

**Ministry of Higher Education & Scientific Research  
Supervision and Scientific Evaluation Directorate  
Quality Assurance and Academic Accreditation  
International Accreditation Dept.**



# **Academic Program and Course Description Guide**

2025

**Program description templateAcademic**

**University Name: Northern Technical University**

**College/Institute: Technical Institute of the Round**

**Scientific Department: Prosthetics**

**Name of the academic or professional program: Diploma in Prosthetics**

**Final Certificate Name: Diploma in Prosthetics**

**Study system: Courses**

**Description prepared on: 1/9/2025**

**Date the description was filled: 15/9/2025**

Signature 

The name of the head of the department

Asst. Lect. Saba Dhamin Shaker

Date: 15/ 9 /2025

Signature 

Dean's Assistant For Scientific Affairs

Prof. Dr. Hanan Shahb Ahmad

Date: 15/ 9 /2025

Check the file by

Quality Assurance and University Performance Division

Name of the director of the Quality Assurance and University Performance Division:  
Assistant Lec. Hayder Ali Mohssn

Date: 15/ 9/2025

Signature 



Dean's endorsement

Prof. Dr. Maha Elttayef Jasim

### **1. Program Vision**

A priest seeksFrom prosthetic limbs to leadership and excellence in preparing specialized personnel, both scientifically and practically, who possess the necessary knowledge and skillsTo provide advanced services in the field of prosthetics and medical rehabilitation that meet the needs of society and the labor market.

### **2. Program Message**

Preparing and qualifying specialized personnel in the field of prosthetics and orthotics who possess scientific knowledge, practical skills, and professional ethics, and are capable of providing distinguished services in the field of medical rehabilitation according to academic standards, labor market requirements, and community service with.

### **3. Program Objectives**

It aims The Prosthetics and Orthotics Program aims to prepare specialized personnel who possess the necessary scientific knowledge and practical skills in the field of prosthetics and medical rehabilitation, and to develop students' abilities in the design, manufacture, and fitting of prosthetics and orthotics, while promoting adherence to professional ethics, meeting labor market needs, and serving the community according to modern academic standards.

### **4. Program accreditation**

nothing

### **5. Other external influences**

The prosthetics and orthotics program is influenced by several external factors, including recent technological advancements in prosthetics, labor market demands, the needs of healthcare institutions and the community, as well as academic standards, Ministry of Higher Education policies, and changes related to rehabilitation and healthcare.

| 6. Program Structure |            |            |                   |                                       |
|----------------------|------------|------------|-------------------|---------------------------------------|
| comments*            | Percentage | Study unit | Number of courses | Program structure                     |
| Core course          | 20.22%     | 18         | 9                 | Institution (university) requirements |
| essential            | 15.05%     | 14         | 5                 | College/Institute Requirements        |
| essential            |            |            | Complete          | Summer training                       |
| -                    | -          | -          | -                 | Other                                 |

| 7. Program Description |             |                                     |             |            |
|------------------------|-------------|-------------------------------------|-------------|------------|
| Credit Hours           |             | Course name                         | Course code | Year/Level |
| practical              | theoretical |                                     |             |            |
| -                      | 2           | Democracy and human rights          | NTU 100     | Level One  |
| -                      | 2           | English language                    | NTU 101     |            |
| 1                      | 1           | computer                            | NTU 102     |            |
| -                      | 2           | Arabic                              | NTU 103     |            |
| 1                      | 1           | Sports                              | NTU 104     |            |
| -                      | 2           | French                              | NTU 105     |            |
| 2                      | 2           | Physiology                          | TIDO 106    |            |
| 2                      | 2           | anatomy                             | TIDO107     |            |
| -                      | 2           | Laboratory and workshop safety      | TIDO 108    |            |
| -                      | 2           | Medical terminology                 | TIDO 109    |            |
| 3                      | 2           | Manufacturing below-knee prostheses | IPT 110     |            |
| 2                      | 3           | Manufacturing above-knee prostheses | IPT111      |            |

|   |   |                                            |          |           |
|---|---|--------------------------------------------|----------|-----------|
| 2 | 1 | Biomechanics of prosthetics                | IPT112   |           |
| - | 2 | Musculoskeletal diseases                   | IPT113   |           |
| 2 | 1 | Anatomy of the lower limbs                 | IPT114   |           |
| 2 | 1 | microscopic organisms                      | IPT115   |           |
| 2 | 1 | parasites                                  | IPT116   |           |
| 1 | 1 | computer                                   | NTU 201  | Level Two |
| - | 2 | Arabic                                     | NTU 202  |           |
| - | 2 | Crimes of the Ba'ath regime in Iraq        | NTU 203  |           |
| - | 2 | Professional ethics                        | NTU 204  |           |
| - | 2 | My life statistics                         | TIDO 205 |           |
| 6 | 2 | Manufacturing prosthetics for lower limbs  | IPT206   |           |
| 2 | 2 | Manufacturing of upper limb prostheses     | IPT 207  |           |
| 2 | 1 | Biomechanics of supports                   | IPT 208  |           |
| 2 | 1 | Manufacturing replacements for upper limbs | IPT 209  |           |
| - | 2 | Musculoskeletal diseases                   | IPT 210  |           |
| - | 2 | Properties of materials                    | IPT 211  |           |
| - | 1 | Explaining the upper limbs and trunk       | IPT 212  |           |
| 2 | 2 | biomaterials                               | IPT 213  |           |
| - | - | Research project                           | IPT 214  |           |
| 2 | 1 | Natural treatment methods                  | IPT 215  |           |
| 2 | 1 | parasites                                  | IPT 216  |           |

## **8. Expected learning outcomes of the program**

### **Knowledge**

Acquiring basic scientific knowledge in the field of prosthetics and orthotics..  
The ability to design, manufacture, install, and maintain prosthetic limbs and orthotic devices.  
. Applying practical skills and modern techniques in assessing cases and providing rehabilitation services.  
.Adherence to professional ethics and teamwork to meet the needs of society and the labor market.

### **Skills**

- Possessing skills in designing and manufacturing prosthetic limbs and assistive devices.
- The ability to diagnose patients' needs and assess their condition.
- Mastering the use of devices and equipment specific to prosthetic limbs.
- The skill of fitting and adjusting prosthetic limbs to suit the patient

### **Values**

- .Adherence to professional ethics.
- Respecting patients and appreciating their needs.
  - Taking responsibility for performing the work.
- Accuracy and honesty in providing services.
- Cooperation and teamwork.

## **9. Teaching and learning strategies**

The lecture strategy, where the teacher explains the practical material directly to the students.

The discussion strategy relies on the teacher asking questions and opening dialogue between students, which helps them to think, express their opinions, and understand the topic more deeply.

1. The collaborative strategy where students are divided into groups working together to accomplish a task.

The brainstorming strategy involves the teacher asking students to come up with as many ideas as possible about a specific topic without criticism at the beginning, and then the ideas are discussed later.

Self-learning strategy where the student relies on himself to search for information from books and the internet.

## 10. Assessment Methods

- \* Theoretical lectures inside classrooms.
- \* Practical training within laboratories and prosthetic limb workshops.
- \* Learning based on application and field practice.
- \* Using presentations and modern educational tools

## 11. Faculty

**Faculty members (list all faculty members in the academic department, including external and internal lecturers)**

| Faculty preparation |       | Special requirements/skills (if any) |  | Specialization          |                        | Scientific rank     |
|---------------------|-------|--------------------------------------|--|-------------------------|------------------------|---------------------|
| lecturer            | angel |                                      |  | private                 | general                |                     |
|                     | angel |                                      |  | Physiology              | Life Sciences          | assistant professor |
|                     | angel |                                      |  | livestock               | agriculture            | teacher             |
|                     | angel |                                      |  | Production and Minerals | Mechanical Engineering | Assistant teacher   |
|                     | angel |                                      |  | Physiology              | Life Sciences          | Assistant teacher   |
| lecturer            |       |                                      |  | Life Sciences           | parasites              | External lecturer   |
| lecturer            |       |                                      |  | Bones and joints        | Fractures              | External lecturer   |

|                        |  |  |  |                                |                                |                   |
|------------------------|--|--|--|--------------------------------|--------------------------------|-------------------|
| lecturer               |  |  |  | Physiology of bones and joints | Physiology of bones and joints | External lecturer |
| Diploma in Prosthetics |  |  |  | prosthetic limbs               | prosthetic limbs               | External lecturer |
| Diploma in Prosthetics |  |  |  | prosthetic limbs               | prosthetic limbs               | External lecturer |
| Diploma in Prosthetics |  |  |  | prosthetic limbs               | prosthetic limbs               | External lecturer |
| Assistant teacher      |  |  |  | Life Sciences                  | Physiology                     | External lecturer |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Professional development</b>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Orienting new faculty members</b>                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>- Participating in training courses and workshops organized by universities and educational institutions.</li> <li>- Developing his ability to prepare lectures and study plans and organize scientific material.</li> <li>- Courses on how to publish scientific research.</li> <li>- Keeping up with scientific developments in the field of specialization in order to continuously update knowledge.</li> </ul> |
| <b>Professional development of faculty members</b>                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>- Participating in training courses on modern teaching methods.</li> <li>- Developing scientific research and publishing skills in scientific journals.</li> <li>- Training on the use of modern technologies and educational tools in teaching.</li> <li>- Continuously reviewing the latest scientific sources in the field of specialization.</li> </ul>                                                         |

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| <b>12. Admission Criteria</b>                                                                      |
| <ul style="list-style-type: none"> <li>- The scientific branch.</li> <li>- The average.</li> </ul> |



### **13. Key sources of information about the program**

Scientific books and references, international medical organizations, medical applications, institutesdMedical colleges, the institute's library, the internet.

### **14. Program Development Plan**

The Prosthetics and Orthotics program strives for continuous development of its academic program by updating curricula to keep pace with the latest scientific and technological advancements in the field of prosthetics. The program also works to develop and equip laboratories and training workshops with modern equipment and technologies to enhance the practical skills of students..

The program focuses on developing the skills of faculty members through participation in training courses, workshops, and scientific conferences, in addition to strengthening cooperation with health institutions and specialized centers to provide field training opportunities that contribute to raising the efficiency of students and linking the theoretical aspect with practical application..

The development plan also includes adopting modern teaching methods, encouraging scientific research, and conducting periodic program evaluations to identify strengths and address areas for improvement to ensure the quality of educational outcomes and meet labor market demands.L.

| Program Skills Plan                         |               |               |            |        |    |    |    |           |    |    |    |                              |                               |                 |            |
|---------------------------------------------|---------------|---------------|------------|--------|----|----|----|-----------|----|----|----|------------------------------|-------------------------------|-----------------|------------|
| Learning outcomes required from the program |               |               |            |        |    |    |    |           |    |    |    |                              |                               |                 |            |
| Values                                      |               |               |            | Skills |    |    |    | Knowledge |    |    |    | Essenti<br>al or<br>optional | Course Name                   | Cours<br>e code | Year/Level |
| Q<br>4                                      | Pa<br>rt<br>3 | P<br>art<br>2 | Pa<br>rt 1 | B4     | B3 | B2 | B1 | A4        | A3 | A2 | A1 |                              |                               |                 |            |
|                                             | ✓             |               |            |        | ✓  |    |    | ✓         |    |    |    | essenti<br>al                | Democracy and<br>human rights | NTU 100         | Level One  |
| ✓                                           |               |               | ✓          |        | ✓  |    |    | ✓         |    | ✓  |    | essenti<br>al                | English language              | NTU 101         |            |
|                                             |               |               |            | ✓      |    | ✓  |    |           | ✓  |    |    | essenti<br>al                | computer                      | NTU 102         |            |
| ✓                                           | ✓             |               |            | ✓      |    |    |    |           | ✓  |    | ✓  | essenti<br>al                | Arabic                        | NTU 103         |            |
| ✓                                           |               |               | ✓          |        | ✓  |    | ✓  | ✓         | ✓  |    |    | optional                     | sports                        | NTU 104         |            |
|                                             |               | ✓             |            |        |    |    |    |           | ✓  |    |    | optional                     | French                        | TIDO 106        |            |
| ✓                                           |               |               |            | ✓      |    |    |    | ✓         |    |    | ✓  | essenti<br>al                | Physiology                    | TIDO107         |            |
| ✓                                           | ✓             |               |            |        | ✓  |    | ✓  |           |    |    |    | essenti<br>al                | Medical<br>terminology        | TIDO 108        |            |

|   |   |   |   |   |   |   |   |   |   |   |   |               |                                           |          |            |
|---|---|---|---|---|---|---|---|---|---|---|---|---------------|-------------------------------------------|----------|------------|
|   |   |   | ✓ |   |   |   | ✓ |   |   | ✓ | ✓ | essenti<br>al | anatomy                                   | TIDO 109 |            |
|   |   | ✓ |   |   |   | ✓ |   |   | ✓ | ✓ | ✓ | essenti<br>al | Laboratory and<br>workshop safety         | IMA 110  |            |
| ✓ | □ | ✓ |   |   |   |   |   | ✓ |   |   |   | essenti<br>al | Manufacturing<br>below-knee<br>prostheses | IMA 111  |            |
|   | ✓ |   | ✓ |   |   | ✓ |   | ✓ |   |   | ✓ | essenti<br>al | Musculoskeletal<br>diseases               | IMA 112  |            |
|   |   |   | ✓ |   |   | ✓ |   | ✓ |   |   | ✓ | essenti<br>al | Anatomy of the<br>lower limbs             | IMA 113  |            |
| ✓ | ✓ | ✓ |   | ✓ |   |   | ✓ |   | ✓ |   |   | essenti<br>al | Manufacturing<br>above-knee<br>prostheses | IMA 114  |            |
| ✓ |   |   |   | ✓ | ✓ |   | ✓ | ✓ |   | ✓ | ✓ | essenti<br>al | Biomechanics of<br>prosthetics            | IMA 116  |            |
| ✓ |   |   |   |   | ✓ |   |   | ✓ |   |   |   | optional      | Microbiology                              |          |            |
| ✓ |   | ✓ |   | ✓ |   | ✓ |   | ✓ |   | ✓ | ✓ | optional      | parasites                                 |          |            |
| ✓ |   |   |   | ✓ |   | ✓ | ✓ |   |   |   | ✓ | essenti<br>al | computer                                  | NTU 201  | ✓Level Two |

|   |   |   |   |   |   |   |   |   |   |  |   |               |                                                   |         |  |
|---|---|---|---|---|---|---|---|---|---|--|---|---------------|---------------------------------------------------|---------|--|
| ✓ | ✓ |   | ✓ |   | ✓ |   |   | ✓ |   |  | ✓ | essenti<br>al | Arabic                                            | NTU 202 |  |
| ✓ | ✓ |   | ✓ |   | ✓ |   |   | ✓ |   |  |   | essenti<br>al | Crimes of the<br>Ba'ath regime in<br>Iraq         | NTU 203 |  |
| ✓ |   | ✓ |   | ✓ | ✓ | ✓ |   |   | ✓ |  | ✓ | essenti<br>al | Professional ethics                               | NTU 204 |  |
| ✓ | ✓ |   |   |   | ✓ |   |   |   | ✓ |  |   | essenti<br>al | Statistics is my life                             | TIDO205 |  |
| ✓ |   | ✓ |   | ✓ |   | ✓ |   | ✓ |   |  |   | essenti<br>al | Manufacturing<br>prosthetics for<br>lower limbs   | IPT 206 |  |
| ✓ |   |   | ✓ |   |   |   |   | ✓ | ✓ |  |   | essenti<br>al | Manufacturing of<br>components for<br>upper limbs | IPT 207 |  |
| ✓ | ✓ |   |   |   | ✓ |   | ✓ | ✓ |   |  | ✓ | essenti<br>al | Biomechanics of<br>supports                       | IPT 208 |  |
| ✓ |   |   |   | ✓ | ✓ |   |   | ✓ |   |  |   | essenti<br>al | Manufacturing<br>replacements for<br>upper limbs  | IPT 209 |  |

|   |   |   |   |   |  |   |   |   |   |   |   |               |                                            |         |  |
|---|---|---|---|---|--|---|---|---|---|---|---|---------------|--------------------------------------------|---------|--|
|   | ✓ |   |   | ✓ |  | ✓ |   | ✓ |   | ✓ |   | essenti<br>al | Musculoskeletal<br>diseases                | IPT 210 |  |
| ✓ |   |   |   | ✓ |  |   |   | ✓ |   |   |   | essenti<br>al | Properties of<br>materials                 | IPT 211 |  |
| ✓ | ✓ |   |   | ✓ |  |   |   |   |   |   | ✓ | essenti<br>al | Anatomy of the<br>upper limbs and<br>trunk | IPT 212 |  |
| ✓ |   |   |   | ✓ |  | ✓ |   | ✓ |   |   |   | essenti<br>al | biomaterials                               | IPT 213 |  |
| ✓ |   | ✓ |   | ✓ |  | ✓ |   | ✓ | ✓ |   |   | essenti<br>al | Research project                           | IPT 214 |  |
| ✓ |   |   |   | ✓ |  |   | ✓ | ✓ |   |   |   | optional      | Natural treatment<br>methods               | IPT 215 |  |
| ✓ | ✓ |   | ✓ | ✓ |  | ✓ |   | ✓ |   | ✓ | ✓ | optional      | parasites                                  | IPT 216 |  |

