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| **Identity card of the specialty**Academic License: Automatic |

**Level :**Academic license

**Domain :**Science and Technology

**Sector :**Automatique

**Speciality :**Automatique

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| **1- Location of the training:** |

**Faculty (or Institute)**:TECHNOLOGY

**Department**:Electrical Engineering.

References of the enabling order: Order no. 703 of 08/05/2015.

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| **2- External partners:** |

**Companies and other socio-economic partners**:/

**International partners**:/

**Other partner establishments**: Sonelgaz of the production SPE Bechar/Ghardaïa, Sonelgaz distribution Bechar, Sonelgaz of the Transport of electrical energy THT/HT GRTE Bechar /Oran, Algérie Telecom, NAFTAL (GPL, CPL) Bechar, GICA Saoura Bechar

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| **3- General organization of the training: position of the project** |



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| **4- Context of the training:** |

Control is defined as the science of analysis and control of dynamic systems. It is a constantly evolving discipline located at the border of many disciplines which give it great importance in terms of applications.

In effect,modern industry abounds with industrial automatisms that call upon a wide variety of technologies: pneumatics, electromechanical, electronics, electrical engineering, IT, and others. This is why industrial companies expect from the university the training of specialists, with a multidisciplinary profile and mastering the tools of computer science and industrial control, to put their skills and know-how to the benefit of these sectors. They will then contribute to the efficiency of the company by providing adequate information for the right decision.

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| **5- Objectives of the training:** |

In this regard, this course in Automation aims to respond exactly to the concerns of industrial partners. Its program is designed with the aim of providing students with a diploma and effective training aimed at their smooth integration into the professional sector.

This training, which lasts three years, is of the academic type. It relies heavily on mathematics, physics, electronics, automation and computer science. It is structured in 6 semesters, the first two of which (common base) are reserved for basic subjects (mathematics, physics, chemistry and computer science). From the third semester, the lessons become more and more specialized. Istudent receivesbasic knowledge in the field of automation by mastering the most widespread control and automation techniques in the various industrial sectors and which can be summarized in three missions: control and monitoring of production systems, maintenance of installations, process automation (numerical control by programmable logic controllers).

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| **6- Profiles and skills targeted:** |

The primary purpose of the proposed license is to prepare the student for longer studies (Master, Doctorate). In addition, the proposed course offers the possibility to students, in difficulty to pursue Master's studies, to quickly integrate into working life at the end of this training.

They will then be able to act in very varied fields of industry as technical managers for the engineering and industrial maintenance departments of medium or large-scale companies.

Trained students will thus be able to understand a medium-sized automatism, to model the control system, to choose the appropriate technologies, to implement classical numerical control algorithms, this in conjunction with (or possibly under the supervision of a) a designer intervening at a higher level in the management of the workshop or production unit.

More concretely, the knowledge acquired by these young executives will enable thembasicallyof :

* Integrate effectively into an automation team,
* Conduct studies, install, operate and troubleshoot industrial facilities.
* Know how to evaluate the performance of a system.
* Propose and detail the solutions envisaged in collaboration with the engineers.
* Assist in the definition of specifications for a project.
* Provide project management.
* Take into account the socio-economic environment of the company by integrating safety and quality aspects.
* help inidentification of needs for restructuring the company's control and command processes

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| **7- Local, regional and national employability potential:** |

Remarkable evolution of automated industries in recent years is driving increased demand for executivesin Automatic.Skillsin this domainare in demand in all branches of industry, regardless of the particular technologies that can be found there. We can cite among others:

* Industrieschemicals, petrochemicals.
* Industries ofsteel industry andmetallurgy.
* Industries ofmechanical and automobile constructions.
* Industrieshydraulics anddesalination of sea water.
* Processing, textile and manufacturing industries.
* Agrifoods industries.
* Pharmaceutical industries.
* Building materials industries.
* Sectorproduction and distribution of'electric energy.
* Sectorrenewable energies.