

**College of Applied Medical Sciences**  
**Public Health Department**  
**Bachelor in Health Informatics((BSc)**

# Bachelor Program Curriculum (Three Semesters)

# Bachelor Program Curriculum

| Semester 1 / Level 1 |               |                                                                      |              |   |    |     |                                |                                     |
|----------------------|---------------|----------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|-------------------------------------|
| Course Code          | Course Number | Course Title                                                         | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite) |
|                      |               |                                                                      | T            | P | Tr | CrH |                                |                                     |
| PENG                 | 111           | English (1) For Preparatory year<br>اللغة الإنجليزية للسنة التحضيرية | 2            | 6 |    | 8   | -----                          | -----                               |
| PMTH                 | 112           | Introduction to Mathematics (1)<br>مقدمة في الرياضيات 1              | 2            |   |    | 2   | -----                          | -----                               |
| Total                |               |                                                                      | 4            | 6 | -  | 10  |                                |                                     |



| Semester 2 / Level 2 |               |                                                                        |              |   |    |     |                                |                                     |
|----------------------|---------------|------------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|-------------------------------------|
| Course Code          | Course Number | Course Title                                                           | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite) |
|                      |               |                                                                        | T            | P | Tr | CrH |                                |                                     |
| PENG                 | 121           | English (2) For Preparatory year<br>اللغة الإنجليزية 2 للسنة التحضيرية | 2            | 4 | -  | 6   | PENG111                        | -----                               |
| PCOM                 | 113           | Computer Skills<br>مهارات الحاسب الآلي                                 | 1            | 1 | -  | 2   | -----                          | -----                               |
| PSSC                 | 114           | Learning and Communication Skills<br>مهارات التعلم و الاتصال           | 1            | 1 | -  | 2   | -----                          | -----                               |
| Total                |               |                                                                        | 4            | 6 | -  | 10  |                                |                                     |

| Semester 3 / Level 3 |               |                                                                     |              |   |    |     |                                |                                     |
|----------------------|---------------|---------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|-------------------------------------|
| Course Code          | Course Number | Course Title                                                        | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite) |
|                      |               |                                                                     | T            | P | Tr | CrH |                                |                                     |
| PENG                 | 122           | English for Medical Specialties<br>اللغة الإنجليزية للتخصصات الصحية | 1            | 1 | -  | 2   | -----                          | -----                               |
| PCHM                 | 124           | Introduction to Chemistry<br>مقدمة في الكيمياء                      | 1            | 1 | -  | 2   | -----                          | -----                               |
| PPHS                 | 125           | Physics for Health Purposes<br>فيزياء للأغراض الصحية                | 1            | 1 | -  | 2   | -----                          | -----                               |
| PBIO                 | 126           | Biology Science<br>علم الأحياء                                      | 1            | 2 | -  | 3   | -----                          | -----                               |
| Total                |               |                                                                     | 4            | 5 | -  | 9   |                                |                                     |

| Semester 1 / Level 4 |               |                                                                              |              |   |    |     |                                |                                                       |
|----------------------|---------------|------------------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|-------------------------------------------------------|
| Course Code          | Course Number | Course Title                                                                 | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite)                   |
|                      |               |                                                                              | T            | P | Tr | CrH |                                |                                                       |
| HIF                  | 231           | Basic Physiology<br>مبادئ علم وظائف الأعضاء                                  | 1            | 1 | -  | 2   | PBIO 126                       | Biology Science<br>علم الأحياء                        |
| HIF                  | 232           | Fundamentals to Anatomy<br>أساسيات علم التشريح                               | 1            | 1 | -  | 2   | PBIO 126                       | Biology Science<br>علم الأحياء                        |
| HIF                  | 233           | Calculus<br>حساب التفاضل والتكامل                                            | 3            | - | -  | 3   | PMTH 112                       | Introduction to Mathematics<br>مقدمة في الرياضيات (1) |
| HIF                  | 234           | Introduction to Public Health Informatics<br>مقدمة في معلوماتية الصحة العامة | 2            | - | -  | 2   | -----                          | -----                                                 |
| MU1                  | MU***         | MU Elective Course<br>مقرر جامعة اختياري                                     | 2            | - | -  | 2   | -----                          | -----                                                 |
| Total                |               |                                                                              | 9            | 2 | -  | 11  |                                |                                                       |



| Semester 2 / Level 5 |               |                                                                                    |              |   |    |     |                                |                                     |
|----------------------|---------------|------------------------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|-------------------------------------|
| Course Code          | Course Number | Course Title                                                                       | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite) |
|                      |               |                                                                                    | T            | P | Tr | CrH |                                |                                     |
| HIF                  | 235           | Introduction to Hospital System and Organization<br>مقدمة في أنظمة وتنظيم المستشفى | 2            | - | -  | 2   | -----                          | -----                               |
| HIF                  | 236           | Principles of nutrition<br>مبادئ التغذية                                           | 2            | - | -  | 2   | -----                          | -----                               |
| HIF                  | 241           | Quality improvement in health care<br>تحسين جودة الرعاية الصحية                    | 2            | - | -  | 2   | -----                          | -----                               |
| HIF                  | 242           | Healthcare database I<br>قاعدة بيانات الرعاية الصحية (1)                           | 1            | 1 | -  | 2   | -----                          | -----                               |
| CAMS                 | 233           | Biostatistics<br>الإحصاء الحيوي                                                    | 2            | - | -  | 2   | -----                          | -----                               |
| MU2                  | MU***         | MU Elective Course<br>مقرر جامعة اختياري                                           | 2            | - | -  | 2   | -----                          | -----                               |
| Total                |               |                                                                                    | 11           | 1 | -  | 12  |                                |                                     |

| Semester 3 / Level 6 |               |                                                                |              |   |    |     |                                |                                                                                    |
|----------------------|---------------|----------------------------------------------------------------|--------------|---|----|-----|--------------------------------|------------------------------------------------------------------------------------|
| Course Code          | Course Number | Course Title                                                   | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite)                                                |
|                      |               |                                                                | T            | P | Tr | CrH |                                |                                                                                    |
| HIF                  | 243           | Epidemiology<br>علم الوبائيات                                  | 2            | - | -  | 2   | HIF 234                        | Introduction to Public health Informatics<br>مقدمة في معلوماتية الصحة العامة       |
| HIF                  | 244           | Electronic Health Records<br>السجلات الصحية الإلكترونية        | 1            | 1 | -  | 2   | HIF 235                        | Introduction to Hospital System and Organization<br>مقدمة في أنظمة وتنظيم المستشفى |
| HIF                  | 245           | Applied Mathematics<br>الرياضيات التطبيقية                     | 3            | - | -  | 3   | HIF 233                        | Calculus<br>حساب التفاضل والتكامل                                                  |
| HIF                  | 246           | Disease Mapping and Surveillance<br>مراقبة وتخطيط انتشار المرض | 1            | 1 | -  | 2   | -----                          | -----                                                                              |
| CAMS                 | ***           | College Elective Course<br>مقرر كلية اختياري                   | 2            | - | -  | 2   | -----                          | -----                                                                              |
| Total                |               |                                                                | 9            | 2 | -  | 11  |                                |                                                                                    |



| Semester 1 / Level 7 |               |                                                                                               |              |   |    |     |                                |                                                                                    |
|----------------------|---------------|-----------------------------------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|------------------------------------------------------------------------------------|
| Course Code          | Course Number | Course Title                                                                                  | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite)                                                |
|                      |               |                                                                                               | T            | P | Tr | CrH |                                |                                                                                    |
| HIF                  | 351           | Linear Algebra<br>الجبر الخطي                                                                 | 3            | - | -  | 3   | HIF 245                        | Applied Mathematics<br>الرياضيات التطبيقية                                         |
| HIF                  | 353           | Public Health Policy and Society<br>سياسة الصحة العامة والمجتمع                               | 2            | - | -  | 2   | HIF 235                        | Introduction to Hospital System and Organization<br>مقدمة في أنظمة وتنظيم المستشفى |
| HIF                  | 356           | Introduction to computer programing in healthcare<br>مقدمة في برمجة الحاسوب في الرعاية الصحية | 2            | 1 | -  | 3   | -----                          | -----                                                                              |
| HIF                  | 361           | Survey of Disease and Treatment<br>مسح الأمراض والعلاج                                        | 2            | - | -  | 2   | HIF 246                        | Disease Mapping and Surveillance<br>مراقبة وتخطيط انتشار المرض                     |
| MU3                  | MU***         | MU Elective Course<br>مقرر جامعة اختياري                                                      | 2            | - | -  | 2   | -----                          | -----                                                                              |
| Total                |               |                                                                                               | 11           | 1 | -  | 12  |                                |                                                                                    |

| Semester 2 / Level 8 |               |                                                                             |              |   |    |     |                                |                                                                                                |
|----------------------|---------------|-----------------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|------------------------------------------------------------------------------------------------|
| Course Code          | Course Number | Course Title                                                                | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite)                                                            |
|                      |               |                                                                             | T            | P | Tr | CrH |                                |                                                                                                |
| HIF                  | 352           | Healthcare database II<br>قاعدة بيانات الرعاية الصحية (2)                   | 1            | 1 | -  | 2   | HIF 242                        | Healthcare database I<br>قاعدة بيانات الرعاية الصحية (1)                                       |
| HIF                  | 354           | Information Technology Governance<br>حوكمة تكنولوجيا المعلومات              | 1            | 1 | -  | 2   | HIF 244                        | Electronic Health Records<br>السجلات الصحية الإلكترونية                                        |
| HIF                  | 355           | Healthcare billing and coding<br>فواتير الرعاية الصحية والترميز             | 1            | 1 | -  | 2   | HIF 241                        | Quality improvement in health care<br>تحسين جودة الرعاية الصحية                                |
| HIF                  | 365           | Data Transmission and Computer networks<br>شبكات نقل البيانات والحاسب الآلي | 2            | 1 | -  | 3   | HIF 356                        | Introduction to computer programming in healthcare<br>مقدمة في برمجة الحاسوب في الرعاية الصحية |
| MU4                  | MU***         | MU Elective Course<br>مقرر جامعة اختياري                                    | 2            | - | -  | 2   | -----                          | -----                                                                                          |
| Total                |               |                                                                             | 7            | 4 | -  | 11  |                                |                                                                                                |

| Semester 3 / Level 9 |               |                                                                          |              |   |    |     |                                |                                                                                                |
|----------------------|---------------|--------------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|------------------------------------------------------------------------------------------------|
| Course Code          | Course Number | Course Title                                                             | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite)                                                            |
|                      |               |                                                                          | T            | P | Tr | CrH |                                |                                                                                                |
| HIF                  | 362           | Computer Applications in Hospital<br>تطبيقات الحاسب الآلي في المستشفى    | 1            | 1 | -  | 2   | HIF 356                        | Introduction to Computer Programming in Healthcare<br>مقدمة في برمجة الحاسوب في الرعاية الصحية |
| HIF                  | 363           | Discrete Mathematics<br>الرياضيات الرقمية                                | 2            | - | -  | 2   | HIF 351                        | Linear algebra<br>الرياضيات الخطية                                                             |
| HIF                  | 364           | Healthcare System Analysis and Design<br>تحليل وتصميم نظم العناية الصحية | 1            | 1 | -  | 2   | HIF 355                        | Healthcare billing and coding<br>فواتير الرعاية الصحية والترميز                                |
| HIF                  | 366           | Healthcare Informatics<br>معلوماتية الرعاية الصحية                       | 2            | 1 | -  | 3   | HIF 354                        | Information Technology Governance<br>حوكمة تكنولوجيا المعلومات                                 |
| MU5                  | MU***         | MU Elective Course<br>مقرر جامعة اختياري                                 | 2            | - | -  | 2   | -----                          | -----                                                                                          |
| Total                |               |                                                                          | 8            | 3 | -  | 11  |                                |                                                                                                |



| Semester 1 / Level 10 |               |                                                                                    |              |   |    |     |                                |                                                    |
|-----------------------|---------------|------------------------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|----------------------------------------------------|
| Course Code           | Course Number | Course Title                                                                       | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite)                |
|                       |               |                                                                                    | T            | P | Tr | CrH |                                |                                                    |
| HIF                   | 471           | Research Methodology<br>مناهج البحث                                                | 1            | 2 | -  | 3   | -----                          | -----                                              |
| HIF                   | 472           | Minor Project<br>مشروع قصير                                                        | -            | 3 | -  | 3   | -----                          | -----                                              |
| HIF                   | 474           | Information System Application Development<br>تطبيق وتطوير نظام المعلومات          | 2            | 1 | -  | 3   | HIF 366                        | Healthcare Informatics<br>معلوماتية الرعاية الصحية |
| HIF                   | 475           | Data Mining for Healthcare Management<br>التنقيب عن البيانات لإدارة الرعاية الصحية | 2            | 1 | -  | 3   | HIF 366                        | Healthcare Informatics<br>معلوماتية الرعاية الصحية |
| Total                 |               |                                                                                    | 5            | 7 | -  | 12  |                                |                                                    |

**Semester 2 / Level 11**

| Course Code  | Course Number                 | Course Title                                                                                                                                                                                      | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite)                                       |
|--------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|---------------------------------------------------------------------------|
|              |                               |                                                                                                                                                                                                   | T            | P | Tr | CrH |                                |                                                                           |
| HIF          | 473                           | Hospital Practice I<br>الممارسة بالمستشفى (1)                                                                                                                                                     | -            | - | 2  | 2   | -----                          | -----                                                                     |
| HIF          | 476<br>Or<br>477<br>Or<br>478 | Image Processing<br>معالجة الصورة<br>Or<br>Clinical decision support system<br>نظام دعم القرار السريري<br>Or<br>Selected topics in health informatics I<br>موضوعات مختارة في المعلوماتية الصحية 1 | 1            | 1 | -  | 2   | -----                          | -----                                                                     |
| HIF          | 482                           | Health Economics and Comparative Health System<br>الاقتصاد الصحي ونظام الصحة المقارن                                                                                                              | 2            | - | -  | 2   | HIF 474                        | Information System Application Development<br>تطبيق وتطوير نظام المعلومات |
| HIF          | 484                           | Major Project<br>مشروع التخرج                                                                                                                                                                     | -            | 3 | -  | 3   | HIF 472                        | Minor Project<br>مشروع قصير                                               |
| CAMS         | ***                           | College Elective Course<br>مقرر كلية اختياري                                                                                                                                                      | 2            | - | -  | 2   | -----                          | -----                                                                     |
| <b>Total</b> |                               |                                                                                                                                                                                                   | 5            | 4 | 2  | 11  |                                |                                                                           |