|                                                                                                                                                                                                                                                 |                     |                                                                        |                                      |                          |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------|--------------------------------------|--------------------------|------|
| 1. Course Name                                                                                                                                                                                                                                  |                     |                                                                        |                                      |                          |      |
| Democracy and human rights                                                                                                                                                                                                                      |                     |                                                                        |                                      |                          |      |
| 2. Course code                                                                                                                                                                                                                                  |                     |                                                                        |                                      |                          |      |
| NTU 114                                                                                                                                                                                                                                         |                     |                                                                        |                                      |                          |      |
| 3. Class/Level                                                                                                                                                                                                                                  |                     |                                                                        |                                      |                          |      |
| the first/the first                                                                                                                                                                                                                             |                     |                                                                        |                                      |                          |      |
| 4. Date of preparation of description                                                                                                                                                                                                           |                     |                                                                        |                                      |                          |      |
| 14/7/2025                                                                                                                                                                                                                                       |                     |                                                                        |                                      |                          |      |
| 5. Available forms of attendance                                                                                                                                                                                                                |                     |                                                                        |                                      |                          |      |
| My attendance is weekly                                                                                                                                                                                                                         |                     |                                                                        |                                      |                          |      |
| 6. Number of study hours (College) / Number of units (College)                                                                                                                                                                                  |                     |                                                                        |                                      |                          |      |
| 2/30                                                                                                                                                                                                                                            |                     |                                                                        |                                      |                          |      |
| 7- Name of the course coordinator<br>Name: M.M. Hakim Abduljabbar Thamer<br>Email address: hakeem.abdulgabar@ntu.edu.iq                                                                                                                         |                     |                                                                        |                                      |                          |      |
| 8-Course objectives                                                                                                                                                                                                                             |                     |                                                                        |                                      |                          |      |
| <ul style="list-style-type: none"> <li>Understanding the freedoms to which members of society are entitled and the role of each individual in it in terms of rights and duties, as well as understanding the various state policies.</li> </ul> |                     |                                                                        |                                      | <b>Course objectives</b> |      |
| 7. Teaching and learning strategies                                                                                                                                                                                                             |                     |                                                                        |                                      |                          |      |
| <ul style="list-style-type: none"> <li>Comprehensive explanation of the curriculum</li> <li>Daily tests</li> <li>student groups</li> </ul>                                                                                                      |                     |                                                                        |                                      |                          |      |
| 8. Course structure                                                                                                                                                                                                                             |                     |                                                                        |                                      |                          |      |
| Evaluation Method                                                                                                                                                                                                                               | Forms of attendance | Learning method                                                        | the topic                            | Hours                    | Week |
| <b>Exams</b>                                                                                                                                                                                                                                    | classroom           | The lecture was explained using visual aids and practical application. | The concept of freedom and democracy | 2                        | 1    |
| <b>Exams</b>                                                                                                                                                                                                                                    | classroom           | The lecture was explained using visual aids and practical application. | Citizen's rights and duties          | 2                        | 2    |

|              |           |                                                                        |                                                |   |    |
|--------------|-----------|------------------------------------------------------------------------|------------------------------------------------|---|----|
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | The concept of the state and government        | 2 | 3  |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Intellectual and cultural freedom              | 2 | 4  |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Economic and social freedom                    | 2 | 5  |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | The right to vote and participate in elections | 2 | 6  |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Freedom to form unions and associations        | 2 | 7  |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Freedom of social security and healthcare      | 2 | 8  |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Democracy, its goals and means of achieving it | 2 | 9  |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Forms of democracy                             | 2 | 10 |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Democracy in Iraq                              | 2 | 11 |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | People's participation in legislative work     | 2 | 12 |
| <b>Exams</b> | classroom | The lecture was explained using visual                                 | Referendum, its types and reasons              | 2 | 13 |

|                                                             |           |                                                                        |                                                      |   |    |
|-------------------------------------------------------------|-----------|------------------------------------------------------------------------|------------------------------------------------------|---|----|
|                                                             |           | aids and practical application.                                        |                                                      |   |    |
| <b>Exams</b>                                                | classroom | The lecture was explained using visual aids and practical application. | Popular referendum and popular solution              | 2 | 14 |
| <b>Exams</b>                                                | classroom | The lecture was explained using visual aids and practical application. | Election of the Iraqi Transitional National Assembly | 2 | 15 |
| 9. Course evaluation                                        |           |                                                                        |                                                      |   |    |
| Daily, monthly, and final exams, as well as weekly reports. |           |                                                                        |                                                      |   |    |
| 10. Learning and teaching resources                         |           |                                                                        |                                                      |   |    |
| Textbooks                                                   |           |                                                                        |                                                      |   |    |
| Main References                                             |           |                                                                        |                                                      |   |    |
| Scientific sources on the internet                          |           |                                                                        |                                                      |   |    |

|                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1- Course Name:</b>                                                                                                                                                                                                                                                                                                                                                                       |
| <b>English language</b>                                                                                                                                                                                                                                                                                                                                                                      |
| <b>2- Course code:</b>                                                                                                                                                                                                                                                                                                                                                                       |
| <b>NTU101</b>                                                                                                                                                                                                                                                                                                                                                                                |
| <b>3- The academic semester/Year:</b>                                                                                                                                                                                                                                                                                                                                                        |
| <b>First / First</b>                                                                                                                                                                                                                                                                                                                                                                         |
| <b>4 -Date of description preparation:</b>                                                                                                                                                                                                                                                                                                                                                   |
| <b>2025/9/14</b>                                                                                                                                                                                                                                                                                                                                                                             |
| <b>5Available forms of attendance:</b>                                                                                                                                                                                                                                                                                                                                                       |
| <b>In-person lectures</b>                                                                                                                                                                                                                                                                                                                                                                    |
| <b>6-Number of credit hours(Total) /Number of units (total)</b>                                                                                                                                                                                                                                                                                                                              |
| <b>Theory 2/2 units</b>                                                                                                                                                                                                                                                                                                                                                                      |
| <b>-7Name of course coordinator</b>                                                                                                                                                                                                                                                                                                                                                          |
| <b>Name: Dr. Hassan Mahmoud Hassan</b>                                                                                                                                                                                                                                                                                                                                                       |
| <b>e-mail:-<a href="mailto:hassan.mh@ntu.edu.iq">hassan.mh@ntu.edu.iq</a></b>                                                                                                                                                                                                                                                                                                                |
| <b>8-Course objectives:</b>                                                                                                                                                                                                                                                                                                                                                                  |
| <b>1. Developing basic language skills.</b><br><b>2. Improving reading, writing, listening, and speaking skills.</b><br><b>3. Understanding English texts in general, especially formal and professional texts..</b><br><b>4. Learn legal and administrative vocabulary and expressions.</b><br><b>5. The ability to understand contracts, laws, and legal documents written in English.</b> |
| <b>9-strategy Teaching and learning:</b>                                                                                                                                                                                                                                                                                                                                                     |
| <b>1. Understanding legal terminology in English.</b>                                                                                                                                                                                                                                                                                                                                        |



2. Familiarization with legal vocabulary and expressions such as contracts, laws, judicial procedures, and official correspondence.
3. The ability to read and understand legal documents such as contracts, regulations, international agreements, and court rulings..
4. Developing the skill of writing official letters, legal reports, and drafting contracts in English correctly and accurately.
- 5- The ability to speak and communicate with international parties or foreign clients, whether in meetings or via email..

#### 10- StructureThe course

| Evaluation Method                             | Teaching method                                      | Unit name/Or the topic                               | Required learning outcomes | Hours     |             | Week       |
|-----------------------------------------------|------------------------------------------------------|------------------------------------------------------|----------------------------|-----------|-------------|------------|
|                                               |                                                      |                                                      |                            | practical | theoretical |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Definition of basic English terms                    | Knowledge and Application  | -         | 2           | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | English Language How many units are three in English | Knowledge and Application  | -         | 2           | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | The eight parts of speech                            | Knowledge and Application  | -         | 2           | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Parts of speech 2                                    | Knowledge and Application  | -         | 2           | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Conversation                                         | Knowledge and Application  | -         | 2           | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Translation of terms related to prosthetics          | Knowledge and Application  | -         | 2           | Sixth      |
| Reports, theoretical,                         | Whiteboard, PowerPoint slides,                       | Verb to be 1                                         | Knowledge and Application  | -         | 2           | Seventh    |

|                                               |                                                      |                      |                           |   |   |            |
|-----------------------------------------------|------------------------------------------------------|----------------------|---------------------------|---|---|------------|
| oral, and written exams                       | practical experiments                                |                      |                           |   |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Verb to be 2         | Knowledge and Application | - | 2 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Prepositions1        | Knowledge and Application | - | 2 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Preposition 2        | Knowledge and Application | - | 2 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Punctuation marks    | Knowledge and Application | - | 2 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Sentence types       | Knowledge and Application | - | 2 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Simple present tense | Knowledge and Application | - | 2 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Simple past tense    | Knowledge and Application | - | 2 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Translation text     | Knowledge and Application | - | 2 | fifteenth  |

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| <b>11-Course evaluation</b>                                                             |
| <b>Student reports and activities, oral and written theoretical and practical exams</b> |

|                                           |                                                                             |
|-------------------------------------------|-----------------------------------------------------------------------------|
| <b>12 Learning and teaching resources</b> |                                                                             |
|                                           | <b>Required textbooks(Textbooks, if available)</b>                          |
|                                           | <b>Main references (sources)</b>                                            |
|                                           | <b>Recommended books and references(Scientific journals and reports...)</b> |
|                                           | <b>Electronic references and websites</b>                                   |

|                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                            |
| Computer technologies                                                                                                                      |
| 2. Course code:                                                                                                                            |
| NTU102                                                                                                                                     |
| 3. Semester/Year:                                                                                                                          |
| the first/the first                                                                                                                        |
| 4. Date the description was prepared:                                                                                                      |
| 15/9/2025                                                                                                                                  |
| 5. Available forms of attendance:                                                                                                          |
| My attendance is weekly                                                                                                                    |
| 6. Number of credit hours (total) / Number of units (total)                                                                                |
| 30/2                                                                                                                                       |
| 7. Name of the course coordinator                                                                                                          |
| Name: M.M. Hind Hatem Ramadan<br>e-mail:<br><a href="mailto:hind.hr@ntu.edu.iq">hind.hr@ntu.edu.iq</a>                                     |
| 8. Course Objectives:                                                                                                                      |
| The student's imamComputer applicationsAnddifferentAndHe is able to distinguish between the types of software that can be dealt with       |
| 9. Teaching and learning strategy:                                                                                                         |
| <ul style="list-style-type: none"> <li>Comprehensive explanation of the curriculum</li> <li>Daily tests</li> <li>student groups</li> </ul> |

| 10. Course Structure                          |                                                      |                                                                                                              |                            |       |            |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------|-------|------------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                                                                                              | Required learning outcomes | Hours | Week       |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The concept of networks<br/>networksIts types – The concept of the Internetinternet And its operation</b> | Knowledge and Application  | 2     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Description of the main screen and its components<br/>How to connect to the World Wide Webweb</b>         | Knowledge and Application  | 2     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>How toLeveraging popular search engineslike Google</b>                                                    | Knowledge and Application  | 2     | the third  |

|                                               |                                                      |                                                                                                                                                                                      |                           |   |          |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---|----------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Understanding methods of searching for information and how to access it</b>                                                                                                       | Knowledge and Application | 2 | Fourth   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>programExcel To understand the program's concept – its benefits, specifications, features, and how to operate it</b>                                                              | Knowledge and Application | 2 | Fifth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Understanding the main screen, its components, and its various menus and active tools.</b>                                                                                        | Knowledge and Application | 2 | Sixth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cell concept – basic data types and how to input them</b>                                                                                                                         | Knowledge and Application | 2 | Seventh  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>How to save a work page -Close the program and close the file.</b>                                                                                                                | Knowledge and Application | 2 | Eighth   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Using some of the functions provided by the program, such ascount, SQRT, Ave, sum, Min, MaxAnd other useful related statistical functions</b>                                     | Knowledge and Application | 2 | Ninth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Understanding the editing processeditingWhich the program provides and</b>                                                                                                        | Knowledge and Application | 2 | tenth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>How to copy or transfer data, and to understand the concept of copying mathematical operations, as well as the concept of relative cells. relative and released cellsabsolute</b> | Knowledge and Application | 2 | eleventh |
| Reports, theoretical,                         | Whiteboard, PowerPoint slides,                       | <b>Controlling cell display – changing its style and</b>                                                                                                                             | Knowledge and Application | 2 | twelfth  |

|                                               |                                                      |                                                                                                                        |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------|---|------------|
| oral, and written exams                       | practical experiments                                | <b>format using formatting tools</b>                                                                                   |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>programWord To understand the program's concept – its benefits, specifications, features, and how to operate it</b> | Knowledge and Application | 2 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Program applicationsWorddifferent</b>                                                                               | Knowledge and Application | 2 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Statistical programSPSS – Program concept and operation</b>                                                         | Knowledge and Application | 2 | fifteenth  |

|                                                                                  |
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| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

|                                            |                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------|
| <b>12. Learning and teaching resources</b> |                                                                       |
|                                            | Required textbooks (curriculum books, if available)                   |
|                                            | Main references (sources)                                             |
|                                            | Recommended books and references (scientific journals and reports...) |
|                                            | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                          |
| Arabic                                                                                                                                                                                                                                                                                                                                                   |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                          |
| NTU202                                                                                                                                                                                                                                                                                                                                                   |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                        |
| the first/the first                                                                                                                                                                                                                                                                                                                                      |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                    |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                        |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                  |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                              |
| 30/2                                                                                                                                                                                                                                                                                                                                                     |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                        |
| the name: .Jaafar Sami Saleh Qaddouri                                                                                                                                                                                                                                                                                                                    |
| e-mail:<br><a href="mailto:gafaral000@gmail.com">gafaral000@gmail.com</a>                                                                                                                                                                                                                                                                                |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>Introducing Arab culture through understanding the rules and principles of the Arabic language and empowering students with their Arabic language through the ability to write correct texts and express themselves appropriately in various situations and cases within their medical specialization.</li> </ul> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>Comprehensive explanation of the curriculum</li> <li>Daily tests</li> <li>student groups</li> </ul>                                                                                                                                                                                                               |

| 10. Course Structure                          |                                                      |                                   |                            |       |           |
|-----------------------------------------------|------------------------------------------------------|-----------------------------------|----------------------------|-------|-----------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                   | Required learning outcomes | Hours | Week      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Language is human identity</b> | Knowledge and Application  | 2     | the first |

|                                               |                                                      |                                            |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The Arabic language and its origins</b> | Knowledge and Application | 2 | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>syntax</b>                              | Knowledge and Application | 2 | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Counting rules</b>                      | Knowledge and Application | 2 | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Conditional sentences in Arabic</b>     | Knowledge and Application | 2 | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Dictation and writing</b>               | Knowledge and Application | 2 | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>punctuation marks</b>                   | Knowledge and Application | 2 | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Arabic calligraphy</b>                  | Knowledge and Application | 2 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Arabic literature</b>                   | Knowledge and Application | 2 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The Merits of Writing by Al-Jahiz</b>   | Knowledge and Application | 2 | tenth      |



|                                               |                                                      |                                                    |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|----------------------------------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>A short story (Tigers on the Tenth Day)</b>     | Knowledge and Application | 2 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The Night Lover's Poem by Nazik al-Mala'ika</b> | Knowledge and Application | 2 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Studying Surah Al-Fajr</b>                      | Knowledge and Application | 2 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The letter ta' marbuta</b>                      | Knowledge and Application | 2 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Communicating in the language</b>               | Knowledge and Application | 2 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| <b>1. Course Evaluation</b>                                                      |
| Student reports and activities, oral and written theoretical and practical exams |

|                                            |                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------|
| <b>12. Learning and teaching resources</b> |                                                                       |
|                                            | Required textbooks (curriculum books, if available)                   |
|                                            | Main references (sources)                                             |
|                                            | Recommended books and references (scientific journals and reports...) |
|                                            | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1. Course Name                                                                                                                                                                                                                                                                                                                                                                                                              |                          |
| Sports                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |
| 2. Course code                                                                                                                                                                                                                                                                                                                                                                                                              |                          |
| NTU104                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |
| 3. Class/Level                                                                                                                                                                                                                                                                                                                                                                                                              |                          |
| the second/ the first                                                                                                                                                                                                                                                                                                                                                                                                       |                          |
| 4. Date of preparation of description                                                                                                                                                                                                                                                                                                                                                                                       |                          |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |
| 5. Available forms of attendance                                                                                                                                                                                                                                                                                                                                                                                            |                          |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                                                                                     |                          |
| 6. Number of study hours (College) / Number of units (College)                                                                                                                                                                                                                                                                                                                                                              |                          |
| 2/30                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |
| Name of course coordinator                                                                                                                                                                                                                                                                                                                                                                                                  |                          |
| Name: Ali Yahya Ahmed<br>Email:ali.yahya@ntu.edu.iq                                                                                                                                                                                                                                                                                                                                                                         |                          |
| 7. Course objectives                                                                                                                                                                                                                                                                                                                                                                                                        |                          |
| <ul style="list-style-type: none"> <li>It aimsThe courseTo provide the student with the concept of exercises and their historical development, to introduce them to different schools of exercises, to familiarize them with original, derived, and special exercise positions, and to develop the basic motor skills of exercises.In addition to learning about some types of sports, their rules and benefits.</li> </ul> | <b>Course objectives</b> |

| 8. Teaching and learning strategies                                                                                                                                      |                         |                                                                        |                                           |       |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------------------------------|-------------------------------------------|-------|------------|
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> <li>• Field visits</li> </ul> |                         |                                                                        |                                           |       |            |
| 9. Course structure                                                                                                                                                      |                         |                                                                        |                                           |       |            |
| Evaluation Method                                                                                                                                                        | Forms of attendance     | Learning method                                                        | the topic                                 | Hours | Week       |
| <b>Exams</b>                                                                                                                                                             | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Introduction to sports and their benefits | 2     | the first  |
| <b>Exams</b>                                                                                                                                                             | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Terms in human anatomy                    | 2     | the second |
| <b>Exams</b>                                                                                                                                                             | classroom and gymnasium | The lecture was explained using visual aids and practical application. | The skeletal system of the human body     | 2     | the third  |
| <b>Exams</b>                                                                                                                                                             | classroom and gymnasium | The lecture was explained using visual aids and practical application. | The muscular system of the human body     | 2     | Fourth     |
| <b>Exams</b>                                                                                                                                                             | classroom and gymnasium | The lecture was explained using visual aids and practical application. | The nervous system of the human body      | 2     | Fifth      |
| <b>Exams</b>                                                                                                                                                             | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Sports medicine and sports injuries       | 2     | Sixth      |
| <b>Exams</b>                                                                                                                                                             | classroom and gymnasium | The lecture was explained using visual aids and practical application. | First aid for sports injuries             | 2     | Seventh    |

|                                                             |                         |                                                                        |                                          |   |            |
|-------------------------------------------------------------|-------------------------|------------------------------------------------------------------------|------------------------------------------|---|------------|
| <b>Exams</b>                                                | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Fatigue and ways to treat it             | 2 | Eighth     |
| <b>Exams</b>                                                | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Ethics and sportsmanship                 | 2 | Ninth      |
| <b>Exams</b>                                                | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Laws of football                         | 2 | tenth      |
| <b>Exams</b>                                                | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Basketball rules                         | 2 | eleventh   |
| <b>Exams</b>                                                | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Volleyball rules                         | 2 | twelfth    |
| <b>Exams</b>                                                | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Laws of tennis                           | 2 | thirteenth |
| <b>Exams</b>                                                | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Swimming and its benefits                | 2 | fourteenth |
| <b>Exams</b>                                                | classroom and gymnasium | The lecture was explained using visual aids and practical application. | Track and field athletes and their rules | 2 | fifteenth  |
| 10. Course evaluation                                       |                         |                                                                        |                                          |   |            |
| Daily, monthly, and final exams, as well as weekly reports. |                         |                                                                        |                                          |   |            |
| 11. Learning and teaching resources                         |                         |                                                                        |                                          |   |            |
| Textbooks                                                   |                         |                                                                        |                                          |   |            |

|                                    |
|------------------------------------|
| Main References                    |
| Scientific sources on the internet |

|                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                            |
| Physiology                                                                                                                                 |
| 2. Course code:                                                                                                                            |
| TID106                                                                                                                                     |
| 3. Semester/Year:                                                                                                                          |
| the first/the first                                                                                                                        |
| 4. Date the description was prepared:                                                                                                      |
| 15/9/2025                                                                                                                                  |
| 5. Available forms of attendance:                                                                                                          |
| My attendance is weekly                                                                                                                    |
| 6. Number of credit hours (total) / Number of units (total)                                                                                |
| 60/4                                                                                                                                       |
| 7. Name of the course coordinator                                                                                                          |
| Name: M.D. Saba Damin Shaker<br>e-mail:<br><a href="mailto:sabada.dour@ntu.edu.iq">sabada.dour@ntu.edu.iq</a>                              |
| 8. Course Objectives:                                                                                                                      |
| The student's understanding of the function of each organ in the human body and its role in maintaining body balance                       |
| 9. Teaching and learning strategy:                                                                                                         |
| <ul style="list-style-type: none"> <li>Comprehensive explanation of the curriculum</li> <li>Daily tests</li> <li>student groups</li> </ul> |

| 10. Course Structure                          |                                                      |                                                                                                                                       |                            |       |            |
|-----------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------|------------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                                                                                                                       | Required learning outcomes | Hours | Week       |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Blood – its components – blood smear – blood volume – red blood cells – red blood cell count – their shape – how to count them</b> | Knowledge and Application  | 4     | the first  |
| Reports, theoretical,                         | Whiteboard, PowerPoint slides,                       | <b>White blood cells - their number - their types - the normal ratios for each type</b>                                               | Knowledge and Application  | 4     | the second |

|                                               |                                                      |                                                                                                                                |                           |   |           |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------|---|-----------|
| oral, and written exams                       | practical experiments                                | <b>- the function of white blood cells.</b>                                                                                    |                           |   |           |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Blood clotting – blood acidity – blood platelets and their function.</b>                                                    | Knowledge and Application | 4 | the third |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Anemia – Types of anemia.</b>                                                                                               | Knowledge and Application | 4 | Fourth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Jaundice – its types – causes of jaundice – destruction of red blood cells.</b>                                             | Knowledge and Application | 4 | Fifth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The cardiovascular system – an overview of the circulatory system anatomy – heart anatomy – heart valves.</b>               | Knowledge and Application | 4 | Sixth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The position of the heart in relation to the surface of the living body – the heart as a pump – cardiac output.</b>         | Knowledge and Application | 4 | Seventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Electrocardiogram – Heart sounds – Heart valve regions – Normal sounds.</b>                                                 | Knowledge and Application | 4 | Eighth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Arterial blood pressure – silent blood flow – atmospheric pressure – blood pressure measurement.</b>                        | Knowledge and Application | 4 | Ninth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Factors affecting blood pressure – high – low – central control of blood vessels – measuring high blood pressure – low.</b> | Knowledge and Application | 4 | tenth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides,                       | <b>The respiratory system – respiratory muscles – diaphragm – the function of</b>                                              | Knowledge and Application | 4 | eleventh  |

|                                               |                                                      |                                                                                                                                          |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---|------------|
|                                               | practical experiments                                | <b>the diaphragm in relation to the lungs.</b>                                                                                           |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Respiratory volumes – Expiratory reserve volume – Inspiratory reserve volume – Vital capacity – Factors affecting vital capacity.</b> | Knowledge and Application | 4 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Diseases that affect the effectiveness of respiratory volumes – nasal function.</b>                                                   | Knowledge and Application | 4 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Function of the alveoli</b>                                                                                                           | Knowledge and Application | 4 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The digestive system – the mouth – the pharynx.</b>                                                                                   | Knowledge and Application | 4 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

|                                            |                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------|
| <b>12. Learning and teaching resources</b> |                                                                       |
|                                            | Required textbooks (curriculum books, if available)                   |
|                                            | Main references (sources)                                             |
|                                            | Recommended books and references (scientific journals and reports...) |
|                                            | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Medical terminology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>TIDO109</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| the first/the first                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 30/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Name: M.M. Ammar Khaled Shehab<br>e-mail:<br><a href="mailto:ammar.khalid@ntu.edu.iq">ammar.khalid@ntu.edu.iq</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>- <b>The Medical Terminology course aims to provide students with the fundamental knowledge necessary to understand and use medical terms related to the human body in general, with a focus on the limbs. Objectives include: becoming familiar with the terminology specific to the skeletal system of the limbs; and studying the names and functions of the bones of the upper and lower limbs.</b></p> <p><b>Learn about the terminology related to fractures, bone deformities, and bone diseases.</b></p> <p><b>Studying the terminology related to joints and ligaments: Understanding the terminology specific to joints, cartilage, and ligaments.</b></p> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



| 10. Course Structure                          |                                                      |                                                                                  |                            |       |            |
|-----------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------|-------|------------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                                                                  | Required learning outcomes | Hours | Week       |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Basic word roots</b>                                                          | Knowledge and Application  | 3     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Word roots, suffixes and prefixes</b>                                         | Knowledge and Application  | 3     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Basic anatomical terms and abnormal conditions</b>                            | Knowledge and Application  | 3     | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The genitals and urinary tract</b>                                            | Knowledge and Application  | 3     | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The gastrointestinal tract</b>                                                | Knowledge and Application  | 3     | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The heart and cardiovascular system</b>                                       | Knowledge and Application  | 3     | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Symptoms, diagnoses, treatments, communicationqualifiers, and statistics.</b> | Knowledge and Application  | 3     | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Growth and development</b>                                                    | Knowledge and Application  | 3     | Eighth     |

|                                               |                                                      |                           |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|---------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Gynecology</b>         | Knowledge and Application | 3 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The eye</b>            | Knowledge and Application | 3 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The nervous System</b> | Knowledge and Application | 3 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Blood and immunity</b> | Knowledge and Application | 3 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Blood and immunity</b> | Knowledge and Application | 3 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Bone and joint</b>     | Knowledge and Application | 3 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Blood and immunity</b> | Knowledge and Application | 3 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| 11. Course Evaluation                                                            |
| Student reports and activities, oral and written theoretical and practical exams |

|                                                     |
|-----------------------------------------------------|
| 12. Learning and teaching resources                 |
| Required textbooks (curriculum books, if available) |

|  |                                                                          |
|--|--------------------------------------------------------------------------|
|  | Main references (sources)                                                |
|  | Recommended books and references<br>(scientific journals and reports...) |
|  | Electronic references and websites                                       |

|                                                                                                                                                                                       |                          |                                                                        |                                           |                   |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------|-------------------------------------------|-------------------|-----------|
| 1. Course Name                                                                                                                                                                        |                          |                                                                        |                                           |                   |           |
| Anatomy                                                                                                                                                                               |                          |                                                                        |                                           |                   |           |
| 2. Course code                                                                                                                                                                        |                          |                                                                        |                                           |                   |           |
| TID110                                                                                                                                                                                |                          |                                                                        |                                           |                   |           |
| 3. Class/Level                                                                                                                                                                        |                          |                                                                        |                                           |                   |           |
| the second/ the first                                                                                                                                                                 |                          |                                                                        |                                           |                   |           |
| 4. Date of preparation of description                                                                                                                                                 |                          |                                                                        |                                           |                   |           |
| 15/9/2025                                                                                                                                                                             |                          |                                                                        |                                           |                   |           |
| 5. Available forms of attendance                                                                                                                                                      |                          |                                                                        |                                           |                   |           |
| My attendance is weekly                                                                                                                                                               |                          |                                                                        |                                           |                   |           |
| 6. Number of study hours (College) / Number of units (College)                                                                                                                        |                          |                                                                        |                                           |                   |           |
| 60/4                                                                                                                                                                                  |                          |                                                                        |                                           |                   |           |
| 7. Name of course coordinator                                                                                                                                                         |                          |                                                                        |                                           |                   |           |
| Name: Dr. Rana Naseer Abdulhameed                                                                                                                                                     |                          |                                                                        |                                           |                   |           |
| Email address:<br><a href="mailto:rana.naseer@ntu.edu.iq">rana.naseer@ntu.edu.iq</a>                                                                                                  |                          |                                                                        |                                           |                   |           |
| 8. Course objectives                                                                                                                                                                  |                          |                                                                        |                                           |                   |           |
| <ul style="list-style-type: none"> <li>The student's familiarity with the anatomy of the human body and its organs, as well as knowledge of the relationship between them.</li> </ul> |                          |                                                                        |                                           | Course objectives |           |
| 9. Teaching and learning strategies                                                                                                                                                   |                          |                                                                        |                                           |                   |           |
| <ul style="list-style-type: none"> <li>Comprehensive explanation of the curriculum</li> <li>Daily tests</li> <li>student groups</li> <li>Field visits</li> </ul>                      |                          |                                                                        |                                           |                   |           |
| 10. Course structure                                                                                                                                                                  |                          |                                                                        |                                           |                   |           |
| Evaluation Method                                                                                                                                                                     | Forms of attendance      | Learning method                                                        | the topic                                 | Hours             | Week      |
| Exams                                                                                                                                                                                 | classroom and laboratory | The lecture was explained using visual aids and practical application. | Anatomical orientations and body surfaces | 4                 | the first |

|              |                          |                                                                        |                                                                                              |   |            |
|--------------|--------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---|------------|
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Anatomy of the heart, its position relative to the chest wall, and the number of cells.AddNo | 4 | the second |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | The anatomy of the lungs, their location according to the chest wall and the number of ribs  | 4 | the third  |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Abdominal dissection and division of the abdomen vertically and horizontally                 | 4 | Fourth     |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Stomach anatomy, its parts and its relationship to other organs                              | 4 | Fifth      |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Anatomy of the liver and spleen and their location according to body surfaces                | 4 | Sixth      |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Anatomy of the small intestine and its relationship to other organs in the abdominal cavity  | 4 | Seventh    |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Anatomy of the cecum and its location within the abdominal cavity                            | 4 | Eighth     |

|              |                          |                                                                        |                                                                 |   |            |
|--------------|--------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------|---|------------|
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Dissection of the gallbladder and its location                  | 4 | Ninth      |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Anatomy of the uterus and its location within the pelvic cavity | 4 | tenth      |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Skeleton, skull and spine                                       | 4 | eleventh   |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Shoulder bones, scapula and clavicle                            | 4 | twelfth    |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | The forearm bone and its parts                                  | 4 | thirteenth |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Hand and thigh bones                                            | 4 | fourteenth |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | pelvic bones and lower limbs                                    | 4 | fifteenth  |

#### 11. Course evaluation

Daily, monthly, and final exams, as well as weekly reports.

#### 12. Learning and teaching resources

Textbooks

Main References

Scientific research

Scientific sources on the internet

|                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course name:1</b>                                                                                                                                                     |
| <b>Laboratory and workshop safety</b>                                                                                                                                    |
| <b>Course code:2</b>                                                                                                                                                     |
| TID108                                                                                                                                                                   |
| <b>semester/Year:3-</b>                                                                                                                                                  |
| <b>First/Second</b>                                                                                                                                                      |
| <b>-Date of description preparation:4</b>                                                                                                                                |
| 2025/9/14                                                                                                                                                                |
| <b>Available forms of attendance5</b>                                                                                                                                    |
| <b>In-person lectures</b>                                                                                                                                                |
| <b>-Number of credit hours(Total) /6: Number of units (total)</b>                                                                                                        |
| <b>Theory 2/2 units</b>                                                                                                                                                  |
| <b>Name of course coordinator-7</b>                                                                                                                                      |
| <b>Name: Dr. Hassan Mahmoud Hassan</b><br><b><a href="mailto:hassan.mh@ntu.edu.iq">hassan.mh@ntu.edu.iq</a></b> For email:                                               |
| <b>- Course objectives:8</b>                                                                                                                                             |
| identification <b>BASED ON SAFETY AND SECURITY RULES AND THE ABILITY TO DEAL WITH SOURCES OF HAZARDS IN LABORATORIES AND WORKSHOPS</b>                                   |
| <b>-strategyTeaching and Learning: 9</b>                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> <li>• Field visits</li> </ul> |

| 1. Course structure |                          |                                                                        |                                                                                  |       |      |
|---------------------|--------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------|------|
| Evaluation Method   | Forms of attendance      | Learning method                                                        | the topic                                                                        | Hours | Week |
| <b>Exams</b>        | classroom and laboratory | The lecture was explained using visual aids and practical application. | Essential equipment that must be available in the laboratory (laboratory layout) | 2     | 1    |
| <b>Exams</b>        | classroom and laboratory | The lecture was explained using visual aids and practical application. | Safety precautions when handling laboratory equipment and chemicals              | 2     | 2    |
| <b>Exams</b>        | classroom and laboratory | The lecture was explained using visual aids and practical application. | Safety precautions upon completion of laboratory work                            | 2     | 3    |
| <b>Exams</b>        | classroom and laboratory | The lecture was explained using visual aids and practical application. | Fires and their types                                                            | 2     | 4    |
| <b>Exams</b>        | classroom and laboratory | The lecture was explained using visual aids and practical application. | Fire extinguishing equipment                                                     | 2     | 5    |
| <b>Exams</b>        | classroom and laboratory | The lecture was explained using visual aids and practical application. | Personal protective equipment                                                    | 2     | 6    |
| <b>Exams</b>        | classroom and laboratory | The lecture was explained using visual aids and practical application. | Chemical hazards and how to deal with them                                       | 2     | 7    |
| <b>Exams</b>        | classroom and laboratory | The lecture was explained using visual aids and practical application. | Radiation hazards                                                                | 2     | 8    |

|                                                             |                          |                                                                        |                                                                                            |   |    |
|-------------------------------------------------------------|--------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---|----|
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | biological hazards                                                                         | 2 | 9  |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | Disposal of laboratory (medical) waste                                                     | 2 | 10 |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | First aid in laboratories                                                                  | 2 | 11 |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | Use of warning signs in the laboratory                                                     | 2 | 12 |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | Environmental factors and their impact on safety and health (light, noise, heat, humidity) | 2 | 13 |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | Safety in field studies                                                                    | 2 | 14 |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | Methods of storing chemical and medical materials                                          | 2 | 15 |
| <b>2. Course evaluation</b>                                 |                          |                                                                        |                                                                                            |   |    |
| Daily, monthly, and final exams, as well as weekly reports. |                          |                                                                        |                                                                                            |   |    |
| <b>3. Learning and teaching resources</b>                   |                          |                                                                        |                                                                                            |   |    |
| Textbooks                                                   |                          |                                                                        |                                                                                            |   |    |
| Main References                                             |                          |                                                                        |                                                                                            |   |    |
| Scientific research                                         |                          |                                                                        |                                                                                            |   |    |
| Scientific sources on the internet                          |                          |                                                                        |                                                                                            |   |    |



|                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                             |
| Manufacturing below-knee prostheses                                                                                                                                                                                                                                                                                                                         |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                             |
| <b>IPT110</b>                                                                                                                                                                                                                                                                                                                                               |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                           |
| the first/the first                                                                                                                                                                                                                                                                                                                                         |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                       |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                   |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                           |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                     |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                                 |
| 75/5                                                                                                                                                                                                                                                                                                                                                        |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                           |
| Name: Dr. Anas Abbas Hussein<br>e-mail:<br><a href="mailto:anas1993vi@gmail.com">anas1993vi@gmail.com</a>                                                                                                                                                                                                                                                   |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                       |
| <b>The ability to understand the fundamental principles of below-knee prosthesis design and manufacturing; the ability to define problems and find appropriate solutions; guiding students to understand the physiological and technical factors influencing the design and manufacturing of lower limbs to ensure compatibility with the human body. .</b> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                                                                                                            |

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| 10. Course Structure |
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| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                        | Required learning outcomes | Hours | Week       |
|-----------------------------------------------|------------------------------------------------------|----------------------------------------|----------------------------|-------|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Prosthetic Manufacturing</b>        | Knowledge and Application  | 5     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Socket Design</b>                   | Knowledge and Application  | 5     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Static and dynamic equilibrium.</b> | Knowledge and Application  | 5     | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Component Selection</b>             | Knowledge and Application  | 5     | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Alignment</b>                       | Knowledge and Application  | 5     | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Socket Fabrication.</b>             | Knowledge and Application  | 5     | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Suspension Systems</b>              | Knowledge and Application  | 5     | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>design the symes prosthesis</b>     | Knowledge and Application  | 5     | Eighth     |
| Reports, theoretical,                         | Whiteboard, PowerPoint slides,                       | <b>Exam</b>                            | Knowledge and Application  | 5     | Ninth      |

|                                               |                                                      |                                                          |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|----------------------------------------------------------|---------------------------|---|------------|
| oral, and written exams                       | practical experiments                                |                                                          |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Prosthetic Foot Design</b>                            | Knowledge and Application | 5 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Biomechanics of TK prosthesis</b>                     | Knowledge and Application | 5 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Gait Training</b>                                     | Knowledge and Application | 5 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Alignment and force distribution of TK prosthesis</b> | Knowledge and Application | 5 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Biomechanics of Ak Prosthesis</b>                     | Knowledge and Application | 5 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Check out AK and TK prosthesis</b>                    | Knowledge and Application | 5 | fifteenth  |

|                                                                                  |                                                     |
|----------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>11. Course Evaluation</b>                                                     |                                                     |
| Student reports and activities, oral and written theoretical and practical exams |                                                     |
| <b>12. Learning and teaching resources</b>                                       |                                                     |
|                                                                                  | Required textbooks (curriculum books, if available) |
|                                                                                  | Main references (sources)                           |

|  |                                                                          |
|--|--------------------------------------------------------------------------|
|  | Recommended books and references<br>(scientific journals and reports...) |
|  | Electronic references and websites                                       |

|                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                                               |
| Musculoskeletal diseases                                                                                                                                                                                                                                                                                                                                                      |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                                               |
| IPT210                                                                                                                                                                                                                                                                                                                                                                        |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                                             |
| the first/the first                                                                                                                                                                                                                                                                                                                                                           |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                                         |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                                     |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                                             |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                                       |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                                                   |
| 30/2                                                                                                                                                                                                                                                                                                                                                                          |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                                             |
| the name: .Asia Ayad Dahash Hamid Al-Douri                                                                                                                                                                                                                                                                                                                                    |
| e-mail:                                                                                                                                                                                                                                                                                                                                                                       |
| <a href="mailto:asiaasiadr@gmail.com">asiaasiadr@gmail.com</a>                                                                                                                                                                                                                                                                                                                |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• The ability to interact with people in multiple fields within the same discipline, AThe ability to define problems and find appropriate solutions; the ability to use modern methods to reach suitable treatment approaches. Distinguishing between diseases related to the limbs and others through accurate diagnosis..</li> </ul> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                                                                                                                              |

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|----------------------|
| 10. Course Structure |
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| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                                                                                                    | Required learning outcomes | Hours | Week       |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------|-------|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Introduction &amp; clinical methods, Ankle &amp; foot disorders: club foot, pes plans, pes cares</b>            | Knowledge and Application  | 2     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Metatarsal lesions; metatarsalagia..., finger lesions: hallux rigidus, hammer toe.</b>                          | Knowledge and Application  | 2     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Knee lesions: Gemu varum, valgus, hyperextension, Hip lesions: CDH, pesorthe's disease</b>                      | Knowledge and Application  | 2     | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Hip lesions: (cont.), Spines lesions: cervical &amp; lumbar; Spin bifida, Kyphosis, Scoliosis, Torricelli's</b> | Knowledge and Application  | 2     | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Rheumatoid arthritis &amp; deformities, Ortheoarthritis &amp; deformities</b>                                   | Knowledge and Application  | 2     | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Revision, Metabolic disorders: DM, Scurvy &amp; Rickets,</b>                                                    | Knowledge and Application  | 2     | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Metabolic disorders: DM, Scurvy &amp; Rickets, Short limb: causes, management in general</b>                    | Knowledge and Application  | 2     | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Muscle atrophy: eg polyomyelitis, cerebral palsy</b>                                                            | Knowledge and Application  | 2     | Eighth     |
| Reports, theoretical,                         | Whiteboard, PowerPoint slides,                       | <b>Peripheral nerve lesion: Radial plexus inj, radial,</b>                                                         | Knowledge and Application  | 2     | Ninth      |

|                                               |                                                      |                                                                                          |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------|---|------------|
| oral, and written exams                       | practical experiments                                | <b>ulnar N, Peripheral nerve lesion: &amp; median</b>                                    |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Peripheral nerve lesion: sciatic N, pop N &amp; tibialis, Peripheral nerve lesion</b> | Knowledge and Application | 2 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cervical prolapsed disc, Limber PID &amp; sciatic a</b>                               | Knowledge and Application | 2 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Surgical management in orthopedic, Physiotherapy: in orthopedic</b>                   | Knowledge and Application | 2 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Physiotherapy: in orthopedic, Manipulation treatment of orthopedic lesions</b>        | Knowledge and Application | 2 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The effect of orthosis [rules] in orthopedic, Protective orthosis</b>                 | Knowledge and Application | 2 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Revision</b>                                                                          | Knowledge and Application | 2 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

| 12. Learning and teaching resources |                                                                       |
|-------------------------------------|-----------------------------------------------------------------------|
|                                     | Required textbooks (curriculum books, if available)                   |
|                                     | Main references (sources)                                             |
|                                     | Recommended books and references (scientific journals and reports...) |

|  |                                    |
|--|------------------------------------|
|  | Electronic references and websites |
|--|------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                    |                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1. Course Name :                                                                                                                                                                                                                                                                                                                                                                                   |                          |
| <b>Anatomy of the lower limbs</b>                                                                                                                                                                                                                                                                                                                                                                  |                          |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                                                                    |                          |
| IPT114                                                                                                                                                                                                                                                                                                                                                                                             |                          |
| 3. Class/Level                                                                                                                                                                                                                                                                                                                                                                                     |                          |
| First/First                                                                                                                                                                                                                                                                                                                                                                                        |                          |
| 4. Date of preparation of description                                                                                                                                                                                                                                                                                                                                                              |                          |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                                                          |                          |
| 5. Available forms of attendance                                                                                                                                                                                                                                                                                                                                                                   |                          |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                                                            |                          |
| 6. Number of study hours (College) / Number of units (College)                                                                                                                                                                                                                                                                                                                                     |                          |
| 3/45                                                                                                                                                                                                                                                                                                                                                                                               |                          |
| 7- Name of the course coordinator                                                                                                                                                                                                                                                                                                                                                                  |                          |
| Name: Dr. Rana Naseer Abdulhameed                                                                                                                                                                                                                                                                                                                                                                  |                          |
| e-mail:                                                                                                                                                                                                                                                                                                                                                                                            |                          |
| <a href="mailto:rana.naseer@ntu.edu.iq">rana.naseer@ntu.edu.iq</a>                                                                                                                                                                                                                                                                                                                                 |                          |
| 8-Course objectives                                                                                                                                                                                                                                                                                                                                                                                |                          |
| 1. Anatomical understanding of the lower limbs: Recognizing the general structure of the lower limbs, including bones, joints, muscles, blood vessels, and nerves.<br>2. Studying the skeletal structure of the lower limbs: identifying the bones of the pelvis, femur, leg, and foot.<br>3. Study of joints and ligaments: Understanding the types of joints in the lower limb (such as the hip, | <b>Course objectives</b> |

|                                                                                                                                      |                          |                                              |                                             |       |      |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------|---------------------------------------------|-------|------|
| knee, and ankle joints). Studying the mechanisms of movement and stability in these joints.                                          |                          |                                              |                                             |       |      |
| 7. Teaching and learning strategies                                                                                                  |                          |                                              |                                             |       |      |
| <ul style="list-style-type: none"><li>Comprehensive explanation of the curriculum ,Daily tests,student groups,Field visits</li></ul> |                          |                                              |                                             |       |      |
| 8. Course structure                                                                                                                  |                          |                                              |                                             |       |      |
| Evaluation Method                                                                                                                    | Forms of attendance      | Learning method                              | Subject name                                | Hours | Week |
| Tests and reports                                                                                                                    | classroom and laboratory | The lecture was explained using visual aids. | Introduction in anatomy and term of anatomy | 3     | 1    |
| Tests and reports                                                                                                                    | classroom and laboratory | The lecture was explained using visual aids. | Classify of bone and kind of bone           | 3     | 2    |
| Tests and reports                                                                                                                    | classroom and laboratory | The lecture was explained using visual aids. | Bone of lower extremity- pelvic bone        | 3     | 3    |
| Tests and reports                                                                                                                    | classroom and laboratory | The lecture was explained using visual aids. | Bone of Femur                               | 3     | 4    |
| Tests and reports                                                                                                                    | classroom and laboratory | The lecture was explained using visual aids. | Bone of Tibia, Fibula                       | 3     | 5    |
| Tests and reports                                                                                                                    | classroom and laboratory | The lecture was explained using visual aids. | Bones of Foot                               | 3     | 6    |
| Tests and reports                                                                                                                    | classroom and laboratory | The lecture was explained using visual aids. | Introduction in Muscular system             | 3     | 7    |



|                                                                                    |                          |                                              |                                                                                      |   |    |
|------------------------------------------------------------------------------------|--------------------------|----------------------------------------------|--------------------------------------------------------------------------------------|---|----|
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The type of muscles                                                                  | 3 | 8  |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of anterior border of pelvic reign (origin, insertion and action)        | 3 | 9  |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of posterior border of pelvic reign (origin, insertion and action)       | 3 | 10 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of Iliac border of pelvic reign (origin, insertion and action)           | 3 | 11 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of the anterior border of Thigh reign (origin, insertion and action)     | 3 | 12 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of posterior border of Thigh reign (origin, insertion and action)        | 3 | 13 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of medial & lateral border of Thigh reign (origin, insertion and action) | 3 | 14 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | Exam                                                                                 | 3 | 15 |
| 9. Course evaluation                                                               |                          |                                              |                                                                                      |   |    |
| Daily, monthly, and final exams, weekly report writing, and practical application. |                          |                                              |                                                                                      |   |    |
| 10. Learning and teaching resources                                                |                          |                                              |                                                                                      |   |    |
| Textbooks                                                                          |                          |                                              |                                                                                      |   |    |
| Main References                                                                    |                          |                                              |                                                                                      |   |    |

|                                    |
|------------------------------------|
| Scientific research                |
| Scientific sources on the internet |

|                                                                                                                                                                                                                                                                                                                                                                           |                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 11. Course Name :                                                                                                                                                                                                                                                                                                                                                         |                          |
| <b>Anatomy of the lower limbs</b>                                                                                                                                                                                                                                                                                                                                         |                          |
| 12. Course code:                                                                                                                                                                                                                                                                                                                                                          |                          |
| IPT114                                                                                                                                                                                                                                                                                                                                                                    |                          |
| 13. Class/Level                                                                                                                                                                                                                                                                                                                                                           |                          |
| First/First                                                                                                                                                                                                                                                                                                                                                               |                          |
| 14. Date of preparation of description                                                                                                                                                                                                                                                                                                                                    |                          |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                                 |                          |
| 15. Available forms of attendance                                                                                                                                                                                                                                                                                                                                         |                          |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                                   |                          |
| 16. Number of study hours (College) / Number of units (College)                                                                                                                                                                                                                                                                                                           |                          |
| 3/45                                                                                                                                                                                                                                                                                                                                                                      |                          |
| 7- Name of the course coordinator                                                                                                                                                                                                                                                                                                                                         |                          |
| Name: Dr. Rana Naseer Abdulhameed                                                                                                                                                                                                                                                                                                                                         |                          |
| e-mail:                                                                                                                                                                                                                                                                                                                                                                   |                          |
| <a href="mailto:rana.naseer@ntu.edu.iq">rana.naseer@ntu.edu.iq</a>                                                                                                                                                                                                                                                                                                        |                          |
| 8-Course objectives                                                                                                                                                                                                                                                                                                                                                       |                          |
| 1. Anatomical understanding of the lower limbs: Recognizing the general structure of the lower limbs, including bones, joints, muscles, blood vessels, and nerves.<br><br>2. Studying the skeletal structure of the lower limbs: identifying the bones of the pelvis, femur, leg, and foot.<br><br>3. Study of joints and ligaments: Understanding the types of joints in | <b>Course objectives</b> |

|                                                                                                                              |                          |                                              |                                             |       |      |
|------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------|---------------------------------------------|-------|------|
| the lower limb (such as the hip, knee, and ankle joints). Studying the mechanisms of movement and stability in these joints. |                          |                                              |                                             |       |      |
| 17.Teaching and learning strategies                                                                                          |                          |                                              |                                             |       |      |
| • Comprehensive explanation of the curriculum ,Daily tests,student groups,Field visits                                       |                          |                                              |                                             |       |      |
| 18. Course structure                                                                                                         |                          |                                              |                                             |       |      |
| Evaluation Method                                                                                                            | Forms of attendance      | Learning method                              | Subject name                                | Hours | Week |
| Tests and reports                                                                                                            | classroom and laboratory | The lecture was explained using visual aids. | Introduction in anatomy and term of anatomy | 3     | 1    |
| Tests and reports                                                                                                            | classroom and laboratory | The lecture was explained using visual aids. | Classify of bone and kind of bone           | 3     | 2    |
| Tests and reports                                                                                                            | classroom and laboratory | The lecture was explained using visual aids. | Bone of lower extremity- pelvic bone        | 3     | 3    |
| Tests and reports                                                                                                            | classroom and laboratory | The lecture was explained using visual aids. | Bone of Femur                               | 3     | 4    |
| Tests and reports                                                                                                            | classroom and laboratory | The lecture was explained using visual aids. | Bone of Tibia, Fibula                       | 3     | 5    |
| Tests and reports                                                                                                            | classroom and laboratory | The lecture was explained using visual aids. | Bones of Foot                               | 3     | 6    |
| Tests and reports                                                                                                            | classroom and laboratory | The lecture was explained using visual aids. | Introduction in Muscular system             | 3     | 7    |

|                                                                                    |                          |                                              |                                                                                      |   |    |
|------------------------------------------------------------------------------------|--------------------------|----------------------------------------------|--------------------------------------------------------------------------------------|---|----|
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The type of muscles                                                                  | 3 | 8  |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of anterior border of pelvic reign (origin, insertion and action)        | 3 | 9  |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of posterior border of pelvic reign (origin, insertion and action)       | 3 | 10 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of Iliac border of pelvic reign (origin, insertion and action)           | 3 | 11 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of the anterior border of Thigh reign (origin, insertion and action)     | 3 | 12 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of posterior border of Thigh reign (origin, insertion and action)        | 3 | 13 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | The muscles of medial & lateral border of Thigh reign (origin, insertion and action) | 3 | 14 |
| Tests and reports                                                                  | classroom and laboratory | The lecture was explained using visual aids. | Exam                                                                                 | 3 | 15 |
| 19. Course evaluation                                                              |                          |                                              |                                                                                      |   |    |
| Daily, monthly, and final exams, weekly report writing, and practical application. |                          |                                              |                                                                                      |   |    |
| 20. Learning and teaching resources                                                |                          |                                              |                                                                                      |   |    |
| Textbooks                                                                          |                          |                                              |                                                                                      |   |    |
| Main References                                                                    |                          |                                              |                                                                                      |   |    |

|                                    |
|------------------------------------|
| Scientific research                |
| Scientific sources on the internet |

