



TEHRAN UNIVERSITY  
OF  
MEDICAL SCIENCES



**Collaboration Agreement:**  
**Joint Master of Science (M.Sc.) Degree**  
**on**  
**Medical Nanotechnology**  
**(Nanomedicine)**

**between**

**University of Kufa**  
**(UOK)**

**and**

**Tehran University of Medical Sciences**  
**(TUMS)**



This collaboration agreement (hereafter "Agreement") is made effective as of the date set out in Appendix "A" (the "Effective Date") and entered into by and between:

**University of Kufa**, a national university established under the laws of the Republic of Iraq (hereinafter referred to as "**UOK**");

And

**Tehran University of Medical Sciences**, a national university established under the laws of the Islamic Republic of Iran (hereinafter referred to as "**TUMS**");

### **1. Services and Deliverables**

1.1 **TUMS** provides the services and deliverables as described in the attached Appendix "A" to fulfill requirements of the joint master program in Medical Nanotechnology as described in Appendix "B" .

1.2 By signing this document, the Parties confirm that they approve the proposed joint Master of Science program according to the present agreement and the relevant appendices and that they will comply with all the arrangements and stipulations thereof. **TUMS** shall ensure that the dedicated staffs to perform services under this agreement have the proper skills for the execution of the services under this agreement.

1.3 **UOK** will allow the use of its educational facilities (classes, lecture halls, etc.) for the educational phase of the program.

1.4 All legal approvals for implementation of this agreement in Iraq is the responsibility of **UOK**.

1.5 All legal approvals for implementation of this agreement in Iran is the responsibility of **TUMS**.



## **2. Duration**

This agreement is effective as of the commencement date set out in Appendix "A", unless earlier terminated pursuant to Section 4 hereof, shall continue until the termination date set out in Appendix "A" (the "term").

This collaboration agreement will not be activated unless being certified by the Iraqi Ministry of Higher Education and Scientific Research.

## **3. Fees**

3.1 For and in consideration of the Services and Deliverables furnished by **TUMS** to **UOK** under this agreement, **TUMS** shall receive fees set out in Appendix "A". All payments under this Agreement shall be made without deduction for free of any present or future taxes, levies, import or other duties, charges, fees deductions, withholdings, restrictions or conditions of any nature whatsoever. **TUMS** shall not be responsible for the aforementioned deductions.

3.2 In case of delayed payment, **TUMS** shall be entitled, in addition to the interest charged, to postpone its own obligations – including but not limited to the right to discontinue the program – until receipt of the payment due.

## **4. Instructors and Course Terms**

4.1 All instructors and lecturers must be familiar with Medical Nanotechnology and hold a PhD in nanotechnology-related fields. **TUMS** will be responsible to closely supervise the implementation of the program during the length of this agreement.

4.2 All courses will be taught in English and students will need to the required capabilities in understanding English (written and oral). **TUMS** will also be responsible to confirm this capability.

## **5. Intellectual Property Rights**

5.1 The parties recognize and agree that nothing contained in this agreement shall be construed as granting any property rights, by license or otherwise, or affecting any invention or any patent, copyright, trademark, or other intellectual property rights of the parties. None of the parties may use registered or non-registered logos and trademarks of the other parties for any purpose whatsoever without the prior written consent of such Party. This agreement entitles none of the parties to represent the other parties in any transaction or to act in its name for any purpose or in any way whatsoever.





5.2 All property provided to students and **UOK** staff by the Placement Provider, including but limited to manuals, by-laws, administrative guidelines, shall remain the property of the Placement Provider.

5.3 All intellectual properties created directly and independently by the students during the training program shall be owned by the **UOK**.

5.4 All intellectual properties created by the students with cooperation or under supervision of **TUMS's** staff during the program, shall be jointly owned by the **UOK**, in proportion to each Party's contribution.

## **6. Program Management and Financial Aspects**

6.1 The educational program is carried out by and supervised by **TUMS**.

6.2 The process of student selection will be supervised entirely by **TUMS**.

6.3 The financial management of the program will be carried out by **TUMS**.

6.4 All financial transactions will be duly arranged between **TUMS** and **UOK**.

## **7. Force Majeure**

7.1 If a party is prevented from or delayed in performing an obligation by force majeure, and promptly acts to mitigate or remove the force majeure and its effect, then the obligation is suspended during, but for no longer than, the period the force majeure continues and any further period that is reasonable in the circumstances.

7.2 In this agreement clause, force majeure means an event beyond the reasonable control of the affected party, which occurs without the fault or negligence of the affected party but, in the case of the Placement Provider, does not include acts or omissions of the Placement Provider's personnel or other clients.

## **8. Termination**

8.1 This Agreement shall terminate as specified in Section 2 above. Either party may terminate this Agreement at any time upon thirty (30) days' written notice to the other party.

8.2 Termination of this Agreement will not prejudice any rights or remedies already accrued to either party under, or in respect of any breach of, this agreement.





8.3 Should this Agreement expire, or be terminated for any reason UOK shall pay TUMS for all of the Services and Deliverables satisfactorily rendered and delivered by TUMS prior to termination and for all expenses reasonably and properly incurred by TUMS prior to termination.

8.4 Termination of this agreement does not preclude the Parties from engaging in other collaborations. Such collaborations will be defined and agreed upon in other agreements that will be signed by the Parties.

### **9. Amendment and Assignment**

This agreement may be amended in whole or in part only by the written consent of the parties hereto. None of the parties may assign its rights under this agreement without the prior written consent of the other parties hereto, and in any attempt to do so shall be a breach of this agreement and shall be void.

### **10. Governing Law and Dispute Resolution**

10.1 This Agreement shall be construed and interpreted according to the substantive laws of Switzerland.

10.2 All disputes arising out of or in connection with this agreement shall be submitted to arbitration according to the Rules of Arbitration of the International Chamber of Commerce (ICC). These rules shall govern the constitution of the arbitration tribunal, the arbitration procedure and the arbitration decision which shall be final and binding on the parties without further recourse to courts of ordinary jurisdiction. The arbitration procedure shall be in English.

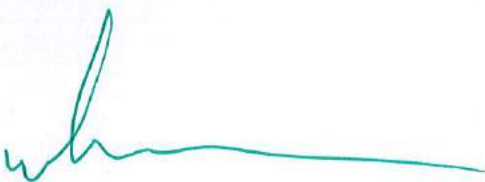
### **11. Language**


11.1 This agreement was signed in the city of \_\_\_\_\_, Republic of Iraq, on \_\_\_\_\_ corresponding to \_\_\_\_\_ pages in English.

11.2 The Parties hereto have each executed this agreement by their respective duly authorized officers

**University of Kufa**

**Tehran University of Medical  
Sciences**

0.13  
  
Prof. Muhsin Al-Dhalimi  
President

0.8.  
  
Prof. Abbasali Karimi  
President



### Appendix "A"

Master of Science Program Duration:	2-year program First year in <b>UOK</b> : Academic Education Second year in <b>TUMS</b> : Research and thesis
Effective Date	5 <sup>th</sup> May 2019
Starting Date	23 <sup>rd</sup> September 2019
End Date	23 <sup>rd</sup> December 2021
Description of Services	<ul style="list-style-type: none"> <li>• Provision of student selection process</li> <li>• Provision of theoretical training courses</li> <li>• Provision of experimental training courses</li> <li>• Assessment of trainees</li> <li>• Definition, supervision, and mentoring of thesis projects</li> </ul>
Fees	<ul style="list-style-type: none"> <li>• For the educational portion of the program (<b>first year</b>), <b>UOK</b> will pay an <i>educational fee</i> equal to one thousand US Dollars (1,000.00 USD) per every academic credit taught by the Iranian instructors. <ul style="list-style-type: none"> <li>○ Note 1: Every credit is equal to 16 credit hours plus an exam session. Every credit hour is 45 minutes long.</li> <li>○ Note 2: <b>UOK</b> will cover all visa, travel expenses for the Iranian instructors. <b>UOK</b> will also be responsible for local accommodation (including food, residence, and transportation) of the Iranian instructors during their stay in Iraq.</li> <li>○ Note 3: The residence of the Iranian instructors must be approved by a <b>TUMS</b> representative prior to the start of the program.</li> <li>○ Note 4: All educational costs related to the <b>first year</b> of the program (including but not limited to educational materials, required laboratory consumables, etc.) will be provided by <b>UOK</b>.</li> <li>○ Note 5: <b>UOK</b> will decide on the minimum number of students to commence the program.</li> </ul> </li> <li>• The tuition fee for students in the <b>second year</b> of the program is five thousand US Dollars (5,000.00 USD) which will be paid entirely and directly to <b>TUMS</b>. <ul style="list-style-type: none"> <li>○ Note 1: The tuition fee for the second year will cover the administrative and research costs (fees for purchasing material, instrumental analysis)</li> <li>○ Note 2: <b>TUMS</b> will cover all visa, travel expenses for the Iraqi faculty members related to the program. <b>TUMS</b> will also be responsible for the local accommodation (including food, residence and transportation) of the Iraqi faculty members during their stay in Iran.</li> <li>○ Note 3: <b>TUMS</b> is not responsible for the housing of the students during their stay in Iran.</li> </ul> </li> </ul>
Student Admission	<ul style="list-style-type: none"> <li>• Baccalaureate degree (B.Sc.) from a recognized institution by <b>UOK</b> in at least one of the following fields of study: medical related fields including biomedical engineering and biotechnology, chemistry and related fields, material sciences, electrical and bioelectrical engineering, food industry, agriculture, pharmacology and related fields, physics and biology. In addition, medical and veterinary doctors can also apply to this program.</li> <li>• A minimum academic Grade Point Average of 3.00/4.00 or its equivalent.</li> <li>• Evidence of English proficiency: a certificate of IELTS with a minimum band score of 5.5 or its equivalent in TOEFL iBT (minimum 69) or TOEFL PBT (minimum 525).</li> <li>• All applicants will go through screening process at <b>UOK</b> and <b>TUMS</b> before final admission.</li> </ul>
Student Assessment	<ul style="list-style-type: none"> <li>• In order, graduate, students must obtain all the required approvals from both <b>UOK</b> and <b>TUMS</b>. In the unlikely event of discrepancy, requirements set by <b>TUMS</b> are the deciding factor for graduation.</li> </ul>
Payment Terms	<ul style="list-style-type: none"> <li>• <b>First year</b>: at the end of each offered course, the <i>educational fee</i> (see Fees above) will be paid by <b>UOK</b> to the instructor of that course or the representative of <b>TUMS</b>.</li> <li>• <b>Second year</b>: student tuition fees will be paid in full to <b>TUMS</b>.</li> </ul>



