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| **1- Identification of the Education Offer** |

***Level* :** **Licence (Bachelor)**

***Field :* Science and Technology**

***Branch* : Civil Engineering**

***Speciality* : Works supervision in buildings and public works**

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| **2- Educational Establishment :** |

***Faculty/Institute:* Institute of Applied Sciences and Technology**

***Department:* Science Department**

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| **3- External partners** |

***Algerian Academic partners:***

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

* SEROR : Société d’Etude et Réalisation des Ouvrages d’Art de l’Ouest
* SOGERHWIT : Société Générale d’Etude et Réalisation Hydraulique de Tlemcen
* STARR : Entreprise des Travaux Publics
* LTPO : Laboratoire des Travaux Publics de l’Ouest
* LAB Analyse & Engineering Lae
* MHT Makteb EL Handassa Tlemcen
* Groupe Dennouni
* Union Générale des Entrepreneurs Algériens UGEA

***International partners :* Associaotion of University Institute of Technology’s Directors (ADUIT) France**

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

The main aim of this degree is to train multi-skilled intermediate level executives in the building and public works sector to work as site supervisors on building and public works projects. They will be able to manage the financial aspects of construction and/or refurbishment projects, oversee the progress of works, implement low-energy consumption buildings and contribute to the management of a company.

This professional degree has been jointly developed with partners in the construction and public works sector. It provides a more comprehensive response to local and national needs in terms of skilled jobs, particularly for site managers in the building and public works sector.

This 3-year higher education training is based on sufficient fundamental scientific content and technical and technological practices adapted to the building and public works trades.

Learning through projects and experimentation, thanks to practical work in laboratories, cross-disciplinary projects, tutored projects in workshops and work placements in companies, helps to ensure that students find employment more quickly and effectively.

Finally, particular attention is paid to learning foreign languages (French and English) to improve communication in the workplace.

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| **5- Facilities, Equipment and Laboratoires** |

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| **No.** | Designation | **U** | **Qty** |
| **Materials Resistance Laboratory "RDM"** |
| **1** | **Didactic bench on the deformation of tensile beams,****Single or combined bending or twisting. With accessories** | **U** | **1** |
| **2** | **A didactic bench for bending beams that allows the study of bends and forces (beams with simple, continuous, recessed or elastic supports). With accessories** | **U** | **1** |
| **3** | **Universal 20 KN testing machine with accessories.** | **In the** | **1** |
| **4** | **Beam buckling apparatus with accessories.** | **In the** | **1** |
| **Building Materials Laboratory "MDC"** |
| **1** | **Concrete compression machine capacity 2000 KN + accessories** | **In the** | **1** |
| **2** | **Vertical axis concrete laboratory mixer with mixing capacity from 80L to 120L+accessories+molds (x10) made of steel****cylindrical D16 and prismatic 10x10x40 cm** | **In the** | **1** |
| **3** | **Equipment for tests on fresh concrete: (01 Abrahams cone, 01 L-box, 01 impact table, 01 5l concrete aerometer, 01 diam vibrating needle 2.5cm, 01 joisel apparatus** | **In the** | **1** |
| **4** | **Equipment for testing on hardened concrete: d16 surfacing (sulfur), thermostatic bath, 1 sclerometer and 1 ultrasound)** | **In the** | **1** |
| **5** | **Mixer (5l) with variable speeds for mortar + accessories + 10 steel molds with 3 flaps 4x4x16 cm + standard impact table + accessories + Retractometer with comparator 12mm/0.001mm** | **In the** | **1** |
| **6** | **Sieve sieve Ø 250 mm with the corresponding set of sieves for standard openings. (sand and gravel)** | **In the** | **1** |
| **7** | **Equipment for testing on binders, ((01) manual Vicat apparatus with accessories, + small equipment for the determination of apparent density (01) and absolute density (02 pichnometer + 02 Lechatelier volumeometer) + 01 Manual penetrometer at****bitumen** | **U** | **1** |
| **8** | **Equipment for testing on sand and gravel: 01 Sand Equivalent apparatus with shaking machine + small equipment for the determination of the apparent density and****absolute.** | **In the** | **1** |
| **9** | **Mechanical (01) and electronic (01) capacity scales****up to 15 kg** | **In the** | **2** |

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| **6- Profiles and Competencies Targeted** |

Responsible for the construction site, the site supervisor organises, plans, controls and ensures that deadlines are met. Their duties vary according to the size of the company. Generally speaking, they oversee the site from A to Z. After examining the architect's plans and the design office's working drawings, he assesses and recruits the staff required. He chooses the materials and subcontractors needed to build the site. They are in constant contact with their deputy, the site manager, as well as with the customer, the architect, the accounts department, suppliers, etc. They are not afraid to lead a team, and have a strong sense of responsibility and interpersonal skills.

This training facilitates rapid professional integration in the civil engineering employment sector. This type of profile is highly sought after for positions as site supervisors or coordinators in building and/or public works.