|                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                                                          |
| Manufacturing above-knee prostheses                                                                                                                                                                                                                                                                                                                                                      |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                                                          |
| <b>IPT111</b>                                                                                                                                                                                                                                                                                                                                                                            |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                                                        |
| the first/the first                                                                                                                                                                                                                                                                                                                                                                      |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                                                    |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                                                |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                                                        |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                                                  |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                                                              |
| 75/5                                                                                                                                                                                                                                                                                                                                                                                     |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                                                        |
| Name: Dr. Anas Abbas Hussein<br>e-mail:<br><a href="mailto:anas1993vi@gmail.com">anas1993vi@gmail.com</a>                                                                                                                                                                                                                                                                                |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                                                    |
| <b>The ability to understand the basic principles and foundations of above-knee prosthesis design and manufacturing; the ability to apply The problems are identified and appropriate solutions are found, guiding students to understand the physiological and technical factors affecting the design and manufacture of upper limbs to ensure compatibility with the human body. .</b> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                                                                                                                                         |

| 10. Course Structure                          |                                                      |                                                                                                                                         |                            |       |            |
|-----------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------|------------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                                                                                                                         | Required learning outcomes | Hours | Week       |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Prosthetic Socket: The component of the above-knee prosthesis that interfaces with the residual tip</b>                              | Knowledge and Application  | 5     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Suspension System: The mechanism used to secure the prosthetic limb to the remaining limb, ensuring proper fit and function.</b>     | Knowledge and Application  | 5     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Prosthetic Knee Joint: The artificial joint component of the above-knee prosthesis that mimics the function of the knee.</b>         | Knowledge and Application  | 5     | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Prosthetic Foot: The artificial foot component of the above-knee prosthesis, which provides support and stability during walking</b> | Knowledge and Application  | 5     | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Alignment: The process of ensuring that the prosthetic components are correctly aligned to optimize function and comfort</b>         | Knowledge and Application  | 5     | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Component Selection: Choosing the appropriate materials and components for constructing above-knee prosthetics.</b>                  | Knowledge and Application  | 5     | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Fabrication Techniques: Methods used to manufacture above-knee prosthetic components, such as casting and machining.</b>             | Knowledge and Application  | 5     | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>design the system prosthesis</b>                                                                                                     | Knowledge and Application  | 5     | Eighth     |

|                                               |                                                      |                                                                                                                                                |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Exam</b>                                                                                                                                    | Knowledge and Application | 5 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Gait Training: Teaching patients how to walk with their above-knee prosthetics effectively and safely</b>                                   | Knowledge and Application | 5 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Above-Knee Prosthetics: Artificial limbs designed to replace limbs lost above the knee due to various conditions or injuries</b>            | Knowledge and Application | 5 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Amputation: The surgical removal of a limb, often necessary due to trauma, vascular disease, or cancer.</b>                                 | Knowledge and Application | 5 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Residual Limb: The remaining portion of a limb after calculation, which serves as the interface with the prosthetic device.</b>             | Knowledge and Application | 5 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Prosthetic Socket: The component of the above-knee prosthesis that interfaces with the residual limb, providing support and attachment.</b> | Knowledge and Application | 5 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Check out AK and TK prosthesis</b>                                                                                                          | Knowledge and Application | 5 | fifteenth  |

#### 11. Course Evaluation

Student reports and activities, oral and written theoretical and practical exams

#### 12. Learning and teaching resources

|  |                                                                       |
|--|-----------------------------------------------------------------------|
|  | Required textbooks (curriculum books, if available)                   |
|  | Main references (sources)                                             |
|  | Recommended books and references (scientific journals and reports...) |
|  | Electronic references and websites                                    |

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| 1. Course Name:                                                                                                                                                                                                                                                             |
| <b>Biomechanics of supports</b>                                                                                                                                                                                                                                             |
| 2. Course code:                                                                                                                                                                                                                                                             |
| <b>IPT208</b>                                                                                                                                                                                                                                                               |
| 3. Semester/Year:                                                                                                                                                                                                                                                           |
| the first/the first                                                                                                                                                                                                                                                         |
| 4. Date the description was prepared:                                                                                                                                                                                                                                       |
| 15/9/2025                                                                                                                                                                                                                                                                   |
| 5. Available forms of attendance:                                                                                                                                                                                                                                           |
| My attendance is weekly                                                                                                                                                                                                                                                     |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                 |
| 45/3                                                                                                                                                                                                                                                                        |
| 7. Name of the course coordinator                                                                                                                                                                                                                                           |
| Name: M.M. Omar Hassan Mahmoud<br>e-mail:<br><a href="mailto:eng.omarhasan94@ntu.edu.iq">eng.omarhasan94@ntu.edu.iq</a>                                                                                                                                                     |
| 8. Course Objectives:                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• <b>The ability to master angles and deviations when manufacturing prostheses, the ability to pinpoint problems and find appropriate solutions, and the efficiency in distributing the stress on the amputated limb.</b></li> </ul> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                            |



| 10. Course Structure                          |                                                      |                            |                            |       |            |
|-----------------------------------------------|------------------------------------------------------|----------------------------|----------------------------|-------|------------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name            | Required learning outcomes | Hours | Week       |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Mechanics of Orthosis      | Knowledge and Application  | 3     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Moment of equilibrium.     | Knowledge and Application  | 3     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Free body diagram          | Knowledge and Application  | 3     | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Bending moment             | Knowledge and Application  | 3     | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Design of Orthosis         | Knowledge and Application  | 3     | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Function of orthosis joint | Knowledge and Application  | 3     | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Affected of joint on gait  | Knowledge and Application  | 3     | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides,                       | Kinemtics and acceleration | Knowledge and Application  | 3     | Eighth     |

|                                               |                                                      |                                             |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|---------------------------------------------|---------------------------|---|------------|
|                                               | practical experiments                                |                                             |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Equilibrium for ankle deformity</b>      | Knowledge and Application | 3 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Effect of rigidity equipment</b>         | Knowledge and Application | 3 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Mechanic of function of AFO</b>          | Knowledge and Application | 3 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Examine the AFO</b>                      | Knowledge and Application | 3 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Biomechanics of ankle foot deformity</b> | Knowledge and Application | 3 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Biomechanics of ankle foot gait</b>      | Knowledge and Application | 3 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Exam</b>                                 | Knowledge and Application | 3 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

| 12. Learning and teaching resources |                                                                       |
|-------------------------------------|-----------------------------------------------------------------------|
|                                     | Required textbooks (curriculum books, if available)                   |
|                                     | Main references (sources)                                             |
|                                     | Recommended books and references (scientific journals and reports...) |
|                                     | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course name:-1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Microbiology</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Course code:-2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>IMA 114</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Semester:Year -3</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>2025/2026 / First</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Date the description was prepared:-4</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>2026/7/27</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Available forms of attendance:-5</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>In-person lectures</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Credit Hours(Total) / Number of units (Total) -6</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Theory 2/2 units</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>7- Name of the course coordinator</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Name: M.M. Ammar Khaled Shehab</b><br><b>e-mail:-<a href="mailto:ammar.khalid@ntu.edu.iq">ammar.khalid@ntu.edu.iq</a></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Course objectives:-8</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <ol style="list-style-type: none"> <li><b>1. Cellular structure and function: Understanding the basic components of the bacterial cell, the structure of the bacterial cell wall and its pharmacological interactions (Pharmacokinetics).</b></li> <li><b>2. Resistance and natural flora: Understanding the mechanisms of bacterial resistance to antibiotics, and the role of naturally occurring microorganisms (Natural/Inhabitants) in the body.</b></li> <li><b>3. Pathogenesis and Classification: A study of the nature and development of bacterial diseases, including a review of different bacterial systems and examples of pathogenic groups. Comprehensive Pathological Study of Bacterial Groups: Toxins: The nature and effects of bacterial toxins. Infection: Modes of transmission and spread of pathogens. Diagnosis and Treatment: Laboratory diagnostic methods and appropriate treatment strategies. Prevention: Methods for reducing and preventing the spread of infection.</b></li> </ol> |
| <b>9- Teaching and learning strategy:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <ol style="list-style-type: none"> <li><b>1. Interactive learning and discussion: It relies on brainstorming, exchanging ideas, and group dialogue to engage students in deriving concepts.</b></li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

2. **Applied education and field training:** It focuses on studying practical cases and applying skills in the field to link theories to scientific reality.
3. **Self-learning and e-learning:** It allows students to conduct independent research and use digital platforms to enhance their ability to deduce and analyze.
4. **Collaborative learning and teamwork:** Cooperative learning is encouraged through work groups to promote problem-solving, vocabulary building and deconstruction.

#### 10- Course structure:

| Evaluation Method                             | Teaching method                                      | Unit name/ or the topic                                                                                                                                                                                                                          | Required learning outcomes | Hours     |             | Week       |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------|-------------|------------|
|                                               |                                                      |                                                                                                                                                                                                                                                  |                            | practical | theoretical |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Classification of microorganisms: fungi, algae, protozoa, bacteria, mycoplasma, viruses, and rickettsia                                                                                                                                          | Knowledge and Application  |           | 2           | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | General structure of bacteria: cell wall, plasma membrane, capsule (Capsule), and protoplasm (cytoplasm and nucleus), a comparison between prokaryotic and eukaryotic cells                                                                      | Knowledge and Application  |           | 2           | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Bacterial spores (Bacterial Spores): Types of spores and their mechanisms of resistance to harsh environmental conditions                                                                                                                        | Knowledge and Application  |           | 2           | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Environmental factors affecting bacterial growth: oxygen, temperature, humidity, pH (pH), light, osmotic pressure, and culture media. Stages of bacterial growth: adaptation (Lag), logarithmic (Log), stationary, and decline (Decline) phases. | Knowledge and Application  |           | 2           | Fourth     |

|                                                      |                                                             |                                                                                                                                                                                                                                         |                                  |  |          |                |
|------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|--|----------|----------------|
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Inhibiting bacterial growth (Inhibiting Growth): Basic concepts of sterilization and disinfection.</b>                                                                                                                               | <b>Knowledge and Application</b> |  | <b>2</b> | <b>Fifth</b>   |
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Sterilization and disinfection methods: radiation sterilization, filtration (Filtration), chemical sterilization, and other factors</b>                                                                                              | <b>Knowledge and Application</b> |  | <b>2</b> | <b>Sixth</b>   |
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Medical bacteria - StaphylococcusStaphylococcus aureus): General characteristics, toxins produced, pathogenic mechanism, and treatment methods</b>                                                                                   | <b>Knowledge and Application</b> |  | <b>2</b> | <b>Seventh</b> |
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Streptococcal bacteria (Streptococci: Their types (S. pyogenes viridans, S. faecalis) in terms of general structure, culture media, and modes of pathogenesis. Pneumococci (S. pneumoniae): Structure, pathogens, and treatment.</b> | <b>Knowledge and Application</b> |  | <b>2</b> | <b>Eighth</b>  |
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Neisseria genus(Neisseria): Meningococci Structure and disease.</b>                                                                                                                                                                  | <b>Knowledge and Application</b> |  | <b>2</b> | <b>Ninth</b>   |
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Anaerobic bacteria (Anaerobic bacteria: General characteristics. Clostridium tetani: Description, factors affecting wound virulence, methods of prevention and treatment.</b>                                                        | <b>Knowledge and Application</b> |  | <b>2</b> | <b>tenth</b>   |

|                                                      |                                                             |                                                                                                                                                                                                           |                                  |  |          |                   |
|------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|--|----------|-------------------|
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Gastroenteritis and food poisoning</b><br><b>Clostridium spp.: Toxins secreted in food, symptoms, and treatment.</b><br><b>Bacillus anthracis: Pathological description and treatment.</b>             | <b>Knowledge and Application</b> |  | <b>2</b> | <b>eleventh</b>   |
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Intestinal bacteria (Enteric bacteria: medical importance and general characteristics. Salmonella group.</b>                                                                                           | <b>Knowledge and Application</b> |  | <b>2</b> | <b>twelfth</b>    |
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Shigella bacteria (Shigella: Diseases, food poisoning, and treatment. Proteus: Description, characteristics, and culture media.</b>                                                                    | <b>Knowledge and Application</b> |  | <b>2</b> | <b>thirteenth</b> |
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Brucella bacteria (Brucella: General diagnosis, disease, prognosis, and treatment. Bordetella: Morphology, culture media, disease, and treatment.</b>                                                  | <b>Knowledge and Application</b> |  | <b>2</b> | <b>fourteenth</b> |
| <b>Reports, theoretical, oral, and written exams</b> | <b>Whiteboard, PowerPoint slides, practical experiments</b> | <b>Medical terminology related to bones and joints (closely related to prosthetics)</b><br><b>Vibrio bacteria (Vibrio cholerae): General characteristics, pathogenic mechanism, and treatment options</b> | <b>Knowledge and Application</b> |  | <b>2</b> | <b>fifteenth</b>  |

#### **Course Evaluation -11**

**Student reports and activities, oral and written theoretical and practical exams**

#### **12- Learning and teaching resources:**

|  |                                                           |
|--|-----------------------------------------------------------|
|  | <b>Required textbooks(School textbooks, if available)</b> |
|  | <b>Main references (sources)</b>                          |

|  |                                                                             |
|--|-----------------------------------------------------------------------------|
|  | <b>Recommended books and references(Scientific journals and reports...)</b> |
|  | <b>Electronic references and websites</b>                                   |

|                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                          |
| Arabic                                                                                                                                                                                                                                                                                                                                                   |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                          |
| NTU202                                                                                                                                                                                                                                                                                                                                                   |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                        |
| the first/the first                                                                                                                                                                                                                                                                                                                                      |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                    |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                        |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                  |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                              |
| 30/2                                                                                                                                                                                                                                                                                                                                                     |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                        |
| the name: .Jaafar Sami Saleh Qaddouri                                                                                                                                                                                                                                                                                                                    |
| e-mail:<br><a href="mailto:gafaral000@gmail.com">gafaral000@gmail.com</a>                                                                                                                                                                                                                                                                                |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>Introducing Arab culture through understanding the rules and principles of the Arabic language and empowering students with their Arabic language through the ability to write correct texts and express themselves appropriately in various situations and cases within their medical specialization.</li> </ul> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>Comprehensive explanation of the curriculum</li> <li>Daily tests</li> <li>student groups</li> </ul>                                                                                                                                                                                                               |

| 10. Course Structure                          |                                                      |                                            |                            |       |            |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------|----------------------------|-------|------------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                            | Required learning outcomes | Hours | Week       |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Language is human identity</b>          | Knowledge and Application  | 2     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The Arabic language and its origins</b> | Knowledge and Application  | 2     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>syntax</b>                              | Knowledge and Application  | 2     | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Counting rules</b>                      | Knowledge and Application  | 2     | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Conditional sentences in Arabic</b>     | Knowledge and Application  | 2     | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Dictation and writing</b>               | Knowledge and Application  | 2     | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>punctuation marks</b>                   | Knowledge and Application  | 2     | Seventh    |



|                                               |                                                      |                                                    |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|----------------------------------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Arabic calligraphy</b>                          | Knowledge and Application | 2 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Arabic literature</b>                           | Knowledge and Application | 2 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The Merits of Writing by Al-Jahiz</b>           | Knowledge and Application | 2 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>A short story (Tigers on the Tenth Day)</b>     | Knowledge and Application | 2 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The Night Lover's Poem by Nazik al-Mala'ika</b> | Knowledge and Application | 2 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Studying Surah Al-Fajr</b>                      | Knowledge and Application | 2 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The letter ta' marbuta</b>                      | Knowledge and Application | 2 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Communicating in the language</b>               | Knowledge and Application | 2 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| 11. Course Evaluation                                                            |
| Student reports and activities, oral and written theoretical and practical exams |

|                                     |                                                                       |
|-------------------------------------|-----------------------------------------------------------------------|
| 12. Learning and teaching resources |                                                                       |
|                                     | Required textbooks (curriculum books, if available)                   |
|                                     | Main references (sources)                                             |
|                                     | Recommended books and references (scientific journals and reports...) |
|                                     | Electronic references and websites                                    |

|                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                            |
| Computer technologies                                                                                                                      |
| 2. Course code:                                                                                                                            |
| NTU102                                                                                                                                     |
| 3. Semester/Year:                                                                                                                          |
| the first/the first                                                                                                                        |
| 4. Date the description was prepared:                                                                                                      |
| 15/9/2025                                                                                                                                  |
| 5. Available forms of attendance:                                                                                                          |
| My attendance is weekly                                                                                                                    |
| 6. Number of credit hours (total) / Number of units (total)                                                                                |
| 30/2                                                                                                                                       |
| 7. Name of the course coordinator                                                                                                          |
| Name: M.M. Hind Hatem Ramadan<br>e-mail:<br><a href="mailto:hind.hr@ntu.edu.iq">hind.hr@ntu.edu.iq</a>                                     |
| 8. Course Objectives:                                                                                                                      |
| The student's imamComputer applicationsAnddifferentAndHe is able to distinguish between the types of software that can be dealt with       |
| 9. Teaching and learning strategy:                                                                                                         |
| <ul style="list-style-type: none"> <li>Comprehensive explanation of the curriculum</li> <li>Daily tests</li> <li>student groups</li> </ul> |

| 10. Course Structure                          |                                                      |                                                                                                                         |                            |       |            |
|-----------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------|-------|------------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                                                                                                         | Required learning outcomes | Hours | Week       |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The concept of networks<br/>networksIts types – The concept of the Internetinternet And its operation</b>            | Knowledge and Application  | 2     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Description of the main screen and its components<br/>How to connect to the World Wide Webweb</b>                    | Knowledge and Application  | 2     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>How toLeveraging popular search engineslike Google</b>                                                               | Knowledge and Application  | 2     | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Understanding methods of searching for information and how to access it</b>                                          | Knowledge and Application  | 2     | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>programExcel To understand the program's concept – its benefits, specifications, features, and how to operate it</b> | Knowledge and Application  | 2     | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Understanding the main screen, its components, and its various menus and active tools.</b>                           | Knowledge and Application  | 2     | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cell concept – basic data types and how to input them</b>                                                            | Knowledge and Application  | 2     | Seventh    |

|                                               |                                                      |                                                                                                                                                                                      |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>How to save a work page -Close the program and close the file.</b>                                                                                                                | Knowledge and Application | 2 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Using some of the functions provided by the program, such ascount, SQRT, Ave, sum, Min, MaxAnd other useful related statistical functions</b>                                     | Knowledge and Application | 2 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Understanding the editing processeditingWhich the program provides and</b>                                                                                                        | Knowledge and Application | 2 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>How to copy or transfer data, and to understand the concept of copying mathematical operations, as well as the concept of relative cells. relative and released cellsabsolute</b> | Knowledge and Application | 2 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Controlling cell display – changing its style and format using formatting tools</b>                                                                                               | Knowledge and Application | 2 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>programWord To understand the program's concept – its benefits, specifications, features, and how to operate it</b>                                                               | Knowledge and Application | 2 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Program applicationsWorddifferent</b>                                                                                                                                             | Knowledge and Application | 2 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Statistical programSPSS – Program concept and operation</b>                                                                                                                       | Knowledge and Application | 2 | fifteenth  |

