



# Services proposal

List of services provided by the  
Jordanian Leather Consultation Center (INNOLEA Lab) at  
Jordan University for Science and Technology (JUST)

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**INNOLEA: Innovation for the Leather Industry in Jordan and Egypt**  
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## 1. Overview of services provided by the Jordanian Leather Consultation Center (INNOLEA Lab) at Jordan University for Science and Technology (JUST)

Jordan University for Science and Technology (JUST) has established the Jordanian Leather Consultation Center (INNOLEA Lab) in partnership with the Erasmus + Program to provide the local and regional community with the following services:

- Conducting laboratory tests for leather and leather products for factories
- Conducting laboratory tests for leather and leather products for commercial companies / importers
- Organizing training programs in the Arabic language based on the programs attended by the Leather Center employees with the European partners of the project in several areas related to tanning and examination of leather, product design and marketing, creativity management and several specialized areas related to the leather sector
- Continuous development and capacity building of leather center employees to provide guidance and consulting services in various specialized technical and administrative fields related to the leather industry and its products

Examples of priority areas:

- Design of leather products (shoes, bags) to reflect market trends
- Product development, creativity and industrial innovation
- International quality management system certificates and international conformity certificates and marks
- Specialized leather shoes (safety shoes, medical shoes etc.)
- Improving productivity and reducing costs
- Export development for priority export markets
- Industrial wastewater treatment for leather tanning operations
- Technical aspects and economic feasibility studies for investing in new industrial projects in the field of mold making and shoe soles manufacturing (will try to help as much as possible).



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## 2. Training courses that are expected to be provided by JUST

The following are the courses and the content which are expected to be provided:

### 2.1. Introduction to Leather Industry

#### Aim of this course:

Clarifying the leather processing from the hides/skin kinds, slaughter house, the different tanning stages until the finishing; making aware about the old and new techniques.

#### Course Outcomes:

The student/trainees should be able to:

Defining the difference between the skin/leather kinds.

Identifying the different leather processing stages.

Have aware about the available and the difference between the old/new tanning techniques.

#### Course content:

- 1) Raw hides and basics
- 2) Slaughterhouse processes
- 3) leather processing from tanning to finishing
- 4) Available Techniques leather tanning

### 2.2. Industrial wastewater treatment for leather tanning operations

#### Aim of this course:

Explaining the effect of the tanning industry on the environment; the effect of tanning waste water, and how to treat it.

#### Course Outcomes:

The student/trainee is expected to know the following; at the end of the course:

- 1) Defining the hazardous substances in leather training industry
- 2) Defining the chemical materials, and the acceptable dose.
- 3) Have the ability to define the techniques of water treatment and toxic waste

#### Course content:

- 1) Environmental effect of tanning industry.
- 2) Chemical materials management and acceptable dose.



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3) Sewage water treatment.

### 2.3. Physical Testing

#### Aim of the course:

Teaching the different leather physical-tests, in addition to how to operate them, with some leather testing lab according to ISO standards.

#### Course Outcomes:

The student/trainee should be able to:

- 1) Performing the leather physical testing methods.
- 2) Performing the leather chemical testing methods.
- 3) Following the international standards in performing the tests.

#### Course content:

- Physical testing methods for Leather.
- Water vapor absorption- Water vapor permeability
- Flexing Resistance test.
- Tensile Strength, stitch tear
- Chemical tests for leather

### 2.4. Innovation/ R&D

#### Aim of the course:

To make awareness about the importance of the innovation and applying the new research methodologies on solving the country problems in the leather industry and the related sectors. Aims to make the students more aware about how to use the offered service in performing the risk management.

#### Course Outcomes:

The student/trainee should be able to:

- 1) Defining the basic innovation activities/technologies that related to the leather industry.
- 2) Performing and identifying the risk management; service and reduction of risk.
- 3) Defining the different way to achieve the sustainability on research on the innovation



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## 2.5. Marketing and Business Management

### Aim of the course:

To make awareness about the importance of new leather finishing and fashion in opening new markets, make awareness on how to define the customers, modeling basic business, make knowledge on the leather clusters around the world.

### Course Outcomes:

the students should be able to:

building a business model, defining the markets, identifying the recent fashion trend on leather.

### Course Content:

- 1) Leather market analyzing.
- 2) Private funds (institutions and banks)
- 3) Marketing of the leather products.

## 3. Chemical and physical tests that can be performed by JUST

### Determination of Thickness

Determining the thickness of leather.

### Determination of tensile strength and percentage extension

Determining the tensile strength and elongation tests.

### Determination of tear load-single edge tear

Determining the tear strength of leather using a single edge tear

### Determination of tear load- Double edge tear

Determining the tear strength of leather using a double-edged tear

### Measurements of stitch tear resistance

Determining the stitch tear resistance of leather





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### Determination of flex resistance

Determining the dry flex resistance of leather.

### Determination of water vapor absorption

Determining the water vapor absorption of leather.

### Determination of water vapor permeability

Determining of water vapor permeability of leather and provides alternative methods of sample preparation.

### Lab Scale Tanning and Dyeing for Research purposes.

The Lab-scale Leather Tanning and Lab-scale Leather Dyeing.

## 4. Services delivered by JUST

JUST has performed many services:

- 1) Two different Face-to-Face trainings: one for 20 students, and one for the industry.
- 2) One Bachelor graduation project on tannery waste water, as student academic-industrial collaboration.

Maher AL Dabbag Company and Chemical Engineering Department/JUST.

- 3) One teaching course on leather industry (3 credit hours)
- 4) One online training on leather industry during 2020 ALCHE activities.

### Photos from delivering the courses:



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