The main technical and organisational skills targeted by this course are as follows:

- Project management and project implementation,

- A sound knowledge of the administrative procedures involved in building work

- Understanding the environmental issues involved in building

- Knowledge of the procedures involved in setting up a company

- respond to invitations to tender and cost out technical studies

- Preparing a site, allocating material and labour resources

- Coordinate and plan the work of the various people involved in the project

- Checking and monitoring the execution of work

- Monitor site budgets

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| **7- Development Prospects and Employability** |

This training targets two main areas of activity:

- Carrying out construction work in buildings

- Carrying out construction work in public works

Construction and public works are closely linked to the country's economic health. The sector responds to the immense needs expressed by the population: housing, offices, factories, but also roads, tunnels, urban development, equipment, etc.

What's more, the building and public works sector calls on a very wide range of trades, from bricklayers to plumbers, electricians, joiners and painters. Labour requirements for all the building and public works trades are growing.

 Under the President's five-year programme, the building and public works sector has a huge need for skilled workers, particularly site supervisors.

The additional 01 million housing units programme, the East-West motorway in the high plateaux and the LGV high-speed rail line project all represent major regional and national potential for employability in the civil engineering sector.

This training is designed to enable graduates to enter the job market more quickly and to better meet the needs of the civil engineering sector.

The diversity of activities in this sector requires them to perform multiple tasks

- In a design office, following engineers' instructions, they draw up plans, specifications, programmes and calculations, both for the design and preparation of works.

- On construction sites, they are responsible for execution: managing the work, coordinating the various trades, etc.

- In test or research laboratories, they are responsible for organising, carrying out and analysing test and analysis programmes.

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| **8- Organisation of the Semesters Teaching** |

**Semester 1**

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| --- | --- | --- | --- | --- |
| **Teaching units and subjects** | **WW** | **Weekly Workload** | **Coef** | **Credits** |
| **14-16 Weeks** | **L** | **T** | **PW** | **Others** |
| ***Fundamental Teaching Units : FTU 1*** |  |  |  |  |  |  |  |
| Mathematics | **45** | 21 | 24 |  |  | 5 | 5 |
| Strength of Materials 1 | **45** | 18 | 18 | 9 |  | 4 | 4 |
| Applied geology | **45** | 24 | 12 | 9 |  | 4 | 4 |
| ***Methodological Teaching Units : MTU 1*** |  |  |  |  |  |  |  |
| Technical Drawing Applied to Construction and Public Works | **45** |  |  | 45 |  | 4 | 4 |
| Topography | **45** | 21 | 12 | 12 |  | 5 | 5 |
| Workshop 1: Tutored projects | **60** |  |  |  | 60 | 4 | 4 |
| ***Discovery Teaching Units : DTU 1*** |  |  |  |  |  |  |  |
| **University work methods** | **24** | 15 | 9 |  |  | 1 | 1 |
| ***Transversal Teaching Units : TTU 1*** |  |  |  |  |  |  |  |
| Expression and communication 1 | **30** |  | 21 | 9 |  | 2 | 2 |
| English 1 | **21** |  | 12 | 9 |  | 1 | 1 |
| **Total** | **360** | **99** | **108** | **93** | **60** |  | **30** |

**Semester 2 :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Teaching units and subjects** | **WW** | **Weekly Workload** | **Coef** | **Crédits** |
| **14-16 Weeks** | **L** | **T** | **PW** | **Others** |
| ***Fundamental Teaching Units : FTU 2*** |  |  |  |  |  |  |  |
| Resistance of Materials 2 | **39** | 15 | 15 | 9 |  | 5 | 5 |
| Building Materials 1 | **39** | 24 |  | 15 |  | 5 | 5 |
| Applied geotechnics | **36** | 18 | 9 | 9 |  | 4 | 4 |
| **Methodological Teaching Units : MTU 2** |  |  |  |  |  |  |  |
| Building drawings | **42** |  |  | 42 |  | 5 | 5 |
| Quantity surveys and cost estimates | **42** |  | 42 |  |  | 4 | 4 |
| Workshop 2: work placement 1 (2 to 4 weeks) | **100** |  |  |  | 100 | 4 | 4 |
| ***Discovery Teaching Units : DTU 2*** |  |  |  |  |  |  |  |
| **Personal and professional project** | **21** |  | 21 |  |  |  | 1 |
| ***Transversal Teaching Units : TTU 2*** |  |  |  |  |  |  |  |
| Expression and communication 2 | **21** |  | 12 | 9 |  |  | 1 |
| English 2 | **21** |  | 12 | 9 |  |  | 1 |
| **Total** | **361** | **57** | **111** | **93** | **100** |  | **30** |

**Semester 3 :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Teaching units and subjects** | **WW** | **Weekly Workload** | **Coef** | **Credits** |
| **14-16 Weeks** | **L** | **T** | **PW** | **Others** |
| ***Fundamental Teaching Units : FTU 3*** |  |  |  |  |  |  |  |
| