | |

**iv. SIRTE**: <u>completely new Master in Health Management</u> (to be accredited)

Course leader: **Mohamed Dabnoon**

<u>**Faculty of Economics**</u>

# Master of Health Management

**Degree Name:** Master of Healthcare Management

**Program overview:**
The Department of Health Management is established to facilitate the Libyan health care system with leaders and well-trained decision makers in the field of health care. The department courses focus on different administrative health issues such as Introduction to Health Economics for Healthcare Management, Healthcare Economics, Healthcare Management, Human Resources in Healthcare, Health Law and Ethics, Total Quality Management (TQM) and other issues in order to ensure that health care is delivered to the population effectively and solve health issues in the community using the appropriate and scientific approach.

In accordance with the continuous improvements of the Libyan health care system, the department programs and curricula were up to date to cope with the demand of health care and to cope with the various health services required by the society. The department programs were updated to ensure that students are equipped with better knowledge in the field of health and hospital administration which led to better services to the population. It is the intent of department to provide health care facilities, in both public and private sectors, such hospitals, health centers and other health institution with well-trained and educated health care leaders and decision makers.

**Vision**
To be a leading department in the region that produces graduate and qualified leaders in the area of health and hospital administration who can make appropriate health decision making in solving health care issues and problems

**Mission**

To facilitate health care institutions, in both public and private sectors, with qualified health decision makers who can conduct scientific research and contribute to meet health needs of the population.

**Objectives**

The general objective of the department is to prepare qualified and scientifically trained administrators to organize and manage the rapidly expanding national health services in Libya.

**Program Description:**

Study Plan

## Study Plan (Master of Healthcare Management)

## Program Structure and Organisation

### Program Structure

| Course Code | Course Title | Prerequisite | Credit Hours | Instructor |
|---|---|---|---|---|
| | **Core Courses** | | | |
| HCM500 | Introduction to Health Economics for Healthcare Management (SAHA course) | None | 3 | Dr. Ali Albrishni |
| HCM501 | Healthcare Economics (SAHA course) | None | 3 | Dr. Fathaia Abobaker |
| HCM502 | Healthcare Management (SAHA course) | None | 3 | Dr. Eltayeb Elgobbi |
| HCM503 | Human Resources Management in Healthcare | 501 / 502 | 3 | Dr. Najwa Mahana |
| HCM564 | Business Development (SAHA course) | 501 / 502 | 3 | Dr. M Dabnoon |
| HCM570 | Telemedicine (SAHA course) | 501/502 | 3 | Dr. A. Alsadiq |
| HCM 563 | Performance Management (SAHA course) | 502 / 564 | 3 | Dr. Eltayeb Elgobbi |

| HCM505 | Research Methodology in Health Management | None | 3 | Dr. D. Zainab |
|--------|-------------------------------------------|------|---|---------------|
| HCM520 | Total Quality Management in Health | 502 / 563 | 3 | Dr. Masbah Alamary |
| HCM550 | Healthcare Policy Analysis and Development | 502 / 570 | 3 | Dr. A. Alsadg |
| HCM600 | Research Project | 505 | 3 | |
| | **Elective Courses** | | | |
| HCM515 | Health Law and Ethics | 502 / 503 | | Dr. Ahmed Albotti |
| HCM506 | Applied Biostatistics in Healthcare Administration | 501 /502 | 3 | Dr. Emtair Emharhar |
| **Total** | | | **36** | |

# Program Structure by Semesters

| Course Code | Course Title | Prerequisite | Credit Hours |
|-------------|--------------|--------------|--------------|
| **Core Courses** | | | |
| **Semester 1** | | | |
| HCM500 | Introduction to Health Economics for Healthcare Management | None | 3 |
| HCM501 | Healthcare Economics | None | 3 |
| HCM502 | Healthcare Management | None | 3 |
| **Total** | | | **9** |
| **Semester 2** | | | |
| HCM503 | Human Resources Management in Healthcare | 501 / 502 | 3 |
| HCM564 | Business Development | 501 / 502 | 3 |
| HCM570 | Telemedicine | 501 / 502 | 3 |
| **Total** | | | **9** |
| **Semester 3** | | | |

| HCM 563 | Performance Management | 502/ 564 | 3 |
|---|---|---|---|
| HCM520 | Total Quality Management in Health | 502 / 563 | 3 |
| HCM505 | Research Methodology in Health Management | | 3 |
| **Total** | | | **9** |
| | **Semester 4** | | |
| HCM550 | Healthcare Policy Analysis and Development | 502 / 570 | 3 |
| HCM600 | Research Project | 505 | 3 |
| **Total** | | | **6** |

| Elective Courses<br>The student should choose one from the following two courses | | | | |
|---|---|---|---|---|
| **Course Code** | **Course Title** | **Prerequisite** | **Semester** | **Credit Hours** |
| HCM515 | Health Law and Ethics | 502/503 | Semester 1 | 3 |
| HCM506 | Applied Biostatistics in Healthcare Administration | 501/502 | Semester 4 | |
| **Program Total Credit Hours** | | | | **36** |

# Course Descriptions

**Introduction to Health Economics for Healthcare (HCM 500)**

| **College** | Economic Faculty | | **Department** | Business Administration |
|---|---|---|---|---|
| **Course Name:** | **Introduction to Health Economics for Healthcare** | **Course Code:** | HCM 500 | |

| Credit Hours: | 3 Credit Hours | Contact Hours | 3 Hours | |
|---|---|---|---|---|
| **Teaching Language** | | ☐ Arabic | ☒ English | |
| **Course Level** | Level 4 | **Prerequisite** | | |

**Course Description:**
This module introduces key economic concepts in relation to healthcare. It promotes an understanding of the essential economic principles and their application in health. The module starts by considering the healthcare market and the cost of delivering healthcare. The module then moved on to consider the healthcare sector performance and redesign

**Course Learning Outcomes:**

1. Demonstrate their understanding of the basic economic concepts and their application to healthcare
2. Analyze the economic approach to resource allocation in the health sector
3. Discuss specific features that distinguish demands and supply for health care from demand and supply for other goods and services