| Semester 3 / Level 12 |               |                                                                                    |              |   |    |     |                                |                                                                                     |
|-----------------------|---------------|------------------------------------------------------------------------------------|--------------|---|----|-----|--------------------------------|-------------------------------------------------------------------------------------|
| Course Code           | Course Number | Course Title                                                                       | Credit Hours |   |    |     | Number & Code of Pre-requisite | Name of Prerequisite (Co-Requisite)                                                 |
|                       |               |                                                                                    | T            | P | Tr | CrH |                                |                                                                                     |
| HIF                   | 481           | Health Information Service Administration<br>إدارة خدمة المعلومات الصحية           | 2            | 1 | -  | 3   | HIF 475                        | Data Mining for Healthcare Management<br>التنقيب على البيانات لإدارة الرعاية الصحية |
| HIF                   | 483           | Hospital Practice II<br>الممارسة بالمستشفى (2)                                     | -            | - | 2  | 2   | HIF 473                        | Hospital Practice I<br>الممارسة بالمستشفى (1)                                       |
| HIF                   | 485           | Data Security and Human Ethics<br>أمن البيانات والأخلاقيات الإنسانية               | 2            | 1 | -  | 3   | HIF 475                        | Data Mining for Healthcare Management<br>التنقيب على البيانات لإدارة الرعاية الصحية |
| HIF                   | 486           | Artificial Intelligence<br>الذكاء الاصطناعي                                        | 1            | 1 | -  | 2   | -----                          | -----                                                                               |
|                       | Or            | Or                                                                                 |              |   |    |     |                                |                                                                                     |
|                       | 487           | Clinical Trials<br>التجارب الاكلينيكية                                             |              |   |    |     |                                |                                                                                     |
|                       | Or            | Or                                                                                 |              |   |    |     |                                |                                                                                     |
|                       | 488           | Selected topics in health informatics II<br>موضوعات مختارة في المعلوماتية الصحية 2 |              |   |    |     |                                |                                                                                     |
| MU6                   | MU***         | MU Elective Course<br>مقرر جامعة اختياري                                           | 2            | - | -  | 2   | -----                          | -----                                                                               |
| Total                 |               |                                                                                    | 7            | 3 | 2  | 12  |                                |                                                                                     |



### MU Elective Course

| Course Code | Course Title                                | Required or Elective | Credit Hours | The student should study at least $\frac{3}{4}$ |
|-------------|---------------------------------------------|----------------------|--------------|-------------------------------------------------|
| SALM 101    | Introduction to Islamic Culture             | Elective             | 2            |                                                 |
| SALM 102    | Islam and Society Development               | Elective             | 2            |                                                 |
| SALM 103    | Islamic Economic System                     | Elective             | 2            |                                                 |
| SALM 104    | Fundamentals of Islamic Politics            | Elective             | 2            |                                                 |
| ARAB 101    | Arabic Language Skills                      | Elective             | 2            | The student should study 1/2                    |
| ARAB 103    | Arabic Editing                              | Elective             | 2            |                                                 |
| ENG 101     | English Language                            | Elective             | 2            | The student should study 2/7                    |
| SOCI 101    | Contemporary Societal Issues                | Elective             | 2            |                                                 |
| HAF 101     | Fundamentals of Health and Physical Fitness | Elective             | 2            |                                                 |
| ENT 101     | Entrepreneurship                            | Elective             | 2            |                                                 |
| LHR 101     | Legislations and Human Rights               | Elective             | 2            |                                                 |
| FCH 101     | Family and Childhood                        | Elective             | 2            |                                                 |
| VOW 101     | Voluntary Work                              | Elective             | 2            |                                                 |

### CAMS Mandatory Course

|          |               |           |   |  |
|----------|---------------|-----------|---|--|
| CAMS 233 | Biostatistics | Mandatory | 2 |  |
|----------|---------------|-----------|---|--|

### CAMS Elective Course

|          |                            |          |   |                              |
|----------|----------------------------|----------|---|------------------------------|
| CAMS 231 | Emergency Care             | Elective | 2 | The student should study 2/3 |
| CAMS 232 | Medical Terminology        | Elective | 2 |                              |
| CAMS 234 | The quality of health care | Elective | 2 |                              |

# Best of Luck