

## The scientific plan of the training center and workshops 2024/2025

### Seminars and workshops scheduled to be held at the training center and workshops for the academic year 2024/2025

Venue of the meeting	Duration of the meeting	History	Type of activity	Activity name	T
Technological University / training and workshops Center	One day	2024/10/13	Workshop	Quick solutions to address the most common car breakdowns that women face when driving	-1
Technological University / training and workshops Center	One day	2024/12/03	Workshop	Reducing the phenomenon of drug abuse among young people	-2
Technological University / training and workshops Center	One day	2025/1/16	Workshop	Curriculum development workshop at the center	-3
Technological University / training and workshops	One day	2024/1/23	Symposium	The independent horizons symposium for Sustainable Systems	-4

<b>Center</b>					
<b>Technological University / training and workshops Center</b>	<b>One day</b>	<b>2025/1/30</b>	<b>Workshop</b>	<b>First aid and Civil Defense procedures</b>	<b>-5</b>
<b>Technological University / training and workshops Center</b>	<b>One day</b>	<b>2025/2/13</b>	<b>Workshop</b>	<b>Employing artificial intelligence applications in writing scientific research</b>	<b>-6</b>
<b>Technological University / training and workshops Center</b>	<b>One day</b>	<b>2025/3/5</b>	<b>Workshop</b>	<b>Fire fighting and security and safety management for laboratories and workshops</b>	<b>-7</b>
<b>Technological University / training and workshops Center</b>	<b>One day</b>	<b>2024/3/12</b>	<b>Workshop</b>	<b>Methods of scientific publication</b>	<b>-8</b>
<b>Technological University / training and workshops Center</b>	<b>One day</b>	<b>2025/3/26</b>	<b>Workshop</b>	<b>National strategy for early childhood development in Iraq</b>	<b>-9</b>

<b>Technological University / training and workshops Center</b>	<b>One day</b>	<b>2025/4/16</b>	<b>Workshop</b>	<b>The most important technical developments in automated .sensing systems</b>	<b>-10</b>
<b>Technological University / training and workshops Center</b>	<b>One day</b>	<b>2025/4/30</b>	<b>Workshop</b>	<b>Workshop on nanotechnological materials used in automotive efficiency</b>	<b>-11</b>
<b>Technological University / training and workshops Center</b>	<b>One day</b>	<b>2025/5/7</b>	<b>Workshop</b>	<b>Implementation of the national integrity and anti-corruption strategy</b>	<b>-12</b>
<b>Technological University / training and workshops Center</b>	<b>One day</b>	<b>2025/5/21</b>	<b>Workshop</b>	<b>National Suicide Prevention Strategy</b>	<b>-13</b>

### Completed research

Researcher's name	Search title	T
<b>M.Dr. Ahmed Hikmat Jassim</b> <b>M.M. Shahla Abbas Abu Al-Qasim</b> <b>M.D. Ali as Muhammad Ali</b> <b>M.M. Lutfi Ahmed Lutfi</b>	<b>Leak detection and localization in water distribution systems using advanced feature analysis and an Artificial Neural Network</b>	.1
<b>M.Dr. Ahmed Hikmat Jassim</b> <b>A.M.Dr. Salah Mahdi Saleh</b> <b>M.Dr. Kazim Hassan Ali</b>	<b>Comparative CFD Case Study on Forced Convection: Analysis of Constant vs. Variable Air Properties in Channel Flow</b>	.2
<b>Elaf Sadek Brak</b> <b>Dr.Hasnain Mohamed Hussein</b> <b>Dr. Laith Jafar Habib</b>	<b>Indoor Environments' Thermal Comfort and Mitigation of Airborne Transmission of Viruses</b>	.3
<b>Elaf Sadek Brak</b> <b>Dr.Hasnain Mohamed Hussein</b> <b>Dr. Laith Jafar Habib</b>	<b>Assessing Indoor Air Quality Indices and Airborne Contaminant Exposure in Isolation Rooms with Protected Zone Ventilation Systems: A Comprehensive Review</b>	.4
<b>Elaf Sadek Brak</b> <b>Dr.Hasnain Mohamed Hussein</b> <b>Dr. Laith Jafar Habib</b>	<b>Experimental Study for Controlling Airborne Contaminant Exposure in Iraqi Negative Pressure Isolation Rooms</b>	.5
<b>Jafar Salim</b> <b>Khaled Chahrour</b> <b>Dr. Laith Jafar Habib</b>	<b>Exploring the Impacts of System Geometry on Heat Transfer Efficiency in Coil-and-Tube Heat Exchangers</b>	.6
<b>M.M. Lutfi Ahmed Lutfi</b> <b>A.Dr. Alaa Abdul Hadi Gabr</b> <b>M.Dr. nabras Mohammed Mehdi</b> <b>M.M. Sinan Ahmed Lutfi</b> <b>M.M. Mustafa Ismail</b>	<b>Protocol for UAV Fault Diagnosis Using Signal Processing and Machine Learning</b>	.7

A. M. Kazem Rashid Kabashi Dr. Ali Bahari Dr.Sadiq Hani gesture	Nanostructural, mechanical, dielectric, and morphological measurements of (BT) BaTiO <sub>3</sub> and (BCT) BaCaTiO <sub>3</sub> for energy storage applications	.8
A. M. Kazem Rashid Kabashi Dr. Ali Bahari Dr.Sadiq Hani gesture	Multi-layer ceramics based on Ba(CaTi)O <sub>3</sub> capacitors and investigation of their temperature stability performance and characteristic	.9

### **Research planned for the academic year 2024/2025**

Name of the researcher	Search address	T
A.M.Dr. Hassanein Adnan Abdel Wahab A.Dr. Hussein Hashim Hamoud M.Dr. Ahmed Hikmat <u>Jassim</u>	Numerical Analysis of Horizontal Geothermal Heat Exchanger at Various Burial Depths for Solar PV/T Cooling in South Iraq <b>Weather</b>	1
Dr. Laith Jafar Habib Jafar Salim Khaled Chahrour	Exploring the Impacts of System Geometry on Heat Transfer Efficiency in Coil-and-Tube Heat Exchangers	2
Zahra Muhammad Jafar Nazir Bashir Mahmood Leila Ali Jafar	preparation carbon coated LiMnxFe(1-x)PO <sub>4</sub> by solid state method and characterization of their structural and electrical properties	3
M.M. Lotfi Ahmed Lotfi	Protocol for UAV Fault Diagnosis Using Signal Processing and Machine Learning	4
A. M. Kazem Rashid Kabashi Dr. Ali Bahari Dr.Sadiq Hani gesture	Nanostructural, mechanical, dielectric, and morphological measurements of (BT) BaTiO <sub>3</sub> and (BCT) BaCaTiO <sub>3</sub> for energy storage applications	5

<b>A. M. Kazem Rashid Kabashi Dr. Ali Bahari Dr.Sadiq Hani gesture</b>	<b>Multi-layer ceramics based on Ba(CaTi)O<sub>3</sub> capacitors and investigation of their temperature stability performance and characteristic</b>	<b>6</b>
<b>M. Ahmed Salman Hammoud</b>	<b>Fatigue Analysis of Polyester Composite Plate Reinforced with Carbon Fiber and Nano Silicon Dioxide</b>	<b>7</b>
<b>Dr. Laith Jafar Habib</b>	<b>EFFECT OF POWDER MIXED ELECTRIC DISCHARGE MACHINING ON PERFORMANCE OF EDM - A REVIEW</b>	<b>8</b>
<b>Dr. Laith Jafar Habib</b>	<b>EFFECT OF HYDRAULIC COMPRESSOR ROTATIONAL SPEED AND FLUID TYPE ON HYDRAULIC SYSTEM OF CYLINDER FORCE</b>	<b>9</b>
<b>Dr. Laith Jafar Habib</b>	<b>ELECTRODES TYPE EFFECTS IN COPPER TO 304 STAINLESS STEEL JOINTS HEAT DISTRIBUTION, MICROSTRUCTURES, AND MECHANICAL PROPERTIES</b>	<b>10</b>
<b>Dr. Laith Jafar Habib</b>	<b>Numerical study and experimental investigation for analyzing the kinematic and vibration of the single- cylinder engine</b>	<b>11</b>
<b>Dr. Laith Jafar Habib</b>	<b>NUMERICALLY AND EXPERIMENTALLY ENHANCEMENT OF POOL BOILING HEAT TRANSFER BY HYBRID NANOMATERIALS USING MICRO FINS</b>	<b>12</b>
<b>Dr. Laith Jafar Habib</b>	<b>OPTIMIZATION OF DIFFERENT MATERIALS DRONE BLADE USING COMPUTATIONAL FLUID DYNAMICS</b>	<b>13</b>
<b>Dr. Laith Jafar Habib</b>	<b>A numerical study of the effect of Geogrid on road way reinforced with layers of pavements</b>	<b>14</b>

<b>Dr. Laith Jafar Habib</b>	<b>NUMERICAL SIMULATION AND EXPERIMENTAL EVALUATION OF RESIDENTIAL WATER TAP INDUCTION HEATING</b>	<b>15</b>
<b>Dr. Laith Jafar Habib</b>	<b>Investigation of 304 stainless steel welding joint thermal properties effect on weld zone and HAZ corrosion resistance</b>	<b>16</b>
<b>Dr. Laith Jafar Habib</b>	<b>TECHNO-ECONOMIC ASSESSMENT OF OFFSHORE WIND ENERGY PROSPECTIVE ALONG THE LIBYAN COAST</b>	<b>17</b>
<b>Dr. Laith Jafar Habib</b>	<b>Numerical Study of a Wickless Heat Pipe for Cooling of Electronic Component</b>	<b>18</b>
<b>Dr. Laith Jafar Habib</b>	<b>Comparative Experimental and Numerical Analysis of Microstructure and Mechanical Properties in GMAW and SMAW Welded alloy Steel</b>	<b>19</b>
<b>Dr. Laith Jafar Habib</b>	<b>SOLAR AND WIND ENERGY GENERATION SYSTEMS WITH PUMPED HYDRO ENERGY STORAGE: CITY OF DERNÄ</b>	<b>20</b>
<b>Dr. Laith Jafar Habib</b>	<b>Thermal and Mechanical Analysis of Symmetric and Unsymmetrical Double V Welding Joint of Thick Steel Alloy Plates</b>	<b>21</b>
<b>Dr. Laith Jafar Habib</b>	<b>A Numerical Study of the Effect of the Angle and Diameter of the Injector In Internal Combustion Engines</b>	<b>22</b>
<b>Dr. Laith Jafar Habib</b>	<b>Airborne Contaminant Control within Negative Pressure Isolation Rooms: An Experimental Study of Protected Ventilation Systems</b>	<b>23</b>
<b>Dr. Laith Jafar Habib</b>	<b>Performance analysis of a novel design of an engine piston for a single cylinder</b>	<b>24</b>

<b>Dr. Laith Jafar Habib</b>	<b>Enhancing Fuel Characteristics for Vibration and Pollution Minimization</b>	<b>25</b>
<b>Dr. Laith Jafar Habib</b>	<b>Numerical and experimental validation of pool boiling heat transfer enhancement by Al<sub>2</sub>O<sub>3</sub> nanofluid and micro-finned surfaces</b>	<b>26</b>
<b>Dr. Laith Jafar Habib</b>	<b>Pool Boiling Heat Transfer Enhancement by multi Nanofluid and Micro-Finned Surfaces: Numerical and experimental study</b>	<b>27</b>
<b>Dr. Laith Jafar Habib</b>	<b>Comparison between nanomaterials and hybrid nanomaterials in enhancing heat transfer by micro fins in a boiling pool</b>	<b>28</b>