**Major Course Topics:**

| |
|---|
| 1. Terms and definitions in health economics, including scarcity, opportunity cost, efficiency and equity |
| 2. Demand and supply in healthcare |
| 3. Cost of delivering health services |
| 4. Basic market models and the markets for healthcare services |
| 5. Market failure and government |
| 6. Allocative efficiency and priority setting in healthcare |
| 7. Performance of the healthcare sector |
| 8. Economic tools in the analysis of the market for healthcare |
| 9. Economics for health sector reform |

| Grading: | ☒ Mid-Term Exams | ☒ Quizzes | ☒ Assignments | |
|---|---|---|---|---|
| | ☒ Final Exam | ☒ Project | ☐ Lab Work | |

| Text Book: | |
|---|---|

| Reference Book (s): | |
|---|---|

**Health Economics (HCM501)**

| College | Economic Faculty | Department | Business Administration |
|---|---|---|---|
| Course Name | Health Economics | Course Code: | HCM501 | |
| Credit Hours | 3 Credit Hours | Contact Hours | 3 Hours |
| Teaching Language | | ☐ Arabic | ☒ English |
| Course Level | Level 3 | Prerequisite | |

**Course Description:**

In this course, students receive practical knowledge about and apply economic theories and principles to understanding healthcare economic issues and problems related to the amount, organization, and distribution of healthcare resources. Students will learn and apply economic principles such as supply and demand, economic theories, resources allocation, competitive markets, market evaluation methods, and cost effectiveness analysis related to making choices about and understanding the consequences of resource scarcity in the healthcare industry.

**Course Learning Outcomes:**

1. Outline the Libyan healthcare economy challenges for the future, and application to practice.
2. State Libyan healthcare economics, theories, models, measures, and tools that influence industry success.
3. Appraise economic implications of expenditure and cost control.
4. Analyze economic metrics of evaluating and managing risk and the impact of health insurance.
5. Evaluate the demand for healthcare and necessary supply of services, workforce, value

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**Major Course Topics:**

| | |
|---|---|
| 1. | Considering Healthcare Economics |
| 2. | The Traditional Competitive Module |
| 3. | Evaluating and Managing Risk |
| 4. | Demand for Health, Insurance, and Services |
| 5. | Considerations of Demand |
| 6. | Healthcare Supply Competition |
| 7. | The Profit Motive in Healthcare |
| 8. | The Healthcare Workforce |
| 9. | Expatriate Considerations |
| 10. | Equity and Justice |
| 11. | Healthcare Expenditures |
| 12. | Economic Evaluation in Healthcare |
| 13. | Healthcare Systems in Libya |
| 14. | Libya's Future Healthcare Challenges, Vision 2030, and Beyond |

| Grading: | ☒ Mid-Term Exams | ☒ Quizzes | ☒ Assignments | |
|---|---|---|---|---|
| | ☒ Final Exam | ☒ Project | ☐ Lab Work | |

| Text Book: | Lee, R. H. (2019). Economics for healthcare managers (4th ed.). Health Administration Press. ISBN: 9781640550483 |
|---|---|
| Reference Book (s): | PricewaterhouseCoopers LLP. (2015). Behind the numbers, 2015. Retrieved from http://www.pwc.com/us/en/health-industries/behind-the-numbers/index.jhtml |

**Healthcare Management (HCM 502)**

| College | Economic Faculty | Department | Business Administration |
|---|---|---|---|
| **Course Name:** | Healthcare Management | **Course Code:** | HCM502 |
| **Credit Hours:** | 3 Credit Hours | **Contact Hours:** | 3 Hours |

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| Teaching Language | | ☐ Arabic | ☒ English |
|---|---|---|---|
| **Course Level** | Level 1 | **Prerequisite** | |

**Course Description:**

This course provides a foundation in Healthcare Management. It will give an introduction to the principles of management and leadership as the foundations for the administration of health care products and service delivery. The evolution of management principles and practices are traced and the bases for health care administration are analysed. The courses will emphasis on the management of global health care systems in technological societies and the need for innovation and creativity in health care administration. The student will learn the roles of a manager in healthcare organizations, models and styles of leadership, theories of motivation and motivational strategies, strategic planning, outcome monitoring and control, healthcare marketing, quality improvement basics, financing healthcare, managing healthcare professionals and human resources, teamwork, and fraud and abuse of the healthcare system.

**Course Learning Outcomes:**

1. Describe the leadership abilities and groups & team building skills in healthcare administration
2. Recognize the different approaches and management which transforming the healthcare administration landscape in Libya
3. Illustrate the role of effective communication practices and key functions of human resources in healthcare administration
4. Explain various problem arising in healthcare field related to change, innovation, marketing and consumerism in Libya
5. Evaluate strategic assessment & planning and its effectiveness & efficiency in Libyan healthcare organizations

Major Course Topics:

| | |
|---|---|
| 1. | Essential Components of the Healthcare Industry in Libya |
| 2. | Healthcare Organization Structures in Libya |
| 3. | Healthcare Organization Departments, Groups & Teams |
| 4. | Corporate Culture in Libya |
| 5. | Corporate and Regulatory Internal Compliance for Facilities |
| 6. | Leadership & Management |
| 7. | Marketing & Consumerism in Libya |
| 8. | Human Resources |

| 9. | Strategic Assessment and Planning in Libya |
|---|---|
| 10. | Productivity, Prioritization and Problem Solving in Libya |
| 11. | Goal Setting, Clarity and Communication in Libyan Healthcare Organizations |
| 12. | Change, Motivation and Innovation |
| 13. | Effectiveness and Efficiency in Libyan Healthcare Organizations |
| 14. | Managing the Evolution of Healthcare in Libya |

| Grading: | ☒ Mid-Term Exams | ☒ Quizzes | ☒ Assignments | |
|---|---|---|---|---|
| | ☒ Final Exam | ☒ Project | ☐ Lab Work | |
| Text Book: | Olden, P. (2019) Principles of Healthcare Administration (3ed Edition) Health Administration Press. ISBN: 9781640550438 | | | |
| Reference Book (s): | Buchbinder SB, Nancy H. Shanks & Buchbunder D (2013) Cases in Health Care Management Jones & Bartlett Learning | | | |

**Human Resources Management in Healthcare (HCM 503)**

| College | Economic Faculty | | Department | Business Administration |
|---|---|---|---|---|
| Course Name | Human Resources Management in Healthcare | Course Code: | HCM503 | |
| Credit Hours | 3 Credit Hours | Contact Hours | 3 Hours | |
| Teaching Language | ☐ Arabic | | ☒ English | |
| Course Level | Level 1 | Prerequisite | HCM 502 | |

**Course Description:**

This course focuses on the application of theory to develop the knowledge and skills needed to effectively manage individuals and groups in health care organizations. Topics include human behaviour, human resource management and labour relation policies. This course serves as an introduction to organizational behaviour and human resource management in healthcare, examining organizational theory, change, and leadership. Students will learn the processes and practices involved in these areas: management of individuals and teams, change and conflict management, human resource strategy, human resources and workforce management, training and development, performance appraisals, compensation, retention, and human resource systems effectiveness.

