**Course Description Form of thermofluids 1**

|  |
| --- |
| 1. Course Name:  |
| Thermofluid 1  |
| 2. Course Code:  |
|  WBM- 41-05 |
| 3. Semester / Year:  |
|  semester 1 2024 -2025  |
| 4. Description Preparation Date:  |
| 23\9\2024 |
| 5. Available Attendance Forms:  |
| presence in the classroom  |
| 6. Number of Credit Hours (Total) / Number of Units (Total)  |
| 30 Hours / 3Units   |
| 7. Course administrator's name (mention all, if more than one name)  |
| Prof. Dr. Ghanim Kadhim Abdulsada Email: Ghanim.sada@uowa.edu.iq   |
| 8. Course Objectives  |
| **Course Objectives**  | This subject aims to provide students with knowledge of basic concepts in thermofluids and systems used in thermal science, including thermodynamic laws, processes and cycles, work and heat  |
| 9. Teaching and Learning Strategies  |
| **Strategy**  | * Using the smart board
* Use illustrative pictures whenever possible
 |
| 10. Course Structure  |
| **Week**  | **Hours**  |  **Required Learning Outcomes**  | **Unit or subject name**  | **Learning method**  | **Evaluation method**  |
| 1-2  | 3  | Basic Fluid and Thermodynamics Properties State and unit  ;   |  Thermofliid fundamental  | Lectures presented i PDF forma | Daily exams + homework t assignments + monthly exams  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |    |  |  |  |
| 3  | 3  | Fluid static  |  Thermofluid fundamental  | Lectures presented in PDF format  | Daily exams homework assignments monthly exam |
| 4 -5  | 3  | Pressure head measurment ;   |  Thermofluid fundamental  | Lectures presented in PDF format  | Daily exams homework assignments monthly exam |
| 6-7  | 3  |   Fluid flow and flow pattern ;  | Thermofluid fundamental   | Lectures presented in PDF format  | Daily exams homework assignments monthly exam |
| 8  | 3  | Newton law of viscosity    | Thermofluid  fundamental   | Lectures presented in PDF format  | Daily exams homework assignments monthly  |
| 9 -10  | 3  | Continuity Equation And energy relationships ;  |  | Lectures presented in PDF format  | Daily exams homework assignments monthly  |
|  | Thermofluid |    |
| fundamental |
|  |   |
|   |
| 11 -12  | 3  | Bernoulli equation Pressure drop in pipe   | Thermofluid fundamental  | Lectures presented in PDF format  | Daily exams homework assignments monthly  |
| 13  | 3  | Reynold number And friction factor   | thermofluid  | Lectures presented in PDF format  | Daily exams homework assignments monthly  |
| 14 -15  | 3  |  Flow measurement and boundary layer  |  Thermofluid fundamental  | Lectures presented in PDF format  | Daily exams homework assignments monthly  |
|   |   |   |  |   |   |
|   |   |   |  |   |   |
|   |   |   |  |   |   |
|   |   |   |   |   |   |
| 11. Course Evaluation  |
|  Daily exams scientific questions.  Establishing grades for environmental duties and the reports assigned to them  Semester exams for the curriculum, in addition to the mid-year exam and final exam Lab exam  |
| 12. Learning and Teaching Resources  |

|  |
| --- |
|  Fundamental of Thermal fluid Science By Cengel Y. A. , Turner R.H. and cimbala J .  |
|   |

p