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|----------------------------------------------------------------------------------|
| 11. Course Evaluation                                                            |
| Student reports and activities, oral and written theoretical and practical exams |

| 12. Learning and teaching resources |                                                                       |
|-------------------------------------|-----------------------------------------------------------------------|
|                                     | Required textbooks (curriculum books, if available)                   |
|                                     | Main references (sources)                                             |
|                                     | Recommended books and references (scientific journals and reports...) |
|                                     | Electronic references and websites                                    |

|                                                                          |
|--------------------------------------------------------------------------|
| 1. Course Name                                                           |
| <b>Crimes of the Ba'ath regime in Iraq</b>                               |
| 2. Course code                                                           |
| <b>NTU203</b>                                                            |
| 3. Class/Level                                                           |
| the first/the second                                                     |
| 4. Date of preparation of description                                    |
| 14/7/2025                                                                |
| 5. Available forms of attendance                                         |
| My attendance is weekly                                                  |
| 6. Number of study hours (College) / Number of units (College)           |
| 2/30                                                                     |
| 7- Name of the course coordinator                                        |
| Name: A.M. Adnan Abdulkarim Khalil<br>Email address:adnan.akh@ntu.edu.iq |
| 7. Course objectives                                                     |

|                                                                                                                                                                                                                                          |                          |                     |                                                             |       |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------|-------------------------------------------------------------|-------|------------|
| <ul style="list-style-type: none"><li>Defining the Baath regime and its origins in Iraq, the types of crimes it committed over decades, and studying the motives behind the various crimes committed against the Iraqi people.</li></ul> | <b>Course objectives</b> |                     |                                                             |       |            |
| 8. Teaching and learning strategies                                                                                                                                                                                                      |                          |                     |                                                             |       |            |
| <ul style="list-style-type: none"><li>Comprehensive explanation of the curriculum</li><li>Daily tests</li><li>student groups</li></ul>                                                                                                   |                          |                     |                                                             |       |            |
| 9. Course structure                                                                                                                                                                                                                      |                          |                     |                                                             |       |            |
| Evaluation Method                                                                                                                                                                                                                        | Forms of attendance      | Learning method     | the topic                                                   | Hours | Week       |
| Exams                                                                                                                                                                                                                                    | classroom                | Lecture explanation | Basic political terms                                       | 2     | the first  |
| Exams                                                                                                                                                                                                                                    | classroom                | Lecture explanation | The emergence of the Ba'ath Party in Iraq                   | 2     | the second |
| Exams                                                                                                                                                                                                                                    | classroom                | Lecture explanation | Types of crime                                              | 2     | the third  |
| Exams                                                                                                                                                                                                                                    | classroom                | Lecture explanation | Causes and motives for crime                                | 2     | Fourth     |
| Exams                                                                                                                                                                                                                                    | classroom                | Lecture explanation | Perpetrators of Ba'ath regime crimes                        | 2     | Fifth      |
| Exams                                                                                                                                                                                                                                    | classroom                | Lecture explanation | The United Nations' view of the crimes of the Ba'ath regime | 2     | Sixth      |
| Exams                                                                                                                                                                                                                                    | classroom                | Lecture explanation | Human rights and the crimes of the Ba'ath regime            | 2     | Seventh    |
| Exams                                                                                                                                                                                                                                    | classroom                | Lecture explanation | Baath regime human rights violations                        | 2     | Eighth     |
| Exams                                                                                                                                                                                                                                    | classroom                | Lecture explanation | military crimes                                             | 2     | Ninth      |

|                                     |           |                        |                  |   |            |
|-------------------------------------|-----------|------------------------|------------------|---|------------|
| <b>Exams</b>                        | classroom | Lecture<br>explanation | Political crimes | 2 | tenth      |
| <b>Exams</b>                        | classroom | Lecture<br>explanation | economic crimes  | 2 | eleventh   |
| <b>Exams</b>                        | classroom | Lecture<br>explanation | civil crimes     | 2 | twelfth    |
| <b>Exams</b>                        | classroom | Lecture<br>explanation | social crimes    | 2 | thirteenth |
| <b>Exams</b>                        | classroom | Lecture<br>explanation | genocide         | 2 | fourteenth |
| <b>Exams</b>                        | classroom | Lecture<br>explanation | mass graves      | 2 | fifteenth  |
| 10. Course evaluation               |           |                        |                  |   |            |
| Daily, monthly, and final exams     |           |                        |                  |   |            |
| 11. Learning and teaching resources |           |                        |                  |   |            |
| Textbooks                           |           |                        |                  |   |            |
| Main References                     |           |                        |                  |   |            |
| Scientific sources on the internet  |           |                        |                  |   |            |

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|-----------------------------------------------------------------------------------------------------------------|--------------------------|
| 1. Course Name                                                                                                  |                          |
| Professional ethics                                                                                             |                          |
| 2. Course code                                                                                                  |                          |
| NTU204                                                                                                          |                          |
| 3. Class/Level                                                                                                  |                          |
| the first/the second                                                                                            |                          |
| 4. Date of preparation of description                                                                           |                          |
| 14/7/2025                                                                                                       |                          |
| 5. Available forms of attendance                                                                                |                          |
| My attendance is weekly                                                                                         |                          |
| 6. Number of study hours (College) / Number of units (College)                                                  |                          |
| 2/30                                                                                                            |                          |
| 7. Name of course coordinator:                                                                                  |                          |
| Name: M.M. Hassan Mohamed Hassan                                                                                |                          |
| Email address:hasanmohammedhasan69@gmail.com                                                                    |                          |
| 7. Course objectives                                                                                            |                          |
| <ul style="list-style-type: none"> <li>Understanding the basic principles of professional ethics for</li> </ul> | <b>Course objectives</b> |



|                                                                                                                                                                                                                                                          |                     |                     |                                                                                                                                                                                                                                              |       |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------|
| those working in medical specialties andQualifying the graduate onProfessional handlingWith his profession and achieving harmony with himself and his professional environment (the patient, his companions, healthcare workers, and medical equipment). |                     |                     |                                                                                                                                                                                                                                              |       |            |
| 8. Teaching and learning strategies                                                                                                                                                                                                                      |                     |                     |                                                                                                                                                                                                                                              |       |            |
| <ul style="list-style-type: none"><li>• Comprehensive explanation of the curriculum</li><li>• Daily tests</li><li>• student groups</li></ul>                                                                                                             |                     |                     |                                                                                                                                                                                                                                              |       |            |
| 9. Course structure                                                                                                                                                                                                                                      |                     |                     |                                                                                                                                                                                                                                              |       |            |
| Evaluation Method                                                                                                                                                                                                                                        | Forms of attendance | Learning method     | the topic                                                                                                                                                                                                                                    | Hours | Week       |
| Exams                                                                                                                                                                                                                                                    | classroom           | Lecture explanation | - Principles of professional ethics in the stages of civilizational development.<br>- Principles of professional ethics in Arab and Islamic civilization.<br>- Etiquette of dealing with patients in hospitals from ancient times until now. | 2     | the first  |
| Exams                                                                                                                                                                                                                                                    | classroom           | Lecture explanation | Professional conduct: its definition and concept,- Its practical applications,The relationship between employees and their superiors.                                                                                                        | 2     | the second |
| Exams                                                                                                                                                                                                                                                    | classroom           | Lecture explanation | Basic professional ethics<br>- The characteristics of professional ethics as a                                                                                                                                                               | 2     | the third  |

|              |           |                     |                                                                                                                                                                                                                                                                                                                                                         |   |         |
|--------------|-----------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------|
|              |           |                     | <p>guide and mentor for behavior.</p> <p>- How to employ professional ethics from the position of a guide to the individual's behavior, emotions, and ability to make the appropriate decision.</p> <p>Characteristics and attributes of healthcare workers...</p> <p>Appearance, behavior, and commitment.</p> <p>Patient's moral and legal rights</p> |   |         |
| <b>Exams</b> | classroom | Lecture explanation | <p>Behavioral/Human-Interactive-Associative Patterns.</p> <p>Its definition, nature, motives, interpretations, and influencing factors.</p>                                                                                                                                                                                                             | 2 | Fourth  |
| <b>Exams</b> | classroom | Lecture explanation | <p>Communication methods/linguistic and non-linguistic</p> <p>-Its definition, types, effects, and design of successful communication methods.</p> <p>-How do communication methods affect behavior, listening, and how can one practice them, with practical examples?</p>                                                                             | 2 | Fifth   |
| <b>Exams</b> | classroom | Lecture explanation | <p>Behavioral trends and tendencies.</p> <p>- Definition, classification, Factors affecting it, Methods of measuring it.</p>                                                                                                                                                                                                                            | 2 | Sixth   |
| <b>Exams</b> | classroom | Lecture explanation | <p>Values, customs, and traditions.</p> <p>- Definition, classification, Factors affecting it, Methods of measuring it.</p>                                                                                                                                                                                                                             | 2 | Seventh |

|              |           |                     |                                                                                                                                                                                                                                                 |   |                |
|--------------|-----------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------|
| <b>Exams</b> | classroom | Lecture explanation | Personality types and how to deal with them.<br>-Definition of personality - its types - its relationship to the profession.<br>-The techie's personality and characteristics                                                                   | 2 | Eighth         |
| <b>Exams</b> | classroom | Lecture explanation | Conditions for improving mental health<br>- Definition,Factors affecting it,Prevention of mental illness,The role of mental health in vocational preparation.                                                                                   | 2 | Ninth          |
| <b>Exams</b> | classroom | Lecture explanation | Conditions for professional compatibility and the associated working relationship.<br>- its concept,Its conditions,Poor professional availability.                                                                                              | 2 | tenth          |
| <b>Exams</b> | classroom | Lecture explanation | Job description for graduate work                                                                                                                                                                                                               | 2 | atheistic ten  |
| <b>Exams</b> | classroom | Lecture explanation | -Patient behavior.<br>-Receiving the patient, dealing with him, gaining his trust, and maintaining professional confidentiality.<br>-Setting dates to meet the requirements of the required procedure.<br>-Preserving the patient's belongings. | 2 | the second ten |
| <b>Exams</b> | classroom | Lecture explanation | Behavioral behavior in dealing with medical devices and equipment.                                                                                                                                                                              | 2 | the third ten  |

|                                                             |           |                     |                                                                                                                                                                                                                                                                                                                                                          |   |            |
|-------------------------------------------------------------|-----------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------------|
|                                                             |           |                     | <ul style="list-style-type: none"> <li>-Daily inspection of equipment, tools, solutions and other requirements, preparing them for daily work, maintaining, servicing and preserving them.</li> <li>-Preparing the necessary medications for the job and handling them properly.</li> </ul>                                                              |   |            |
| <b>Exams</b>                                                | classroom | Lecture explanation | <p>Occupational safety</p> <ul style="list-style-type: none"> <li>-Prevention of workplace hazards and accidents.</li> <li>-Prevention of the risks of bacterial, toxic and radioactive contamination.</li> <li>-Prevention of thoughts of infection with contagious and infectious diseases.</li> <li>-Avoid bad practices in the workplace.</li> </ul> | 2 | Fourth ten |
| <b>Exams</b>                                                | classroom | Lecture explanation | <p>Applications in professional conduct.</p> <ul style="list-style-type: none"> <li>- Field visits to hospitals and other health institutions to learn and exchange experiences and information.</li> </ul>                                                                                                                                              | 2 | fifteenth  |
| 10. Course evaluation                                       |           |                     |                                                                                                                                                                                                                                                                                                                                                          |   |            |
| Daily, monthly, and final exams, as well as weekly reports. |           |                     |                                                                                                                                                                                                                                                                                                                                                          |   |            |
| 11. Learning and teaching resources                         |           |                     |                                                                                                                                                                                                                                                                                                                                                          |   |            |

|                                    |
|------------------------------------|
| Textbooks                          |
| Main References                    |
| Scientific sources on the internet |

|                                                                                                                                                                                 |                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1. Course Name                                                                                                                                                                  |                          |
| <b>Life statistics</b>                                                                                                                                                          |                          |
| 2. Course code                                                                                                                                                                  |                          |
| <b>TID205</b>                                                                                                                                                                   |                          |
| 3. Class/Level                                                                                                                                                                  |                          |
| the first/the second                                                                                                                                                            |                          |
| 4. Date of preparation of description                                                                                                                                           |                          |
| 15/9/2025                                                                                                                                                                       |                          |
| 5. Available forms of attendance                                                                                                                                                |                          |
| My attendance is weekly                                                                                                                                                         |                          |
| 6. Number of study hours (College) / Number of units (College)                                                                                                                  |                          |
| 2/30                                                                                                                                                                            |                          |
| Name of course coordinator                                                                                                                                                      |                          |
| Name: M.M. Saja Jumaa Hammad                                                                                                                                                    |                          |
| Email address:                                                                                                                                                                  |                          |
| saja.jumaa@ntu.edu.iq                                                                                                                                                           |                          |
| 7. Course objectives                                                                                                                                                            |                          |
| <ul style="list-style-type: none"> <li>The ability to deal with different statistical methods and their vital applications within the field of medical laboratories.</li> </ul> | <b>Course objectives</b> |
| 8. Teaching and learning strategies                                                                                                                                             |                          |
| <ul style="list-style-type: none"> <li>Comprehensive explanation of the curriculum</li> <li>Daily tests</li> <li>student groups</li> </ul>                                      |                          |
| 9. Course structure                                                                                                                                                             |                          |

| Evaluation Method | Forms of attendance | Learning method                                                        | the topic                           | Hours | Week       |
|-------------------|---------------------|------------------------------------------------------------------------|-------------------------------------|-------|------------|
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids and practical application. | Basic concepts in mathematics       | 2     | the first  |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids and practical application. | division equation                   | 2     | the second |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids and practical application. | Purpose and continuity              | 2     | the third  |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids and practical application. | Biostatistics                       | 2     | Fourth     |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids and practical application. | Statistical concepts                | 2     | Fifth      |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids and practical application. | The concept of probability          | 2     | Sixth      |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids and practical application. | Calculation and counting techniques | 2     | Seventh    |

|              |           |                                                                        |                                              |   |            |
|--------------|-----------|------------------------------------------------------------------------|----------------------------------------------|---|------------|
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Probability distribution                     | 2 | Eighth     |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Frequency distribution table                 | 2 | Ninth      |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Measures of central tendency                 | 2 | tenth      |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Methods of classifying and categorizing data | 2 | eleventh   |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Derived                                      | 2 | twelfth    |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | Derivative of trigonometric functions        | 2 | thirteenth |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and practical application. | integration                                  | 2 | fourteenth |
| <b>Exams</b> | classroom | The lecture was explained using visual aids and                        | Deviation and contrast                       | 2 | fifteenth  |

|                                                             |  |                        |  |  |  |
|-------------------------------------------------------------|--|------------------------|--|--|--|
|                                                             |  | practical application. |  |  |  |
| 10. Course evaluation                                       |  |                        |  |  |  |
| Daily, monthly, and final exams, as well as weekly reports. |  |                        |  |  |  |
| 11. Learning and teaching resources                         |  |                        |  |  |  |
| Textbooks                                                   |  |                        |  |  |  |
| Main References                                             |  |                        |  |  |  |
| Scientific sources on the internet                          |  |                        |  |  |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Manufacturing prosthetics for lower limbs</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>IPT206</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| the first/the first                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 120/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Name: Dr. Anas Abbas Hussein<br>e-mail:<br><a href="mailto:anas1993vi@gmail.com">anas1993vi@gmail.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• <b>Understanding the anatomical and biomechanical foundations of the lower limbs</b></li> <li>• <b>Understanding the mechanical principles that affect body balance and walking      Design and manufacture of lower limb prostheses</b></li> <li>• <b>Identifying the types of supports used to support and treat lower limb disorderslike(AFO, KAFO, SMO).</b></li> <li>• <b>Choosing the appropriate materials for manufacturing orthotics based on the patient's needs (such as plastics, fiberglass, lightweight metals).</b></li> </ul> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                       |



| 10. Course Structure                          |                                                      |                              |                            |       |            |
|-----------------------------------------------|------------------------------------------------------|------------------------------|----------------------------|-------|------------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name              | Required learning outcomes | Hours | Week       |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>History of Orthosis</b>   | Knowledge and Application  | 8     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Motor disability</b>      | Knowledge and Application  | 8     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Foot deformities (FO)</b> | Knowledge and Application  | 8     | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Foot deformities</b>      | Knowledge and Application  | 8     | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Foot deformities</b>      | Knowledge and Application  | 8     | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Foot deformities</b>      | Knowledge and Application  | 8     | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Ankle deformities</b>     | Knowledge and Application  | 8     | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides,                       | <b>Foot deformities</b>      | Knowledge and Application  | 8     | Eighth     |

|                                               |                                                      |                             |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|-----------------------------|---------------------------|---|------------|
|                                               | practical experiments                                |                             |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Foot deformities</b>     | Knowledge and Application | 8 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Foot deformities</b>     | Knowledge and Application | 8 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>knee deformities</b>     | Knowledge and Application | 8 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Foot deformities</b>     | Knowledge and Application | 8 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Foot deformities</b>     | Knowledge and Application | 8 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Hip deformities HKFO</b> | Knowledge and Application | 8 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Exam</b>                 | Knowledge and Application | 8 | fifteenth  |