**Course learning outcomes:**

1. Describe theories and practices of management that help in identifying conflict & change management, organizational culture and dynamics
2. Recognize key challenges for healthcare settings with regard to organizational improvement, development, and leadership.
3. Assess performance management system implementation and its effect on quality of healthcare
4. Analyze the role of developing & training employees and and how maximizing human resources skills in order to promote organizational effectiveness
5. Evaluate the applications, risks, and benefits of performance management systems in healthcare organizations.

**Major Course Topics:**

| | |
|---|---|
| 1. | Introduction to Human Resources Management in Health |
| 2. | Organizational Theory and Performance Management |
| 3. | Leadership: Theory and Practice |
| 4. | Managing Healthcare Teams |
| 5. | Defining and Measuring Performance |
| 6. | Change and Conflict Management |
| 7. | Appraisals for Performance Management |
| 8. | Coaching for Performance Management |
| 9. | Rewarding through Performance Management |
| 10. | Effective Communication for Performance Management |
| 11. | Performance Management System Implementation |
| 12. | Developing and Training Employees and Maximizing Human Resources |
| 13. | Performance Management and Strategy |

| 14. Internal and External Environments and Strategic Healthcare Human Resources | | | | | |
|---|---|---|---|---|---|
| **Grading:** | ☒ **Mid-Term Exams** | | ☒ **Quizzes** | | ☒**Assignments** |
| | ☒ **Final Exam** | | ☒ **Project** | | ☐ **Lab Work** |
| **Text Book:** | 1. Borkowski, N. & Meese, K. (2020). Organizational behavior in health care (4th ed.). Jones & Bartlett Learning. ISBN: 978-1284183245.<br>2. Aguinis, H. (2019). Performance management (4th ed.). Chicago Business Press. ISBN: 9780998814087. | | | | |
| **Reference Book (s):** | 1. List Essential References Materials (Journals, Reports, etc.) **Course Modules for Weeks 1-14**<br>**2.** List Recommended Textbooks and Reference Material (Journals, Reports, etc)<br>**3.** List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)**The course is delivered via Blackboard. The live classes are delivered via Blackboard Collaboration.**<br>4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. | | | | |

**Business Development (HCM 564)**

| College | Economic Faculty | | Department | Business Administration |
|---|---|---|---|---|
| **Course Name:** | **Business Development** | **Course Code:** | HCM 564 | |
| **Credit Hours:** | 3 Credit Hours | **Contact Hours** | 3 Hours | |
| **Teaching Language** | | ☐ **Arabic** | ☒ **English** | |
| **Course Level** | Level 4 | **Prerequisite** | HCM 502 | |

## Course Description:

Business development identifies the triggering events leading to the need to expand the organisation business beyond its current boundaries. The course will introduce students to tools and techniques to develop their facilitation skills. To become a successful BD professional requires ability to build consensus among varied stakeholders of different function of the organisation (sales, marketing, finance, senior management and operations). Students will learn different business analysis tools and techniques such as SWOT, competitive force analysis, Product/Market Matrix, etc… Case studies will be discussed among the students to promote effective participation and strengthen comprehension

## Course learning outcomes:

1. Understand product development and distribution,
2. Determine how to create a high-impact marketing strategy
3. Identify effective product pricing.
4. Develop the skills, knowledge and confidence needed to pen a professional business plan,

## Major Course Topics:

| 1. | Business Development (BD) definition and benefits |
| 2. | BD position in the organization |
| 3. | Development of BD Basic questions |
| 4. | Introduction to sales and marketing process |
| 5. | Functional roles distribution – teamwork |
| 6. | Business analysis |
| 7. | Introduction to facilitation (sticky wall, divergence, and convergence tools) |
| 8. | Business analysis tools |
| 9. | Business models definition and analysis |
| 10. | Sales ecosystem |
| 11. | Introduction to case study |
| 12. | Synthesis of what we learned |
| 13. | Case study application |

| Grading: | ☒ Mid-Term Exams | ☒ Quizzes | ☒ Assignments | |
| | ☒ Final Exam | ☒ Project | ☐ Lab Work | |
| Textbook: | Scott Pollack, (2018) What, Exactly, Is Business Development? | | | |

| Reference Book (s): | [Donald Miller](#) (2021) Business Made Simple 60 Days to Master Leadership, Sales, Marketing, Execution, Management, Personal Productivity and More |
|---|---|
| | John E. Triantis, (2018) Project Finance for Business Development, |

**Telemedicine (HCM 570)**

| College | Economic Faculty | | Department | Business Administration |
|---|---|---|---|---|
| **Course Name:** | **Telemedicine** | **Course Code:** | HCM 570 | |
| **Credit Hours:** | 3 Credit Hours | **Contact Hours** | 3 Hours | |
| **Teaching Language** | | ☐ Arabic | ☒ English | |
| **Course Level** | Level 4 | **Prerequisite** | HCM 500/501 | |

**Course Description:**
Describes and analyses the role of information and communications technologies in enabling remote patient care, health professional collaboration at a distance, and in supporting patient-self management. This is considered with reference to technological, clinical, sociological and policy perspectives. Non-communicable diseases and global health challenges are core themes

**Course Learning Outcomes:**

1. Recognize the main applications of telemedicine and telehealth and how these have evolved over time
2. Understand the key policy drivers for telemedicine, and the challenges of supporting distributed populations in lower income settings
3. Describe and explain a range of use cases, such as remote monitoring of non-communicable diseases, home based and mobile self-management tools, hospital-at-home and remote diagnostics.
4. Understand the often complex legal, regulatory, accountability and reimbursement issues surrounding telehealth and recognize the value of understanding users and contexts for effective telehealth design, and how to achieve this
5. Identify and address a range of sociotechnical factors that influence the success or failure of implementation projects and understand and apply principles and methods of evaluation to telehealth projects

