المدرسة الوطنية للمهندسين بسوسة
École Nationale d'Ingénieurs de Sousse

Engineering Programs

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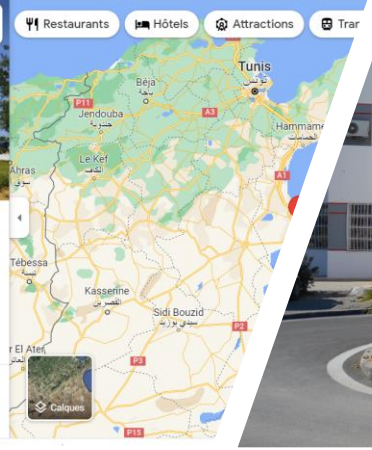
D.M.A
Département Mécanique Avancée
قسم الميكانيك المتقدمة



Ecole Nationale des Ingénieurs de Sousse

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Université

Présentation Avis

Itinéraires Enregistrer À proximité Envoyer vers un téléphone Partager

L'ENISO

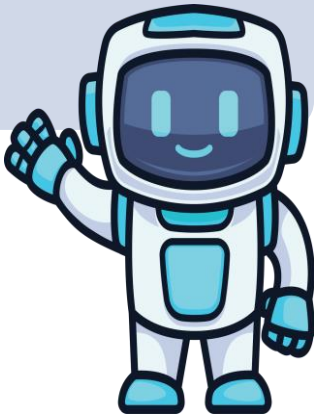
Common Competencies - All ENISo Engineering Graduates

1. **Lead complex technical projects** by integrating economic, human, organizational, societal, and environmental dimensions.
2. **Communicate effectively** both orally and in writing, in French and English, with diverse audiences (technical and non-technical).
3. **Work in multidisciplinary teams and intercultural contexts** with autonomy, critical thinking, ethics, and responsibility.
4. **Adapt to innovation and technological changes**: learn how to learn and continuously update scientific, technical, and digital skills.
5. **Apply corporate social responsibility (CSR) and sustainable development principles** across the lifecycle of a product, project, or process.
6. **Develop and promote soft skills** such as leadership, initiative, time management, critical thinking, and creativity.

Mechatronics Engineering - Objective

High-level program combining mechanics, electronics, and computer science.

Trains versatile engineers for Industry 4/5.0, robotics, automotive and aeronautics.



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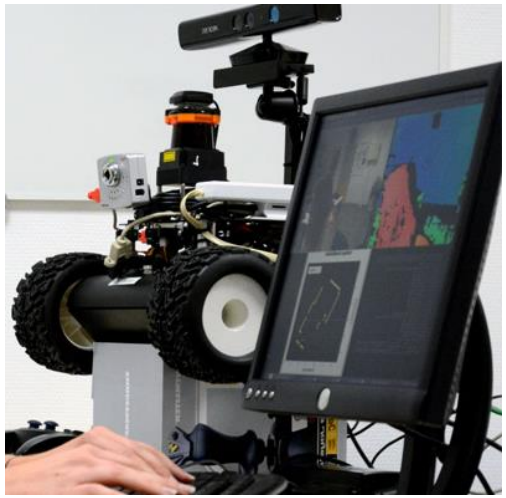
Specific Competencies – Mechatronics Engineering (MECA)

DESIGN AND DEVELOP INNOVATIVE MECHATRONIC SYSTEMS, INTEGRATING MECHANICAL, ELECTRONIC, AND EMBEDDED COMPUTING COMPONENTS.

IMPROVE OR ADAPT EXISTING SYSTEMS IN RESPONSE TO INDUSTRIAL, COMMERCIAL, ERGONOMIC, OR ENVIRONMENTAL CONSTRAINTS.

ANALYZE THE TECHNICAL AND ECONOMIC FEASIBILITY OF A MECHATRONIC PROJECT AND PROPOSE REALISTIC TECHNICAL SOLUTIONS.



APPLY SYSTEMS ENGINEERING METHODS, MODELING, AND SIMULATION FOR DESIGN, VALIDATION, AND PROTOTYPING.

CONDUCT TESTS, INTERPRET RESULTS, AND PROPOSE ADJUSTMENTS TO ENSURE SYSTEM PERFORMANCE AND COMPLIANCE.

OVERSEE IMPLEMENTATION, INTEGRATION, AND MONITORING OF MECHATRONIC PROJECTS IN INDUSTRIAL ENVIRONMENTS.

