



الجمهورية الجزائرية الديمقراطية الشعبية  
République Algérienne Démocratique et Populaire  
وزارة التعليم العالي والبحث العلمي  
Ministère de l'Enseignement Supérieur et de la Recherche Scientifique  
اللجنة البيداغوجية الوطنية لميدان العلوم والتكنولوجيا  
Comité Pédagogique National du domaine Sciences et Technologies



# **ACADEMIC MASTER'S** **HARMONIZES**

## **National program**

**Updated 2022**

Domain	Sector	Speciality
<i>Science and Technology</i>	<i>Mechanical Engineering</i>	<i>Energetics</i>



الجمهورية الجزائرية الديمقراطية الشعبية  
République Algérienne Démocratique et Populaire  
وزارة التعليم العالي والبحث العلمي  
Ministère de l'Enseignement Supérieur et de la Recherche Scientifique  
اللجنة البيداغوجية الوطنية لميدان العلوم والتكنولوجيا  
Comité Pédagogique National du domaine Sciences et Technologies



## ماستر أكاديمي مواعمة

### برنامج وطني

تحيين 2022

الميدان	الفرع	التخصص
علوم وتكنولوجيا	هندسة ميكانيكية	طاقوية

**I – Master's identity card**

### Access conditions

*(Indicate the bachelor's degree specializations that can provide access to the Master's degree)*

Sector	Harmonized master's degree	Bachelor's degrees leading to a master's degree	Ranking by license compatibility	Coefficient assigned to the license
<b>Mechanical Engineering</b>	<b>Energetics</b>	Energetics	<b>1</b>	<b>1.00</b>
		Aeronautics	<b>2</b>	<b>0.80</b>
		Mechanical Construction	<b>2</b>	<b>0.80</b>
		Process Engineering	<b>3</b>	<b>0.70</b>
		Other ST licenses	<b>4</b>	<b>0.60</b>

II – Semester organization sheets for lessons  
of specialty

Semester 1

Teaching Unit	Subjects	Credits	Coefficient	Weekly Hours			Semester Hourly volume (15 weeks)	Additional Work in Consultation (15 weeks)	Evaluation	
	the title			Course	TD	TP			Continuous Control	Exam
Core Unit Code : UEF 1.1.1 Credits : 8 Coefficients : 4	Advanced Fluid Mechanics	4	2	1h30	1h30		45h00	55h00	40%	60%
	Thermal Machines	4	2	1h30	1h30		45h00	55h00	40%	60%
Core Unit Code : UEF 1.1.2 Credits : 10 Coefficients : 5	Advanced Heat and Mass Transfer	6	3	3h00	1h30		67h30	82h30	40%	60%
	Advanced Numerical Methods	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological TU Code : UEM 1.1 Credits : 9 Coefficients : 5	Instrumentation and Measurements	4	2	1h30		1h30	45h00	55h00	40%	60%
	TP Numerical Methods	2	1			1h30	22h30	27h30	100%	
	TP Thermal Machines	2	1			1h30	22h30	27h30	100%	
	TP Fluid Mechanics	1	1			1h00	15h00	10h00	100%	
Discovery TU Code : UED 1.1 Credits : 2 Coefficients : 2	Elective Subject 1	1	1	1h30			22h30	02h30		100%
	Elective Subject 2	1	1	1h30			22h30	02h30		100%
Transversal TU Code : UET 1.1 Credits : 1 Coefficients : 1	Technical English and Terminology	1	1	1h30			22h30	02h30		100%
<b>Total semester 1</b>		<b>30</b>	<b>17</b>	<b>13h30</b>	<b>6h00</b>	<b>5h30</b>	<b>375h00</b>	<b>375h00</b>		

Semester 2

Teaching Unit	Subjects	Credits	Coefficient	Weekly Hours			Semester Hourly volume (15 weeks)	Additional Work in Consultation (15 weeks)	Evaluation	
	The title			Course	TD	TP			Continuous Control	Exam
Core Unit Code : UEF 1.2.1 Credits : 10 Coefficients : 5	Combustion	4	2	1h30	1h30		45h00	55h00	40%	60%
	Gas Dynamics	4	2	1h30	1h30		45h00	55h00	40%	60%
	Thermal Drying	2	1	1h30			22h30	27h30		100%
Core Unit Code : UEF 1.2.2 Credits : 8 Coefficients : 4	Heating and Air Conditioning	4	2	1h30	1h30		45h00	55h00	40%	60%
	Advanced Turbomachines	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological TU Code : UEM 1.2 Credits : 9 Coefficients : 5	Finite Volume Methods	6	3	1h30		3h00	67h30	82h30	40%	60%
	Control and Regulation	3	2	1h30		1h00	37h30	37h30	40%	60%
Discovery TU Code : UED 1.2 Credits : 2 Coefficients : 2	Elective Subject 1	1	1	1h30			22h30	02h30		100%
	Elective Subject 2	1	1	1h30			22h30	02h30		100%
Transversal TU Code : UET 1.2 Credits : 1 Coefficients : 1	Ethics & Standards Compliance	1	1	1h30			22h30	02h30		100%
<b>Total semester 2</b>		<b>30</b>	<b>17</b>	<b>15h00</b>	<b>6h00</b>	<b>4h00</b>	<b>375h00</b>	<b>375h00</b>		

## Semester 3

Teaching Unit	Subjects	Credits	Coefficient	Weekly Hours			Semester Hourly volume (15 weeks)	Additional Work in Consultation (15 weeks)	Evaluation	
	The title			Course	TD	TP			Continuous Control	Exam
Core Unit Code : UEF 2.1.1 Crédits : 8 Coefficients : 4	Advanced Internal Combustion Engines	4	2	1h30	1h30		45h00	55h00	40%	60%
	Cryogenics	4	2	1h30	1h30		45h00	55h00	40%	60%
Core Unit Code : UEF 2.1.2 Crédits : 10 Coefficients : 5	Propulsion Mechanics	6	3	3h00	1h30		67h30	82h30	40%	60%
	Heat Exchangers	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological TU Code : UEM 2.1 Crédits : 9 Coefficients : 5	CFD and Simulation Software	4	2			3h00	45h00	55h00	100%	
	Optimization	3	2	1h30		1h00	37h30	37h30	40%	60%
	Heat Exchanger Lab	2	1			1h30	22h30	27h30	100%	
Discovery TU Code : UED 2.1 Crédits : 2 Coefficients : 2	Elective Subject 1	1	1	1h30			22h30	02h30		100%
	Elective Subject 2	1	1	1h30			22h30	02h30		100%
Transversal TU Code : UET 2.1 Crédits : 1 Coefficients : 1	Research & Thesis Writing	1	1	1h30			22h30	02h30		100%
<b>Total semester 3</b>		<b>30</b>	<b>17</b>	<b>13h30</b>	<b>6h00</b>	<b>5h30</b>	<b>375h00</b>	<b>375h00</b>		