**Major Course Topics:**

| |
|---|
| 1. Introduction to Telemedicine and Telehealth |
| 2. Telehealth in the Home |
| 3. Smart housing and communities |
| 4. Telemedicine for health professionals |
| 5. Telehealth in the Developing World |
| 6. Human and sociotechnical factors |
| 7. Ethical and legal challenges |
| 8. Evaluation of telemedicine systems |
| 9. Future Trends in Telemedicine |

| Grading: | ☒ Mid-Term Exams | | ☒ Quizzes | | ☒ Assignments | |
|---|---|---|---|---|---|---|
| | ☒ Final Exam | | ☒ Project | | ☐ Lab Work | |

| Text Book: | Wootton & Bonnardot (2010) In what circumstances is telemedicine appropriate in the developing world? JRSM Short Rep. 2010 October; 1(5): 37. 10.1258/shorts.2010.010045 |
|---|---|
| Reference Book (s): | McLean, Pagliari et al (2013) The Impact of Telehealthcare on the Quality and Safety of Care: A Systematic Overview. PLoS One. 2013; 8(8): e71238. 10.1371/journal.pone.0071238 |
| | Reeder, Demeris et al (2013) Framing the evidence for health smart homes and home-based consumer health technologies as a public health intervention for independent aging: A systematic review. IJMI 82, 565-579 http://dx.doi.org/10.1016/j.ijmedinf.2013.03.007 |
| | Steventon et al. (2012) Effect of telehealth on use of secondary care and mortality: findings from the Whole System Demonstrator cluster randomised trial. BMJ 344. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3381047/ |

**Performance Management (HCM 563)**

| College | Economic Faculty | Department | Business Administration |
|---|---|---|---|

| Course Name | Performance Management | Course Code: | HCM 563 | |
|---|---|---|---|---|
| Credit Hours | 3 Credit Hours | Contact Hours | 3 Hours | |
| Teaching Language | ☐ Arabic | | ☒ English | |
| Course Level | Level 2 | Prerequisite | HCM 502 | |

**Course Description:**

This course aims to understand the importance of Performance Management in business and how it can contribute to measure the level of strategy implementation towards results of a company or institution. Students will therefore obtain a basic understanding about the critical aspects, when developing a performance management & measurement system. Topics include the control function of management, Management control alternatives and their effects, Financial results control systems, Performance measurement issues and their effects, Performance measurement and the balanced scorecard, Strategy maps, Creating performance measures.

**Course learning outcomes:**

1. Understand the importance of Performance Management in business
2. Measure the level of strategy implementation towards results of a company or institution. Understand the critical aspects, when developing a performance management & measurement system. The focus will especially be driven on the
3. Determining technique of the balanced scorecard (BSC), which combines financial and non-financial ratios to an integrated framework of strategic leadership and controlling.

**Major Course Topics:**

| | |
|---|---|
| 1. | The control function of management |
| 2. | Management control alternatives and their effects |
| 3. | Financial results control systems |
| 4. | Performance measurement issues and their effects |
| 5. | Performance measurement and the balanced scorecard |
| 6. | Strategy maps |
| 7. | Creating performance measures |

| Grading: | ☒ Mid-Term Exams | | ☒ Quizzes | | ☒ Assignments | |
|---|---|---|---|---|---|---|
| | ☒ Final Exam | | ☒ Project | | ☐ Lab Work | |
| Text Book: | Merchant, A. K. & Van der Stede, W. A., Management Control Systems: Performance Measurement, Evaluation and Incentives, Second Edition, Pearson Education Limited, 2007, (Chapters 1 – 12) ISBN: 978-0-273-70801-8 [Book # 1] | | | | | |
| | Niven, P. R., Balanced Scorecard Step by Step: Maximizing Performance and Maintaining Results, John Wiley and Sons, 2002, (Chapters 1 – 6) ISBN: 978-0-471-07872-2 [Book # 2] | | | | | |
| Reference Book (s): | Bititci, U. S., Turner, T., & Begemann, C., Dynamics of Performance Measurement Systems, International Journal of Operations & Production Management, 20 (6), 2000, 692– 704. http://kula.student.usp.ac.fj/class-shares/AF307/Slides/Performance%20management %20systems.pdf | | | | | |

## Research Methodology in Health Management (HCM 505)

| College | Economic Faculty | | Department | Business Administration |
|---|---|---|---|---|
| Course Name | Research Methodology in Health Management | Course Code: | HCM - 505 | |
| Credit Hours | 3 Credit Hours | Contact Hours | 3 Hours | |
| Teaching Language | ☐ Arabic | | ☒ English | |
| Course Level | Level 1 | Prerequisite | None | |

**Course Description:**

This course will provide the students with the basics of research and a broad introduction to the methodological foundations and tools to make research. The course covers the basics of research methodology for graduate level students and introduces the language of research, ethical principles and challenges, and the elements of the research process within quantitative, qualitative, and mixed methods approaches. Participants will use theoretical aspects to begin to critically review literature relevant to their field of interests. Students will learn

how to identify problems to study, develop hypotheses and research questions, specify independent and dependent variables, check for the validity and reliability of studies and design research projects. They will be exposed to a broad range of designs used in their researches from laboratory and field experiments, surveys, content analysis, focus groups and in-depth interviewing

**Course Learning Outcomes:**

1. Describe the use of statistical software and other tools in data analysis for contrast, compare methods of collecting and analyzing data.
2. Define the research process and its importance to furthering knowledge in the field of healthcare management.
3. Explain the range of qualitative, quantitative, and mixed methods research methodologies available, including their strengths and limitations.
4. Illustrate a research proposal addressing a healthcare problem.
5. Evaluate ethical research practices and principles in healthcare research.

**Major Course Topics:**

| | |
|---|---|
| 1. | Introduction to Healthcare Research |
| 2. | Planning and Preparing for Research |
| 3. | Reviewing Literature and Proper Citation |
| 4. | Quantitative Study Approaches: Observational Studies |
| 5. | Experimental Studies and Correlational Studies |
| 6. | Qualitative and Mixed Methods Research Methodologies |
| 7. | Ethical Considerations |
| 8. | Designing the Study |
| 9. | Collecting Primary Data |
| 10. | Secondary and Tertiary Data |
| 11. | Managing and Analysing Data |
| 12. | Software and Other Tools Used in Healthcare Research |
| 13. | Article Structure |
| 14. | Disseminating Research |

| Grading: | ☒ Mid-Term Exams | ☒ Quizzes | ☒ Assignments |
|---|---|---|---|

| | ☒ **Final Exam** | | ☒ **Project** | | ☐ **Lab Work** | |
|---|---|---|---|---|---|---|
| **Text Book:** | Kathryn H. Jacobsen (2020) Introduction to Health Research Methods (3ed ed) Jones & Bartlett Publishers. ISBN: 9781284197563 | | | | | |
| **Reference Book (s):** | Karen (Kay) M. Perrin(2014) Principles Of Evaluation And Research For Health Care Programs Jones & Bartlett Publishers, Julius Sim (2013)Research in Health Care: Designs and Methods Nelson Thornes Ltd. ISBN 13: 9780748737185 | | | | | |

**Total Quality Management in Health (HCM 520)**

| College | Economic Faculty | | Department | Business Administration | |
|---|---|---|---|---|---|
| **Course Name** | **Total Quality Management in Health** | **Course Code:** | HCM520 | | |
| **Credit Hours** | 3 Credit Hours | **Contact Hours** | 3 Hours | | |
| **Teaching Language** | | ☐ Arabic | | ☒ English | |
| **Course Level** | Level 3 | **Prerequisite** | HCM 502 | | |

**Course Description:**

This course introduces students to the concepts, tools, and techniques used in Total Quality Management, quality cultures, effective team structures, measurement of quality, productivity, and competitiveness in an industrial environment. The course not only introduces students to the concepts of quality assurance and quality control, but also connects leadership, supplier-customer relationships, employee engagement, data collection and analysis, productivity, statistical process control, and other topics to quality and customer satisfaction. Students gain practical experience in decision-making and basic troubleshooting techniques in relation to quality.

**Course Learning Outcomes:**

1. Define quality and discuss obstacles of quality management.
2. Recognize the Principles of Total Quality Management.
3. Recognize the role of attitudes, beliefs, behaviors, and ethics in what we know and what we do.
4. Differentiate between internal and external customers and the impact of perceptions on the organization.
5. Utilize communication effectively with customers and co-workers to foster positive relationships.
6. Use the six-step problem-solving model to address difficult customer situations.
7. Comprehend the impact of engagement and motivation on quality.
8. Define quality assurance and quality control and describe the consequences of poor quality management.
9. Explain error tolerances and rationalize the impact of over-control and under-control and standard operating procedures.
10. Discuss key elements of quality improvement strategies using PDCA and Lean tools.
11. Interpret and understand inspection requirements, certificates of compliance, and other means of quality verification.
12. Understand the purpose and fundamentals of the auditing process and comprehend traceability and chain of custody advantages and disadvantages.
13. Recognize the impact of documentation, reporting, inspecting, and auditing in product liability and costs to the individual and company.
14. Develop and use common charting methods for problem solving and data collection.

**Major Course Topics:**

| | |
|---|---|
| 1. | Introduction to quality |
| 2. | Quality leadership |
| 3. | Customer satisfaction |
| 4. | Employee involvement |
| 5. | Behaviour and communications in teams |
| 6. | Quality control management |
| 7. | Supplier partnerships |
| 8. | Quality and performance measurement |
| 9. | Quality tools and techniques |
| 10. | Quality management systems |
| 11. | Quality by design |
| 12. | Charting for quality |

| Grading: | ☒ Mid-Term Exams | ☒ Quizzes | ☒ Assignments | |
|---|---|---|---|---|

| | ☒ **Final Exam** | | ☒ **Project** | | ☐ **Lab Work** | |
|---|---|---|---|---|---|---|
| **Text Book:** | TQM and HRM : The Human Side to Quality, by Emerald Insight Staff, ISBN 9781846633034, Date of Publication 2003 ||||||
| | Modern Approach to Operations Management, by Roy, Ram Naresh, ISBN 9788122423365, Date of Publication 2005 ||||||
| **Reference Book (s):** | Managing Quality (5th Edition), by Dale, Barrie G., van der Wiele, Ton Van Iwaarden, Jos, ISBN 9781118762172, Date of Publication 2013 ||||||

**Healthcare Policy Analysis and Development (HCM 550)**

| **College** | Economic Faculty | | **Department** | Business Administration |
|---|---|---|---|---|
| **Course Name:** | Healthcare Policy Analysis and Development | **Course Code:** | HCM550 | |
| **Credit Hours** | 3 Credit Hours | **Contact Hours** | 3 Hours ||
| **Teaching Language** | | ☐ Arabic | ☒ English ||
| **Course Level** | Level 3 | **Prerequisite** | HCM 502 ||

**Course Description:**
This course introduces and examines methods for assuring quality in policy, process, and outcome management, as well as the significance and statistical application of measuring outcomes. The healthcare policies and changing trends are identified and analyzed.

**Course learning outcomes:**

1. Define the important concepts, theories, laws, literature that impact public opinion and policy within the healthcare environment.
2. Outline the health policy process at both the state and national levels in areas associated with research, funding, and delivery.
3. Analyze the healthcare policy and politics in the United States, Canada, and the European Union.

4. Evaluate the political dimensions of an area of national healthcare policy and project its impact over the next five years.