#### 11. Course Evaluation

Student reports and activities, oral and written theoretical and practical exams

#### 12. Learning and teaching resources

|  |                                                                       |
|--|-----------------------------------------------------------------------|
|  | Required textbooks (curriculum books, if available)                   |
|  | Main references (sources)                                             |
|  | Recommended books and references (scientific journals and reports...) |
|  | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                           |
| <b>Manufacturing of components for upper limbs</b>                                                                                                                                                                                                                                        |
| 2. Course code:                                                                                                                                                                                                                                                                           |
| <b>IPT 207</b>                                                                                                                                                                                                                                                                            |
| 3. Semester/Year:                                                                                                                                                                                                                                                                         |
| the first/the first                                                                                                                                                                                                                                                                       |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                     |
| 15/9/2025                                                                                                                                                                                                                                                                                 |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                         |
| My attendance is weekly                                                                                                                                                                                                                                                                   |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                               |
| 30/2                                                                                                                                                                                                                                                                                      |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                         |
| Name: Dr. Anas Abbas Hussein<br>e-mail:<br><a href="mailto:anas1993vi@gmail.com">anas1993vi@gmail.com</a>                                                                                                                                                                                 |
| 8. Course Objectives:                                                                                                                                                                                                                                                                     |
| <b>The ability to understand the basic principles of how to design and manufacture upper limb prostheses, the ability to define problems and find appropriate solutions, and to encourage students to think creatively and develop new and innovative upper limb prosthesis designs..</b> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                                          |

| 10. Course Structure                          |                                                      |                                                                                                            |                            |       |           |
|-----------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------|-------|-----------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name                                                                                            | Required learning outcomes | Hours | Week      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Orthotic Device: A device designed to support, align, prevent, or correct deformities or to improve</b> | Knowledge and Application  | 8     | the first |

|                                               |                                                      |                                                                                                                                     |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---|------------|
|                                               |                                                      | <b>the function of movable parts of the body.</b>                                                                                   |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Socket Design: The process of designing the interface between the residual tip and the orthotic socket.</b>                      | Knowledge and Application | 8 | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Component Selection: Choosing the appropriate materials and components for constructing upper-limb orthotic devices</b>          | Knowledge and Application | 8 | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Alignment: Ensuring the correct alignment of the orthotic components to optimize function and comfort</b>                        | Knowledge and Application | 8 | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Suspension Systems: Mechanisms used to secure the orthotic device to the body, ensuring proper fit and function.</b>             | Knowledge and Application | 8 | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Prosthetic Joint: The artificial joint component of an orthotic device, designed to mimic the function of the natural joint.</b> | Knowledge and Application | 8 | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Fabrication Techniques: Methods used to manufacture upper-limb orthotic components, such as casting and machining.</b>           | Knowledge and Application | 8 | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Gait Training: Teaching patients how to walk with their orthotic devices effectively and safely.</b>                             | Knowledge and Application | 8 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Exam</b>                                                                                                                         | Knowledge and Application | 8 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides,                       | <b>Socket Design</b>                                                                                                                | Knowledge and Application | 8 | tenth      |

|                                               |                                                      |                                       |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|---------------------------------------|---------------------------|---|------------|
|                                               | practical experiments                                |                                       |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Upper limb orthosis</b>            | Knowledge and Application | 8 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Prosthetic Arm</b>                 | Knowledge and Application | 8 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Orthotic Hand</b>                  | Knowledge and Application | 8 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Biomechanics of Ak Prosthesis</b>  | Knowledge and Application | 8 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Check out AK and TK prosthesis</b> | Knowledge and Application | 8 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

|                                            |                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------|
| <b>12. Learning and teaching resources</b> |                                                                       |
|                                            | Required textbooks (curriculum books, if available)                   |
|                                            | Main references (sources)                                             |
|                                            | Recommended books and references (scientific journals and reports...) |
|                                            | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                             |
| <b>Biomechanics of supports</b>                                                                                                                                                                                                                                             |
| 2. Course code:                                                                                                                                                                                                                                                             |
| <b>IPT208</b>                                                                                                                                                                                                                                                               |
| 3. Semester/Year:                                                                                                                                                                                                                                                           |
| the first/the second                                                                                                                                                                                                                                                        |
| 4. Date the description was prepared:                                                                                                                                                                                                                                       |
| 15/9/2025                                                                                                                                                                                                                                                                   |
| 5. Available forms of attendance:                                                                                                                                                                                                                                           |
| My attendance is weekly                                                                                                                                                                                                                                                     |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                 |
| 45/3                                                                                                                                                                                                                                                                        |
| 7. Name of the course coordinator                                                                                                                                                                                                                                           |
| Name: M.M. Omar Hassan Mahmoud<br>e-mail:<br><a href="mailto:eng.omarhasan94@ntu.edu.iq">eng.omarhasan94@ntu.edu.iq</a>                                                                                                                                                     |
| 8. Course Objectives:                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• <b>The ability to master angles and deviations when manufacturing prostheses, the ability to pinpoint problems and find appropriate solutions, and the efficiency in distributing the stress on the amputated limb.</b></li> </ul> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                            |

| 10. Course Structure  |                                |                       |                            |       |           |
|-----------------------|--------------------------------|-----------------------|----------------------------|-------|-----------|
| Evaluation Method     | Teaching method                | Unit/Topic Name       | Required learning outcomes | Hours | Week      |
| Reports, theoretical, | Whiteboard, PowerPoint slides, | Mechanics of Orthosis | Knowledge and Application  | 3     | the first |

|                                               |                                                      |                                        |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|----------------------------------------|---------------------------|---|------------|
| oral, and written exams                       | practical experiments                                |                                        |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Moment of equilibrium.                 | Knowledge and Application | 3 | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Free body diagram                      | Knowledge and Application | 3 | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Bending moment                         | Knowledge and Application | 3 | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Design of Orthosis                     | Knowledge and Application | 3 | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Function of orthosis joint             | Knowledge and Application | 3 | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Affected of joint on gait              | Knowledge and Application | 3 | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Kinematics and acceleration            | Knowledge and Application | 3 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Equilibrium for ankle deformity</b> | Knowledge and Application | 3 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides,                       | <b>Effect of rigidity equipment</b>    | Knowledge and Application | 3 | tenth      |



|                                               |                                                      |                                             |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|---------------------------------------------|---------------------------|---|------------|
|                                               | practical experiments                                |                                             |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Mechanic of function of AFO</b>          | Knowledge and Application | 3 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Examine the AFO</b>                      | Knowledge and Application | 3 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Biomechanics of ankle foot deformity</b> | Knowledge and Application | 3 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Biomechanics of ankle foot gait</b>      | Knowledge and Application | 3 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Exam</b>                                 | Knowledge and Application | 3 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

|                                            |                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------|
| <b>12. Learning and teaching resources</b> |                                                                       |
|                                            | Required textbooks (curriculum books, if available)                   |
|                                            | Main references (sources)                                             |
|                                            | Recommended books and references (scientific journals and reports...) |
|                                            | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                                     |
| <b>Manufacturing replacements for upper limbs</b>                                                                                                                                                                                                                                                                                                                   |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                                     |
| <b>IPT209</b>                                                                                                                                                                                                                                                                                                                                                       |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                                   |
| the first/the first                                                                                                                                                                                                                                                                                                                                                 |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                               |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                           |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                                   |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                             |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                                         |
| 45/3                                                                                                                                                                                                                                                                                                                                                                |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                                   |
| Name: Dr. Anas Abbas Hussein<br>e-mail:<br><a href="mailto:anas1993vi@gmail.com">anas1993vi@gmail.com</a>                                                                                                                                                                                                                                                           |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                               |
| <b>-1 aLefficiencyWhen dealing with patients during hand or arm fitting</b><br><b>2- ALefficiencyIn casting special molds and the hand carving method</b><br><b>3- The ability to interact with specialists in the field of handcrafts.</b><br><b>4- Distinguishing between what is required, whether the situation requires an electronic or mechanical hand..</b> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                                                                                                                    |

| 10. Course Structure |                 |                 |                            |       |      |
|----------------------|-----------------|-----------------|----------------------------|-------|------|
| Evaluation Method    | Teaching method | Unit/Topic Name | Required learning outcomes | Hours | Week |

|                                               |                                                      |                                         |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|-----------------------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cosmetic prosth. For partial</b>     | Knowledge and Application | 3 | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cosmetic prosth. For partial</b>     | Knowledge and Application | 3 | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cosmetic prosth for blow elbow</b>   | Knowledge and Application | 3 | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cosmetic prosth for above elbow</b>  | Knowledge and Application | 3 | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cosmetic prosth for above elbow</b>  | Knowledge and Application | 3 | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cosmetic prosth for above elbow</b>  | Knowledge and Application | 3 | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cosmetic prosth through shoulder</b> | Knowledge and Application | 3 | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cosmetic prosth through shoulder</b> | Knowledge and Application | 3 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Stump examination</b>                | Knowledge and Application | 3 | Ninth      |

|                                               |                                                      |                                              |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|----------------------------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Mechanical proth. through'.wrist</b>      | Knowledge and Application | 3 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Mechanical proth. through below elbow</b> | Knowledge and Application | 3 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Mechanical proth. through below elbow</b> | Knowledge and Application | 3 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Mechanical proth. through below elbow</b> | Knowledge and Application | 3 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Mechanical proth. through above elbow</b> | Knowledge and Application | 3 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Mechanical proth. through above elbow</b> | Knowledge and Application | 3 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

|                                            |                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------|
| <b>12. Learning and teaching resources</b> |                                                                       |
|                                            | Required textbooks (curriculum books, if available)                   |
|                                            | Main references (sources)                                             |
|                                            | Recommended books and references (scientific journals and reports...) |
|                                            | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                                             |
| Musculoskeletal diseases                                                                                                                                                                                                                                                                                                                                                    |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                                             |
| IPT210                                                                                                                                                                                                                                                                                                                                                                      |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                                           |
| the first/the second                                                                                                                                                                                                                                                                                                                                                        |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                                       |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                                   |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                                           |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                                     |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                                                 |
| 30/2                                                                                                                                                                                                                                                                                                                                                                        |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                                           |
| the name: .Asia Ayad Dahash Hamid Al-Douri<br>e-mail:<br><a href="mailto:asiaasiadr@gmail.com">asiaasiadr@gmail.com</a>                                                                                                                                                                                                                                                     |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>The ability to interact with people in multiple fields within the same discipline, AThe ability to define problems and find appropriate solutions; the ability to use modern methods to reach suitable treatment approaches. Distinguishing between diseases related to the limbs and others through accurate diagnosis..</li> </ul> |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>Comprehensive explanation of the curriculum</li> <li>Daily tests</li> <li>student groups</li> </ul>                                                                                                                                                                                                                                  |

| 10. Course Structure |                 |                 |                            |       |      |
|----------------------|-----------------|-----------------|----------------------------|-------|------|
| Evaluation Method    | Teaching method | Unit/Topic Name | Required learning outcomes | Hours | Week |

|                                               |                                                      |                                                                                                                    |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Introduction &amp; clinical methods, Ankle &amp; foot disorders: club foot, pes plans, pes cares</b>            | Knowledge and Application | 2 | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Metatarsal lesions; metatarsalagia..., finger lesions: hallux rigidus, hummer toe.</b>                          | Knowledge and Application | 2 | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Knee lesions: Gemu varum, valgus, hyperextension, Hip lesions: CDH, pesorthe's disease</b>                      | Knowledge and Application | 2 | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Hip lesions: (cont.), Spines lesions: cervical &amp; lumbar; Spin bifida, Kyphosis, Scoliosis, Torricelli's</b> | Knowledge and Application | 2 | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Rheumatoid arthritis &amp; deformities, Ortheoarthritis &amp; deformities</b>                                   | Knowledge and Application | 2 | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Revision, Metabolic disorders: DM, Scurvy &amp; Rickets,</b>                                                    | Knowledge and Application | 2 | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Metabolic disorders: DM, Scurvy &amp; Rickets, Short limb: causes, management in general</b>                    | Knowledge and Application | 2 | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Muscle atrophy: eg polyomyelitis, cerebral palsy</b>                                                            | Knowledge and Application | 2 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Peripheral nerve lesion: Radial plexus inj, radial, ulnar N, Peripheral nerve lesion: &amp; median</b>          | Knowledge and Application | 2 | Ninth      |

|                                               |                                                      |                                                                                          |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------|---|------------|
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Peripheral nerve lesion: sciatic N, pop N &amp; tibialis, Peripheral nerve lesion</b> | Knowledge and Application | 2 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Cervical prolapsed disc, Limber PID &amp; sciatic a</b>                               | Knowledge and Application | 2 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Surgical management in orthopedic, Physiotherapy: in orthopedic</b>                   | Knowledge and Application | 2 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Physiotherapy: in orthopedic, Manipulation treatment of orthopedic lesions</b>        | Knowledge and Application | 2 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The effect of orthosis [rules] in orthopedic, Protective orthosis</b>                 | Knowledge and Application | 2 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Revision</b>                                                                          | Knowledge and Application | 2 | fifteenth  |

|                                                                                  |
|----------------------------------------------------------------------------------|
| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

|                                            |                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------|
| <b>12. Learning and teaching resources</b> |                                                                       |
|                                            | Required textbooks (curriculum books, if available)                   |
|                                            | Main references (sources)                                             |
|                                            | Recommended books and references (scientific journals and reports...) |
|                                            | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                          |                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1. Course Name                                                                                                                                                                                                                                                           |                          |
| Properties of materials                                                                                                                                                                                                                                                  |                          |
| 2. Course code                                                                                                                                                                                                                                                           |                          |
| IPT211                                                                                                                                                                                                                                                                   |                          |
| 3. Class/Level                                                                                                                                                                                                                                                           |                          |
| First/Second                                                                                                                                                                                                                                                             |                          |
| 4. Date of preparation of description                                                                                                                                                                                                                                    |                          |
| 15/9/2025                                                                                                                                                                                                                                                                |                          |
| 5. Available forms of attendance                                                                                                                                                                                                                                         |                          |
| My attendance is weekly                                                                                                                                                                                                                                                  |                          |
| 6. Number of study hours (College) / Number of units (College)                                                                                                                                                                                                           |                          |
| 30/2                                                                                                                                                                                                                                                                     |                          |
| Name of course coordinator                                                                                                                                                                                                                                               |                          |
| Name: M.M. Yasser Taha Ayad                                                                                                                                                                                                                                              |                          |
| Email address:yasser.ayad@ntu.edu.iq                                                                                                                                                                                                                                     |                          |
| 7. Course objectives                                                                                                                                                                                                                                                     |                          |
| 1. The ability to use materials of all kinds<br>2. TheAbility to develop solutions and find alternative materials if the required quantities are not available to complete the work.<br>3.Proficiency in handling the introduction of materials within the reaction mold | <b>Course objectives</b> |
| 8. Teaching and learning strategies                                                                                                                                                                                                                                      |                          |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> <li>• Field visits</li> </ul>                                                                                                 |                          |
| 9. Course structure                                                                                                                                                                                                                                                      |                          |



| Evaluation Method | Forms of attendance | Learning method                              | the topic                                   | Hours | Week       |
|-------------------|---------------------|----------------------------------------------|---------------------------------------------|-------|------------|
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids. | Power and energy systems                    | 2     | the first  |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids. | Work and stress                             | 2     | the second |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids. | Stress and tension                          | 2     | the third  |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids. | Stress and anxiety                          | 2     | Fourth     |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids. | Breed and its types                         | 2     | Fifth      |
| <b>Exams</b>      | classroom           | The lecture was explained using visual aids. | The relationship between stress and tension | 2     | Sixth      |