**Appendix "B" : Course Details**

**Preamble**

M.Sc. of Medical Nanotechnology program is a joint degree program between Tehran University of Medical Sciences (**TUMS**) in Iran and University of Kufa (**UOK**) in Iraq. It is a two-year program containing interdisciplinary courses with total course credit of 41 (see Table 1) unit. The program has been designed with:

- Theoretical courses,
- Laboratory courses and
- M.Sc. Thesis

Every student is expected to take 27 credit hours of introductory courses, 12 credit hours of core courses, and 2 credit hours from the offered elective courses. Table 2, 3 and 4 present the title of introductory, core, and elective courses, respectively.

**Table 1: Summary of courses for M.Sc. Program in Medical Nanotechnology**

<b>Course Type</b>	<b>Credits</b>
Introductory Courses	27
Core Courses	12
Electives Courses*	12

\* In order for **TUMS** to offer any of these courses, a minimum of 6 students must be registered for that particular course.

**Table 2: Introductory Courses for M.Sc. Program in Medical Nanotechnology**

<b>Introductory Courses</b>					
<b>No</b>	<b>Course Title</b>	<b>Category</b>	<b>Credits</b>	<b>Theory Credits</b>	<b>Practical Credits</b>
1	Medical Biochemistry	Introductory	2	2	-
2	Polymer	Introductory	2	2	-
3	Biophysics	Introductory	2	2	-
4	Basics of Microbiology and Immunology	Introductory	3	3	-
5	Physiology	Introductory	2	2	-
6	Pharmacology and Toxicology	Introductory	2	2	-
7	Quantum Physics	Introductory	2	2	-
8	Molecular & Cell Biology	Introductory	2	1.5	0.5
9	Instrumental Analysis	Introductory	2	1.5	0.5
10	Introduction to Nanotechnology	Introductory	3	3	-
11	Medical Information Systems	Introductory	1	0.5	0.5
12	Chemistry	Introductory	2	2	-
13	Fundamentals of Physiopathology	Introductory	2	2	-
<b>Total Credits</b>			<b>27</b>		



Table 3: Core Courses for M.Sc. Program in Medical Nanotechnology

Core Courses					
No	Course Title	Category	Credits	Theory Credits	Practical Credits
1	Nanomaterials and Nanostructures	Core	2	2	-
2	Modeling at Nanoscale	Core	2	1	1
3	Methods of Nanostructure Fabrication	Core	2	1	1
4	Characterization and Analysis Techniques of Nanostructures	Core	2	1.5	0.5
5	Nanobiomedicine 1	Core	2	2	-
6	Nanobiotechnology	Core	2	1.5	0.5
7	Drug Delivery Systems	Core	1	1	-
8	Nanobiomedicine 2	Core	2	2	-
9	Nanosafety	Core	2	2	-
10	Business Basics in Nanotechnology	Core	2	1	1
11	Seminar	Core	1	1	-
12	Thesis	Research	6	-	-
Total Credits			12		



Table 4: Elective Courses for M.Sc. Program in Medical Nanotechnology

Elective Courses					
No	Course Title	Category	Credits	Theory Credits	Practical Credits
1	Advanced Biostatistics	Elective	2	2	-
2	Applications of Nanotechnology in Food Industries	Elective	2	2	-
3	Colloid and Interface Sciences	Elective	2	2	-
4	Fundamentals of Animal Handling	Elective	2	1	1
Total Credits			8		