**Major Course Topics:**

| | |
|---|---|
| 1. | Understanding Global Health Policy |
| 2. | Contemporary Global Health Governance: Origins, Functions and Challenges |
| 3. | Measuring the World's Health |
| 4. | Kingdom of Libya Health Policy |
| 5. | Politics of Global Health Policy |
| 6. | Ethical Reflections and Economic Perspectives |
| 7. | Policy Responses to Neglected Diseases and Essential Health Commodities |
| 8. | Social Determinants of Health |
| 9. | Pros and Cons of Securitizing Global Health |
| 10. | The Changing Humanitarian Sector |
| 11. | Understanding Vision 2030, Global Financing, and Social Determinants of Health |
| 12. | Health Systems and Delivery in the Kingdom of Libya |
| 13. | Global Health Partnerships |
| 14. | Future Trends in Libya Healthcare in contrast with Globalization Efforts |

| Grading: | ☒ Mid-Term Exams | | ☒ Quizzes | | ☒ Assignments | |
|---|---|---|---|---|---|---|
| | ☒ Final Exam | | ☒ Project | | ☐ Lab Work | |

| Text Book: | Blank, R., Burau, V., & Kuhlmann, E. (Eds.). (2017). *Comparative health policy* (5th ed.). Palgrave. ISBN: 9781137544957 |
|---|---|
| Reference Book (s): | Rochefort, D. A. (2014). The rhetoric of "crisis" and implementing the Affordable Care Act. Harvard Health Policy Review, 16(1), 5-10. |
| | Thieme Sanford, S. (2014). Mind the gap: Basic health along the ACA's coverage continuum. Journal of Health Care Law & Policy, 17(1), 101-127. |

**Research Project (HCM600)**

| College | Economic Faculty | | Department | Business Administration |
|---|---|---|---|---|
| Course Name | Research Project | Course Code: | HCM 600 | |
| Credit Hours | 3 Credit Hours | Contact Hours | 3 Hours | |
| Teaching Language | | ☐ Arabic | ☒ English | |
| Course Level | Level 4 | Prerequisite | HCM 505 | |

**Course Description:**

The purpose of this course is to make a research project under the supervision of a faculty member. The goal is to provide students with hands-on research experience through completing a research project starting with hypothesis development (if applicable), literature searching, experimental design, data collection, and analysis and interpretation. Then they will write up the research and its findings according to an established template.

**Course Learning Outcomes:**

1. Describe nature and importance of the research process, concepts of research and its methodologies, appropriate research problem and its parameters, differentiate between data collection methods and techniques Recognize the importance of research.
2. Define different approaches of research for research proposal.
3. Use a questionnaire and other data collection tools, analyze the collected data using statistical programs as SPSS
4. Analyze scientific research effectively, critical thinking methods in solving scientific research problems following all ethical principles of research
5. Evaluate research results responsibly, critically, and objectively.

**Major Course Topics:**

Student will choose a topic from healthcare field. Find out the gaps in that area and how to fulfil those gaps.

| Grading: | ☒ Mid-Term Exams | | ☒ Quizzes | | ☒ Assignments | |
|---|---|---|---|---|---|---|
| | ☒ Final Exam | | ☒ Project | | ☐ Lab Work | |

| Text Book: | |
|---|---|
| Reference Book (s): | |

**Health Law and Ethics (HCM 515)**

| College | Economic Faculty | Department | Business Administration |
|---|---|---|---|
| Course Name | Health Law and Ethics | Course Code: | HCM 515 | |
| Credit Hours | 3 Credit Hours | Contact Hours | 3 Hours | |
| Teaching Language | ☐ **Arabic** | | ☒ **English** | |
| Course Level | Level 2 | **Prerequisite** | HCM 502 | |

**Course Description:**

This course explores the legal and ethical challenges inherent in the administration of healthcare services. Topics include governmental regulation of healthcare false claims, fraud and abuse, antitrust compliance and litigation, informed consent, principals and legal basis for hospital governance and healthcare malpractice insurance.

**Course learning outcomes:**

1. Describe the structure and development of health law and ethics.
2. Recognize the impacts of legal and regulatory environments on healthcare organizations.
3. Compare basic ethical theories and perspectives.
4. Analyze various health laws and standards that affect health care administrators and managers.
5. Evaluate ethical principles in the solution of a personal leadership and organizational dilemma or challenge.

**Major Course Topics:**

| | |
|---|---|
| 1. | Influence of Ethical Principles on Health Law |
| 2. | Structure and Development of Health Law |

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| | |
|---|---|
| 3. | Governance Structures and Internal Regulation |
| 4. | Healthcare Organizations |
| 5. | Governmental Regulation in Public Healthcare |
| 6. | Private Healthcare |
| 7. | Standards and Regulations for Healthcare Administrators |
| 8. | Fraud and Abuse |
| 9. | Ethical Implications of Medical Privacy |
| 10. | Legal and Ethical Obligations to Provide Care |
| 11. | Tort Law and Medical Malpractice |
| 12. | Informed Consent and Research |
| 13. | Legal and Ethical Challenges of Cost Containment and Healthcare Reform |
| 14. | Future of Health Law |

| Grading: | ☒ Mid-Term Exams | ☒ Quizzes | ☒ Assignments | |
| | ☒ Final Exam | ☒ Project | ☐ Lab Work | |

| Text Book: | Pinto, A. D., & Upshur, R. E. (2013). An Introduction to Global Health Ethics. Routledge (1st ed). ISBN: 978041568183 |
|---|---|
| Reference Book (s): | Alkabba, A. F., Hussein, G. M. A., Albar, A. A., Bahnassy, A. A., &Qadi, M. (2012). The major medical ethical challenges facing the public and healthcare providers in Saudi Arabia. *Journal of Family and Community Medicine*, *19*(1), 1-6. Retrieved from http://www.jfcmonline.com/article.asp?issn=2230-8229;year=2012;volume=19;issue=1;spage=1;epage=6;aulast=Alkabba |

**Applied Biostatistics in Healthcare Administration (HCM 506)**

| College | Economic Faculty | | Department | Business Administration |
|---|---|---|---|---|
| **Course Name:** | Applied Biostatics in Healthcare Administration | **Course Code:** | HCM506 | |
| **Credit Hours:** | 3 Credit Hours | **Contact Hours** | 3 Hours | |

| **Teaching Language** | | ☐ **Arabic** | ☒ **English** |
|---|---|---|---|

| **Course Level** | Level 2 | **Prerequisite** | HCM505 |
|---|---|---|---|

**Course Description:**

This course provides an introduction to important topics in biostatistician concepts and reasoning. It also represents an introduction to basic concepts covering study designs and sample size computation. Students will be introduced how to apply basic theoretical concepts of biostatistics in health science, epidemiology, and public health. Knowledge about measurement scales, types of variables and data along with various statistical methods for summarizing and presenting different types of data will be provided. The concept of probability with its applications in epidemiology and public health will be introduced. The course concludes with a moderate level presentation of important probability distributions applied commonly in epidemiology and public health. The whole program will be delivered in an application oriented way by giving more weight age for problem solving.

**Course learning outcomes:**

1. Write data from a population sample and create reports for use in healthcare administration.
2. Define the concepts and frameworks and different research methods used in biostatistics related to healthcare administration
3. Explain the role of biostatistics in assessing the development, progression of various problem, risk factors among population, different methods of data visualization
4. Evaluate data and draw appropriate inferences by applying a variety of analytical tools.

**Major Course Topics:**

| 1. | Introduction to Biostatistics |
|---|---|
| 2. | Study Designs |

| 3. | Quantifying the Prevalence and Incidence of Disease |
| 4. | Summarizing Data Collected in a Defined Population Sample |
| 5. | The Role of Probability |
| 6. | Confidence Interval Estimates |
| 7. | Hypothesis Testing Procedures |
| 8. | Power and Sample Size Determination |
| 9. | Multivariable Methods |
| 10. | Nonparametric Tests |
| 11. | Distribution-Free Methods |
| 12. | Survival Analysis |
| 13. | Survival Analysis with R Statistics |
| 14. | Data Visualization |

| Grading: | ☒ Mid-Term Exams | | ☒ Quizzes | | ☒ Assignments | |
| | ☒ Final Exam | | ☒ Project | | ☐ Lab Work | |

| Text Book: | Sullivan, L. M. (2018) Essentials of Biostatistics in Public Health. Jones & Bartlett Learning (3ed ed). ISBN: 9781284108194<br>Dalgaard, P. (2008) Introductory Statistics with R. Springer (2ed ed). ISBN: 9780387790534 |
| Reference Book (s): | Susan K. Grove (2007) Statistics for Health Care Research. Elsevier Science Health Science Division |

## HCM 599 -Field Experience (internship, cooperative program)

**Brief description:**

The students will undergo training across various healthcare organizations and related fields. The training can range from healthcare operations, quality control and assurance to patient safety management etc. The students are required to give a presentation at the end of their training and present their project research thesis.

**Time allocation and scheduling arrangement:**

8 weeks, Level 4

**Number of credit hours:**

NO

**Intended learning outcomes:**

i) To train students in all fields of health care and to equip them with knowledge required to maintain and develop their professional skills.

ii) To correlate theoretical knowledge with practical exposure in order to ensure their expertise in the field of healthcare management and to give them hands-on research experience

**Assessment procedures:**

The training period evaluation by special form grading satisfied at least

**v. ZAWYA**: <u>upgrade of the Master in Business Administration</u> (already accredited)

Course leader: **Ibrahim Belhaj**

<u>**Faculty of Economics**</u>

## Table of Modules (University of Zawia)

| Seq. | Module Name | Code | ~~ECTS~~ Libyan Credits | Prerequisites | Instructor | Academic Rank |
|------|-------------|------|-------------------------|---------------|------------|---------------|
| 1 | Introduction to Health Economics and Healthcare Management (SAHA Course) | HM0161 | 3 | | Dr. Hosein Elboiashi | Assistant Professor |
| 2 | Health Economics (SAHA Course) | HM0162 | 3 | | Dr. Hatem Khpiza | Assistant Professor |
| 3 | Healthcare Management (SAHA Course) | HM0163 | 3 | | Dr. Nada Hweissa | Assistant Professor |
| 4 | Business Development (SAHA Course) | HM0261 | 3 | | Dr. Abdulsalam Albalazi | Associate Professor |
| 5 | Telemedicine (SAHA Course) | HM0262 | 3 | HM0161, HM0162, & HM0163 | Dr. Hoda Tawel | Assistant Professor |
| 6 | Performance Management (SAHA Course) | HM0263 | 3 | HM0163& HM0261 | Dr. Ibrahem Alhaj | Assistant Professor |
| 7 | Crisis Managements | HM0361 | 3 | HM0262& HM0364 | Dr. Nada Hweissa | Assistant Professor |
| 8 | Healthcare Psychology | HM0362 | 3 | | Dr. Mustafa Almgherbi | Assistant Professor |
| 9 | Biostatistics | HM0363 | 3 | | Dr. Abdulhaleem Aswai | Assistant Professor |
| 10 | Research Methodology | HM0461 | 3 | HM0363 | Dr. Mohammed Noseer | Assistant Professor |
| 11 | Dissertation / Thesis | | 6 | Permission | | |
| | **Total of Credits** | | 36 | | | |

**vi. TRIPOLI**: completely new <u>Master in Health Management</u> (to be accredited)

Course leader: **Najwa Ali Fituri**

<u>**Faculty of health and medicine**</u>

**Faculty of Medicine / UOT**

**Health care management master**

**2023-2024**

## Introduction

The Master's in Healthcare Management program includes the leadership skills, cognitive and analytical abilities, global perspective, and management tools necessary for the effective and efficient leadership and management of healthcare organizations in both the public and private sectors. The program prepares students for leadership roles in the healthcare sector. With a focus on health economics, financial management, crises management, healthcare ethics, and the new technology in telemedicine and other contemporary best practices that play a significant role in managing the healthcare environment, students also gain the ability to understand and be aware of the policies, problems, and issues facing the healthcare sector.

## Teaching Methods

The teaching methods that will be conducted are:
1. Lectures

2. Presentations
3. Discussion panel
4. Tutorials.
5. Case studies
6. Self-learning

**Teaching Materials**

Textbooks and teaching materials
Scientific Journals

**Examination methods**

1. Mid-term writing exam
2. Oral exam.
3. Final writing exam.

**Learning outcomes**

1. Understand the basic concepts of the scientific research
2. Recognize the fundamentals and guiding principles of business development.
3. Distinguish the economic issues specific to the health sector.
4. Identify the fundamentals of institution financial management
5. Recognize the concepts of human resource management and its development in health organizations.
6. Describe project management and its role in the economy.
7. Identify the stages of crises and the response stratigies

8. Describe the value of biostatistics and the various data summarization techniques
9. Describe the basic concepts of health policies
10. Apply use of telemedicine

**Program**

| First semester | | Credits | Lecturer |
|---|---|---|---|
| | | | |
| .1 | Biostatistics | 2 | Dr Laila Sebee |
| .2 | Scientific and qualitative research method | 1 | Dr Edweeni Mohamed Aalsheekh |
| .3 | Introduction to health economics and healthcare management (**SAHA course**) | 3 | Dr Halima Daw Buni |
| .4 | Introduction to public health | 2 | Dr Mohamed Khaled Shembesh |
| .5 | Telemedicine (**SAHA course**) | 1 | Dr Millad Alsaid Ghawil |
| | | 9 | |
| Second semester | | Credits | Lecturer |
| 1. | Health Information System | 2 | Dr Hajer Al kout |
| 2. | Business development (**SAHA course**) | 2 | Dr Ridha Abdalah Aburaas |
| 3. | Healthcare management (**SAHA course**) | 3 | Dr SanaTaher Ashur |
| 4. | Performance management (**SAHA course**) | 2 | Dr Isa Salheen Belaid |
| 5. | Financial management | 1 | Esmael Abdlah Erhema |
| | | 10 | |
| Third semester | | Credits | Lecturer |
| | Health economics (**SAHA course**) | 3 | Esmael Abdulah Erhema |
| | Human Resource Management | 2 | Dr Saber Almehdi Alwahesh |

| | | | |
|---|---|---|---|
| | Project Management / Hospital Management | 1 | Esmael Abdlah Erhema |
| | Crisis Management | 2 | Dr Isa Salheen Belaid |
| | | 8 | |
| Fourth semester | | Credits | Lecturer |
| | Ethical issues | 2 | Dr Meluda Rajab |
| | Health policies | 1 | Dr Ezideen Franka |
| | Thesis | 6 | |
| | | 9 | |
| | Total Master credits | 36 | |
| | | | |
| Accointing costs | 1 | Elective | |

# Appendix 1: SAHA WP2 Questionnaire results

This questionnaire is aimed at gathering accurate and reliable data in regard to the current situation of the Health Management sector in all UNIMED and LIBYAN university in Higher Education Institutions. The questionnaire is the starting point of a project aiming at the implementation of advanced curriculum design for the postgraduate training of medical professionals in Health Management in the Libyan Partner Universities.

The questionnaire is designed in two sections, respectively dealing with: (I) the main and general features of your University and (II) the description of some courses of interest, when available. The list of courses is provided at the end of the first section. The results of the questionnaire will be carefully analysed to assess the needs, and will highly contribute to the design and structure of the framework of the following project's activities. Thus, we kindly recommend you to answer thoroughly to all of the questions.

The questionnaire is prepared by:

**University of Pavia**

**Sirte University**

Sirte University team for E+ SAHA Project.

Please write your email in the box. We will contact you for additional information.

{    abdelmola_alhossin@yahoo.com    }.

| SECTION I: UNIVERSITY | |
| --- | --- |
| **Feature** | **Description** |
| Name of University | |
| Target Trainer | |
| Thesis (CFU/ECTS, features) | |

| | |
|---|---|
| Process of curriculum approval | |
| Presence of an Introductory course in Health Economics for Healthcare Management | Yes<br><br>No |
| Presence of a course in Healthcare Management | Yes<br><br>No |
| Presence of a course in Health Economics | Yes<br><br>No |
| Presence of a course in Business Development | Yes<br><br>No |
| Presence of a course in Performance Management | Yes<br><br>No |
| Presence of a course in Telemedicine | Yes |

| | No |
|---|---|
| | |

| **SECTION II** |
|---|

| 1. **Introduction to Health Economics for Healthcare Management** |
|---|

| Name of the Faculty/Department | |
|---|---|
| Name of the Degree Course | |
| Year and period | |
| Number of hours | |
| Credits (CFU/ ECTS) | |

| | |
|---|---|
| Prerequisites | |
| Teaching methods | |
| Examination methods | |
| Learning outcomes | |
| Program | |
| Materials | |
| Content of practical part (Internship/stage) | |
| Presence of a similar courses (about similar contents) | |
| **2.       Healthcare management** | |

| | |
|---|---|
| Name of the Faculty/Department | |
| Name of the Degree Course | |
| Year and period | |
| Number of hours | |
| Credits (CFU/ ECTS) | |
| Prerequisites | |
| Teaching methods | |
| Examination methods | |
| Learning outcomes | |
| Program | |
| Materials | |
| Content of practical part (Internship/stage) | |
| Presence of a similar courses (about similar contents) | |

| 3. | Health Economics |
|---|---|
| Name of the Faculty/Department | |
| Name of the Degree Course | |
| Year and period | |
| Number of hours | |
| Credits (CFU/ ECTS) | |
| Prerequisites | |
| Teaching methods | |
| Examination methods | |
| Learning outcomes | |
| Program | |
| Materials | |
| Content of practical part (Internship/stage) | |
| Presence of a similar courses (about similar contents) | |

| 4.      **Business Development** | |
|---|---|
| Name of the Faculty/Department | |
| Name of the Degree Course | |
| Year and period | |
| Number of hours | |
| Credits (CFU/ ECTS) | |
| Prerequisites | |
| Teaching methods | |
| Examination methods | |
| Learning outcomes | |
| Program | |
| Materials | |
| Content of practical part (Internship/stage) | |
| Presence of a similar courses (about similar contents) | |

| 5. Performance Management | |
| --- | --- |
| Name of the Faculty/Department | |
| Name of the Degree Course | |
| Year and period | |
| Number of hours | |
| Credits (CFU/ ECTS) | |
| Prerequisites | |
| Teaching methods | |
| Examination methods | |
| Learning outcomes | |
| Program | |
| Materials | |
| Content of practical part (Internship/stage) | |
| Presence of a similar courses (about similar contents) | |

| 6. **Telemedicine** | |
|---|---|
| Name of the Faculty/Department | |
| Name of the Degree Course | |
| Year and period | |
| Number of hours | |
| Credits (CFU/ ECTS) | |
| Prerequisites | |
| Teaching methods | |
| Examination methods | |
| Learning outcomes | |
| Program | |
| Materials | |
| Content of practical part (Internship/stage) | |
| Presence of a similar courses (about similar contents) | |

**THANK YOU FOR YOUR ATTENTION**