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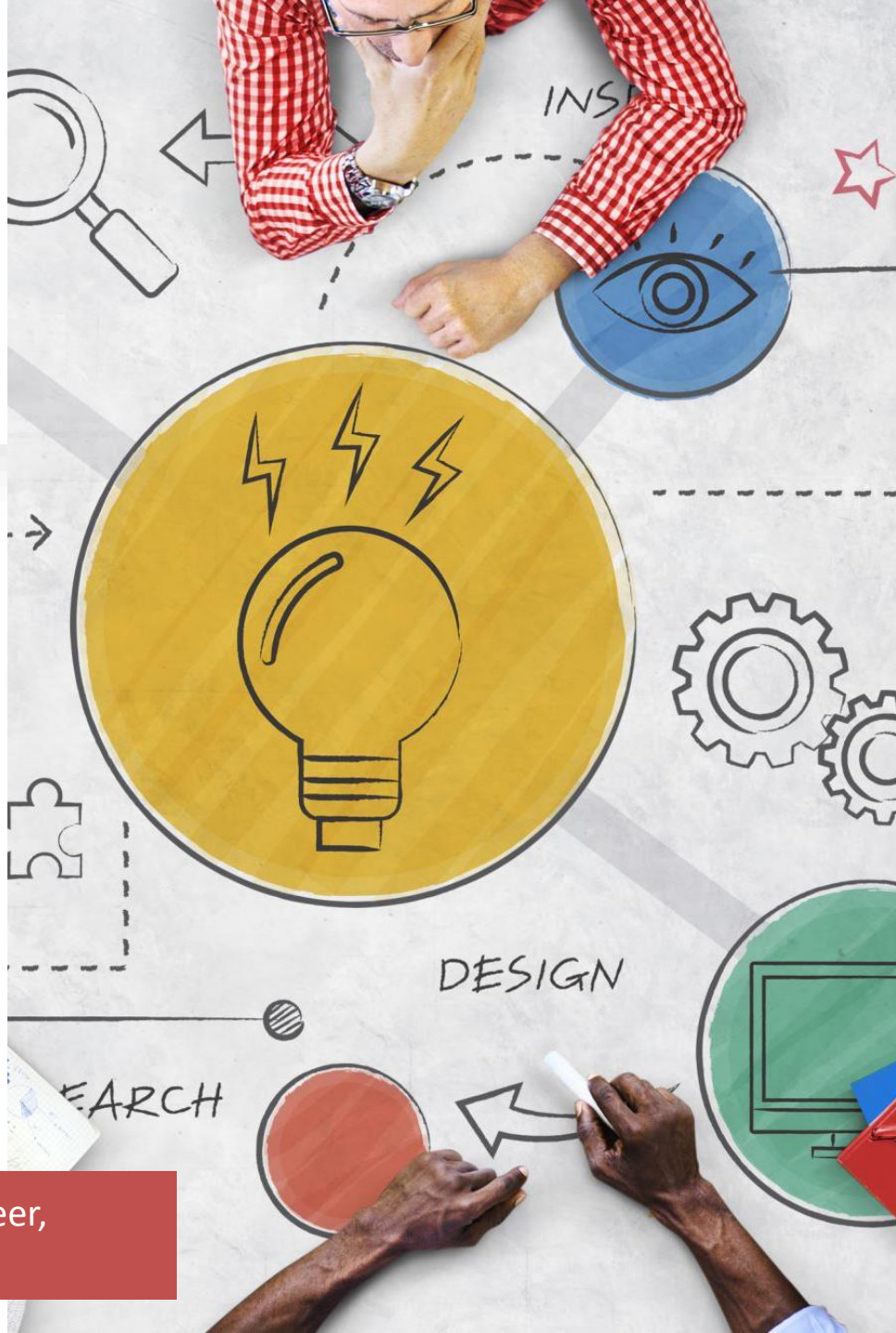
Mechatronics Engineering - Skills

- Creative and innovative mindset
- Engineering skills: theoretical and practical
- System design and development
- CAD/CAM, simulation, finite element tools
- Teamwork and communication
- Project and quality management
- Autonomy and problem-solving



Job Roles: Mechatronic Engineer, Automation Engineer, Mechanical Engineer, R&D Specialist, Consultant