|              |           |                                              |                                         |   |            |
|--------------|-----------|----------------------------------------------|-----------------------------------------|---|------------|
| <b>Exams</b> | classroom | The lecture was explained using visual aids. | Steady motion                           | 2 | Seventh    |
| <b>Exams</b> | classroom | The lecture was explained using visual aids. | Hooke's Law                             | 2 | Eighth     |
| <b>Exams</b> | classroom | The lecture was explained using visual aids. | Kinematic measurements                  | 2 | Ninth      |
| <b>Exams</b> | classroom | The lecture was explained using visual aids. | fragility                               | 2 | tenth      |
| <b>Exams</b> | classroom | The lecture was explained using visual aids. | Plastic for orthopedics and prosthetics | 2 | eleventh   |
| <b>Exams</b> | classroom | The lecture was explained using visual aids. | thermal plastic                         | 2 | twelfth    |
| <b>Exams</b> | classroom | The lecture was explained                    | plasticTH/PP.RT/PVC/ACP                 | 2 | thirteenth |

|                                                                |           |                                              |                               |   |            |
|----------------------------------------------------------------|-----------|----------------------------------------------|-------------------------------|---|------------|
|                                                                |           | using visual aids.                           |                               |   |            |
| <b>Exams</b>                                                   | classroom | The lecture was explained using visual aids. | plasticLT and its application | 2 | fourteenth |
| <b>Exams</b>                                                   | classroom | The lecture was explained using visual aids. | thermal assembly              | 2 | fifteenth  |
| 10. Course evaluation                                          |           |                                              |                               |   |            |
| Daily, monthly, and final exams, and preparing weekly reports. |           |                                              |                               |   |            |
| 11. Learning and teaching resources                            |           |                                              |                               |   |            |
| Textbooks                                                      |           |                                              |                               |   |            |
| Main References                                                |           |                                              |                               |   |            |
| Scientific research                                            |           |                                              |                               |   |            |
| Scientific sources on the internet                             |           |                                              |                               |   |            |

|                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                  |
| Anatomy of the upper limbs and trunk                                                                                                                                                                                                                             |
| 2. Course code:                                                                                                                                                                                                                                                  |
| IPT212                                                                                                                                                                                                                                                           |
| 3. Semester/Year:                                                                                                                                                                                                                                                |
| the first/the second                                                                                                                                                                                                                                             |
| 4. Date the description was prepared:                                                                                                                                                                                                                            |
| 15/9/2025                                                                                                                                                                                                                                                        |
| 5. Available forms of attendance:                                                                                                                                                                                                                                |
| My attendance is weekly                                                                                                                                                                                                                                          |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                      |
| 45/3                                                                                                                                                                                                                                                             |
| 7. Name of the course coordinator                                                                                                                                                                                                                                |
| Name: M.D. Saba Damin Shaker<br>e-mail:<br><a href="mailto:sabada.dour@ntu.edu.iq">sabada.dour@ntu.edu.iq</a>                                                                                                                                                    |
| 8. Course Objectives:                                                                                                                                                                                                                                            |
| The ability to use modern tools And the specialist in anatomy Proficiency in handling the arm installation from Through a thorough understanding of anatomical details, the ability to develop appropriate solutions to structural obstacles. The end on the arm |
| 9. Teaching and learning strategy:                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul>                                                                                                                 |

| 10. Course Structure  |                                |                                                    |                            |       |           |
|-----------------------|--------------------------------|----------------------------------------------------|----------------------------|-------|-----------|
| Evaluation Method     | Teaching method                | Unit/Topic Name                                    | Required learning outcomes | Hours | Week      |
| Reports, theoretical, | Whiteboard, PowerPoint slides, | <b>Introduction in anatomy and term of anatomy</b> | Knowledge and Application  | 3     | the first |

|                                               |                                                      |                                                                                         |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------|---|------------|
| oral, and written exams                       | practical experiments                                |                                                                                         |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Bone of Upper extremity Clavicle bones</b>                                           | Knowledge and Application | 3 | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Bone of Scapula</b>                                                                  | Knowledge and Application | 3 | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Bone of Humerus</b>                                                                  | Knowledge and Application | 3 | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Bone of Ulna</b>                                                                     | Knowledge and Application | 3 | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Bone of Radius</b>                                                                   | Knowledge and Application | 3 | Sixth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Bones of Hand</b>                                                                    | Knowledge and Application | 3 | Seventh    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The muscles of anterior border of Shoulder reign (origin, insertion and action)</b>  | Knowledge and Application | 3 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>The muscles of posterior border of Shoulder reign (origin, insertion and action)</b> | Knowledge and Application | 3 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides,                       | <b>Revision</b>                                                                         | Knowledge and Application | 3 | tenth      |

|                                               |                                                      |                                                   |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|---------------------------------------------------|---------------------------|---|------------|
|                                               | practical experiments                                |                                                   |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Application in anatomical terms</b>            | Knowledge and Application | 3 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Use the skeleton to show the clavicle bone</b> | Knowledge and Application | 3 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Use the skeleton to show the Scapula bone</b>  | Knowledge and Application | 3 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Use the skeleton to show the Humerus bone</b>  | Knowledge and Application | 3 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Use the skeleton to show the Ulna bone</b>     | Knowledge and Application | 3 | fifteenth  |

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| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

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|--------------------------------------------|-----------------------------------------------------------------------|
| <b>12. Learning and teaching resources</b> |                                                                       |
|                                            | Required textbooks (curriculum books, if available)                   |
|                                            | Main references (sources)                                             |
|                                            | Recommended books and references (scientific journals and reports...) |
|                                            | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                                                                                            |                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1.Course Name                                                                                                                                                                                                                                                                                                                              |                          |
| biomaterials                                                                                                                                                                                                                                                                                                                               |                          |
| 2. Course code                                                                                                                                                                                                                                                                                                                             |                          |
| IPT213                                                                                                                                                                                                                                                                                                                                     |                          |
| 3. Class/Level                                                                                                                                                                                                                                                                                                                             |                          |
| Second / Second                                                                                                                                                                                                                                                                                                                            |                          |
| 4. Date of preparation of description                                                                                                                                                                                                                                                                                                      |                          |
| 2025/14                                                                                                                                                                                                                                                                                                                                    |                          |
| 5. Available forms of attendance                                                                                                                                                                                                                                                                                                           |                          |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                    |                          |
| 6. Number of study hours (College) / Number of units (College)                                                                                                                                                                                                                                                                             |                          |
| 30/2                                                                                                                                                                                                                                                                                                                                       |                          |
| Name of course coordinator                                                                                                                                                                                                                                                                                                                 |                          |
| Name: M.M. Yasser Taha Ayad<br>Email address:yasser.ayad@ntu.edu.iq                                                                                                                                                                                                                                                                        |                          |
| 7. Course objectives                                                                                                                                                                                                                                                                                                                       |                          |
| -1 Lightness and flexibility: Biomaterials allow for the manufacture of lightweight and flexible prostheses and supports, making them easier for the wearer to use efficiently. Some biomaterials are characterized by high strength and rigidity, making them ideal for use in prosthetics that need to withstand pressure and heavy use. | <b>Course objectives</b> |

|                                                                                                                                                                                                                                                                                                                                                                                  |                     |                                 |                                      |       |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------|--------------------------------------|-------|------------|
| <p>-2The fit and adaptability of these materials allow for the precise shaping and customization of limbs and supports according to individual needs, making them easier for the person to use comfortably and effectively.</p> <p>3Corrosion resistance: Some biomaterials offer high corrosion resistance, which extends the lifespan of prosthetics and medical supports.</p> |                     |                                 |                                      |       |            |
| 8. Teaching and learning strategies                                                                                                                                                                                                                                                                                                                                              |                     |                                 |                                      |       |            |
| <ul style="list-style-type: none"><li>• Comprehensive explanation of the curriculum</li><li>• Daily tests</li><li>• student groups</li><li>• Field visits</li></ul>                                                                                                                                                                                                              |                     |                                 |                                      |       |            |
| 9. Course structure                                                                                                                                                                                                                                                                                                                                                              |                     |                                 |                                      |       |            |
| Evaluation Method                                                                                                                                                                                                                                                                                                                                                                | Forms of attendance | Learning method                 | the topic                            | Hours | Week       |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Use of Biomaterials</b>           | 2     | the first  |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Biomaterials in Organs</b>        | 2     | the second |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Materials for use in the Body</b> | 2     | the third  |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Selection of Biomedical</b>       | 2     | Fourth     |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Materials Evaluation</b>          | 2     | Fifth      |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Polymers</b>                      | 2     | Sixth      |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Metals</b>                        | 2     | Seventh    |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Ceramics</b>                      | 2     | Eighth     |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Biological Soft Tissue</b>        | 2     | Ninth      |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Mechanical properties of</b>      | 2     | tenth      |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Thermal Properties</b>            | 2     | eleventh   |
| Tests and                                                                                                                                                                                                                                                                                                                                                                        | classroom           | The lecture was explained using | <b>Bio-Ceramics</b>                  | 2     | twelfth    |



|                                                                |           |                                 |                                  |          |            |
|----------------------------------------------------------------|-----------|---------------------------------|----------------------------------|----------|------------|
| Tests and                                                      | classroom | The lecture was explained using | <b>Biomedical Application in</b> | <b>2</b> | thirteenth |
| Tests and                                                      | classroom | The lecture was explained using | <b>Modern Biotechnology</b>      | <b>2</b> | fourteenth |
| Tests and                                                      | classroom | The lecture was explained using | <b>Advancements in</b>           | <b>2</b> | fifteenth  |
| 10. Course evaluation                                          |           |                                 |                                  |          |            |
| Daily, monthly, and final exams, and preparing weekly reports. |           |                                 |                                  |          |            |
| 11. Learning and teaching resources                            |           |                                 |                                  |          |            |
| Textbooks                                                      |           |                                 |                                  |          |            |
| Main References                                                |           |                                 |                                  |          |            |
| Scientific research                                            |           |                                 |                                  |          |            |
| Scientific sources on the internet                             |           |                                 |                                  |          |            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Natural treatment methods                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2. Course code:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>IPT215</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3. Semester/Year:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| the first/the first                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4. Date the description was prepared:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 15/9/2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 5. Available forms of attendance:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| My attendance is weekly                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 6. Number of credit hours (total) / Number of units (total)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 45/3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 7. Name of the course coordinator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Name: Dr. Anas Abbas Hussein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| e-mail:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <a href="mailto:anas1993vi@gmail.com">anas1993vi@gmail.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 8. Course Objectives:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1- Physical therapy aims to improve an individual's ability to use prosthetic limbs efficiently and effectively in daily movement and performance.<br>2- Strengthening muscles and improving flexibility: Physical therapy includes exercises to strengthen the muscles surrounding prosthetic limbs and improve their flexibility, which facilitates movement and reduces the risk of injury.<br>3- Improving balance and motor coordination: Physical therapy includes exercises to improve an individual's balance and motor coordination using prosthetic limbs. |

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|                                                                                                                                                  |
| 9. Teaching and learning strategy:                                                                                                               |
| <ul style="list-style-type: none"> <li>• Comprehensive explanation of the curriculum</li> <li>• Daily tests</li> <li>• student groups</li> </ul> |

| 10. Course Structure                          |                                                      |                             |                            |       |            |
|-----------------------------------------------|------------------------------------------------------|-----------------------------|----------------------------|-------|------------|
| Evaluation Method                             | Teaching method                                      | Unit/Topic Name             | Required learning outcomes | Hours | Week       |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Physical Therapy Techniques | Knowledge and Application  | 3     | the first  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Muscles and Tendons         | Knowledge and Application  | 3     | the second |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Strength training exercises | Knowledge and Application  | 3     | the third  |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Stretching exercises        | Knowledge and Application  | 3     | Fourth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Balance Techniques          | Knowledge and Application  | 3     | Fifth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Pain Management             | Knowledge and Application  | 3     | Sixth      |
| Reports, theoretical,                         | Whiteboard, PowerPoint slides,                       | Massage Techniques          | Knowledge and Application  | 3     | Seventh    |

|                                               |                                                      |                                            |                           |   |            |
|-----------------------------------------------|------------------------------------------------------|--------------------------------------------|---------------------------|---|------------|
| oral, and written exams                       | practical experiments                                |                                            |                           |   |            |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | Coordination exercises                     | Knowledge and Application | 3 | Eighth     |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Psychological Adaptation Techniques</b> | Knowledge and Application | 3 | Ninth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Progress Monitoring</b>                 | Knowledge and Application | 3 | tenth      |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Prosthetic Use</b>                      | Knowledge and Application | 3 | eleventh   |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Injury Prevention</b>                   | Knowledge and Application | 3 | twelfth    |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Performance Enhancement</b>             | Knowledge and Application | 3 | thirteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Irritation Reduction Techniques</b>     | Knowledge and Application | 3 | fourteenth |
| Reports, theoretical, oral, and written exams | Whiteboard, PowerPoint slides, practical experiments | <b>Self-care instructions</b>              | Knowledge and Application | 3 | fifteenth  |

|                                                                                  |
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| <b>11. Course Evaluation</b>                                                     |
| Student reports and activities, oral and written theoretical and practical exams |

| 12. Learning and teaching resources |                                                                       |
|-------------------------------------|-----------------------------------------------------------------------|
|                                     | Required textbooks (curriculum books, if available)                   |
|                                     | Main references (sources)                                             |
|                                     | Recommended books and references (scientific journals and reports...) |
|                                     | Electronic references and websites                                    |

|                                                                                                                                                                                                                                                                                   |                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1. Course Name                                                                                                                                                                                                                                                                    |                          |
| parasites                                                                                                                                                                                                                                                                         |                          |
| 2. Course code                                                                                                                                                                                                                                                                    |                          |
| IPT116                                                                                                                                                                                                                                                                            |                          |
| 3. Class/Level                                                                                                                                                                                                                                                                    |                          |
| the second/the first                                                                                                                                                                                                                                                              |                          |
| 4. Date of preparation of description                                                                                                                                                                                                                                             |                          |
| 14/7/2025                                                                                                                                                                                                                                                                         |                          |
| 5. Available forms of attendance                                                                                                                                                                                                                                                  |                          |
| My attendance is weekly                                                                                                                                                                                                                                                           |                          |
| 6. Number of study hours (College) / Number of units (College)                                                                                                                                                                                                                    |                          |
| 45/3                                                                                                                                                                                                                                                                              |                          |
| 7. Course objectives                                                                                                                                                                                                                                                              |                          |
| <ul style="list-style-type: none"> <li>Student definition for parasites Primary (First) Diagnostic methods Ha and The diseases it causes, and knowledge of epidemiological information Her own Which helps in preventing and eradicating prevalent parasitic diseases.</li> </ul> | <b>Course objectives</b> |
| 8. Teaching and learning strategies                                                                                                                                                                                                                                               |                          |

- Comprehensive explanation of the curriculum
- Daily tests
- student groups
- Field visits

#### 9. Course structure

| Evaluation Method | Forms of attendance      | Learning method                                                        | the topic                               | Hours | Week |
|-------------------|--------------------------|------------------------------------------------------------------------|-----------------------------------------|-------|------|
| <b>Exams</b>      | classroom and laboratory | The lecture was explained using visual aids and practical application. | Introduction to Parasites               | 3     | 1    |
| <b>Exams</b>      | classroom and laboratory | The lecture was explained using visual aids and practical application. | Parasite classification                 | 3     | 2    |
| <b>Exams</b>      | classroom and laboratory | The lecture was explained using visual aids and practical application. | Host and its types                      | 3     | 3    |
| <b>Exams</b>      | classroom and laboratory | The lecture was explained using visual aids and practical application. | First classification and specifications | 3     | 4    |
| <b>Exams</b>      | classroom and laboratory | The lecture was explained using visual aids and                        | radicals                                | 3     | 5    |

|              |                          |                                                                        |                                                                       |   |    |
|--------------|--------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------|---|----|
|              |                          | practical application.                                                 |                                                                       |   |    |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Entamoeba: Form, Pathogenesis and Diagnostic Methods                  | 3 | 6  |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | flagellate                                                            | 3 | 7  |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Giardia-Trichomonas: Morphology, Pathogenesis, and Diagnostic Methods | 3 | 8  |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Leishmaniasis: Form, Pathogenesis and Diagnostic Methods              | 3 | 9  |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using visual aids and practical application. | Trypanosoma: Morphology, Pathogenesis, and Diagnostic Methods         | 3 | 10 |
| <b>Exams</b> | classroom and laboratory | The lecture was explained using                                        | Ciliates                                                              | 3 | 11 |

|                                                             |                          |                                                                        |                                                                 |   |    |
|-------------------------------------------------------------|--------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------|---|----|
|                                                             |                          | visual aids and practical application.                                 |                                                                 |   |    |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | Plantidium: Morphology, Pathogenesis and Diagnostic Methods     | 3 | 12 |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | sporozoites                                                     | 3 | 13 |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | Plasmodium: Morphology, Pathogenesis and Diagnostic Methods     | 3 | 14 |
| <b>Exams</b>                                                | classroom and laboratory | The lecture was explained using visual aids and practical application. | Toxoplasmosis: Morphology, pathogenesis, and diagnostic methods | 3 | 15 |
| 10. Course evaluation                                       |                          |                                                                        |                                                                 |   |    |
| Daily, monthly, and final exams, as well as weekly reports. |                          |                                                                        |                                                                 |   |    |
| 11. Learning and teaching resources                         |                          |                                                                        |                                                                 |   |    |
| Textbooks                                                   |                          |                                                                        |                                                                 |   |    |
| Main References                                             |                          |                                                                        |                                                                 |   |    |
| Scientific research                                         |                          |                                                                        |                                                                 |   |    |

Scientific sources on the internet