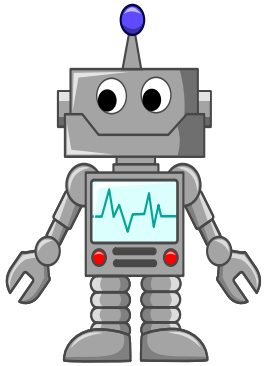
Mechatronics - Sectors & Partners

Sectors: Robotics, Aerospace, Automotive, Smart Manufacturing, R&D, Consulting

Partners:

- SIGMA Clermont – Co-diploma
- POLYTECH Nancy – Co-diploma
- ESIGELEC – Exchange program
- ENSIBS – Co-diploma

Mechatronics - Careers & Training Hours



Training Hours Distribution:

- Mechanics: 39%
- Electrical & Electronics: 15%
- Computer Science: 16%
- Transversal Subjects: 15%
- Final Year Project: 15%

Curricula 2 -Mechanical & Production Engineering

Objective

Training in mechanical design and industrial production management.

Focus on quality, safety, sustainability and use of modern technologies.

Specific Competencies - Mechanical & Production Engineering

Design industrial products and manufacturing processes using a structured approach to innovation and project management.

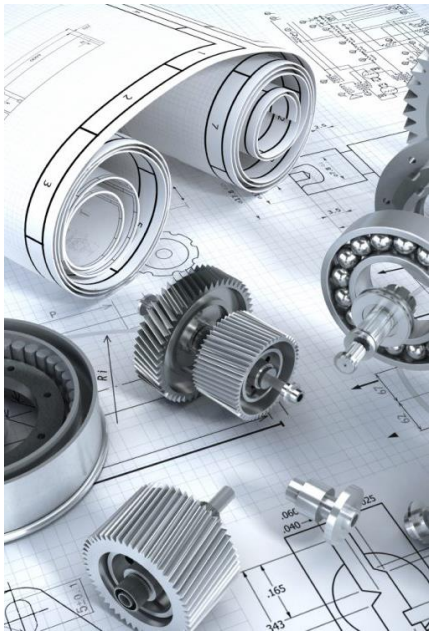
Apply industrialization tools: selection of materials, manufacturing processes, tooling, and layout of production systems.

Manage smart production systems, optimize flows (Lean, 5S, TPM...), and integrate digital industrial solutions (Industry 4.0).

Ensure product quality, safety, traceability, and environmental compliance throughout the production cycle.

Lead technical teams in constrained environments, incorporating human and societal considerations.

Monitor scientific and technological developments to continuously improve processes and products.



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Mechanical & Production - Skills

- Mechanical design and validation
- Production and process optimization
- Materials and manufacturing techniques
- Preventive maintenance planning
- Quality, safety, and environmental compliance
- CAD/CAM, simulation tools
- Lean manufacturing, continuous improvement
- Project and team management
- Adaptability to technology

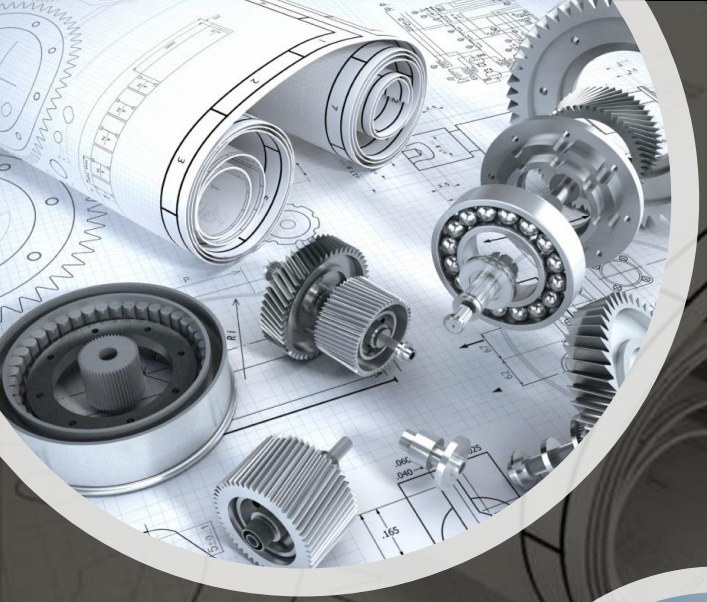
Job Roles: Mechanical Engineer, Production Manager, Project Leader, Consultant

Mechanical & Production - Sectors & Partners

Sectors: Automotive, Aerospace, Naval, Appliances, Manufacturing, Consulting

Partners:

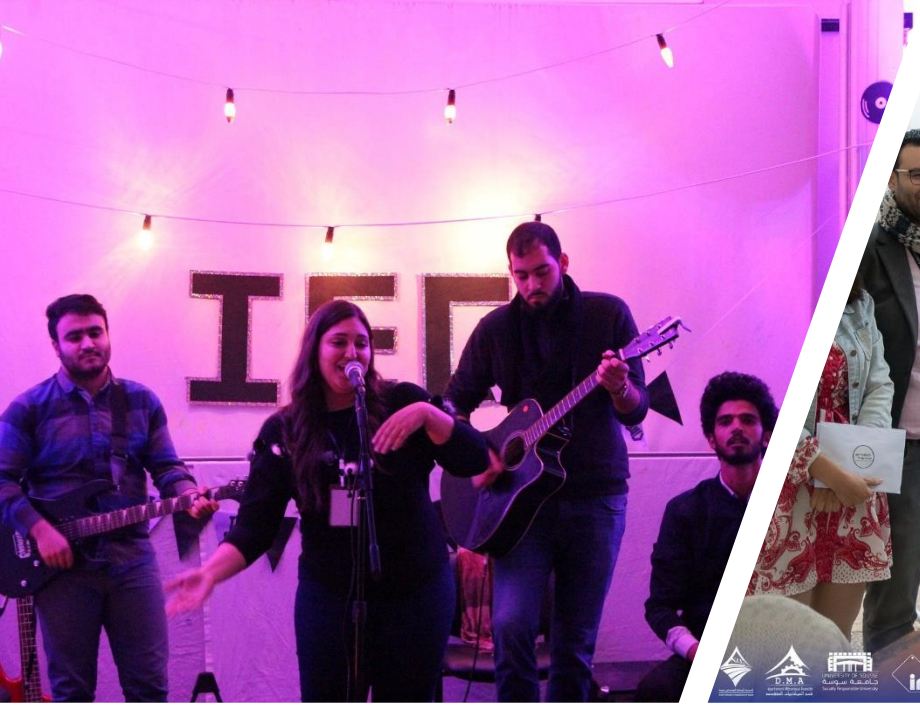
- SIGMA Clermont – Co-diploma
- POLYTECH Nancy – Co-diploma
- ESIGELEC – Exchange program
- ENSIBS – Co-diploma



Mechanical & Production - Careers & Training Hours

Training Hours Distribution:

- Mechanics: 22%
- Production & Manufacturing: 20%
- Materials: 12%
- Computer Science: 13%
- Transversal : 18%
- Final Year Project: 15%

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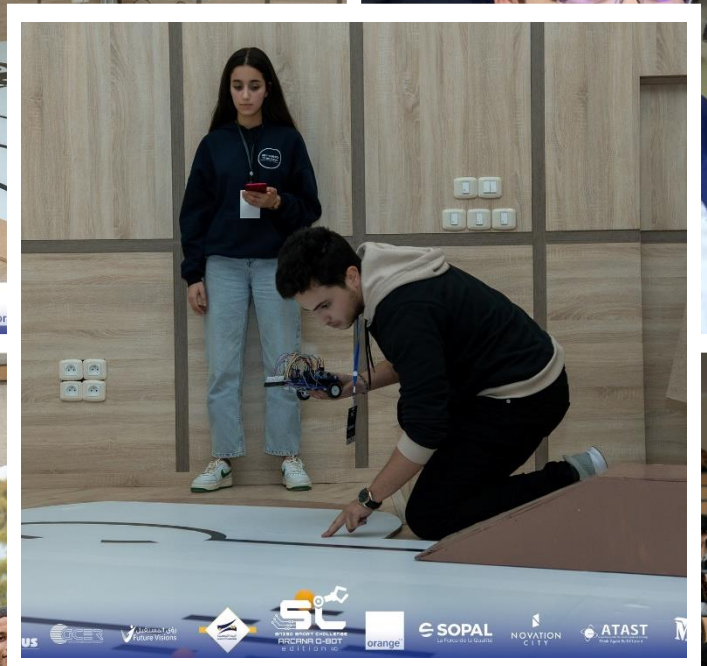
orange
SOPAL
NOVATION CITY


Projet financé par
l'Union européenne
ANPR


QUANTUM-ODYSSEY
LINE FOLLOWER

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Merci

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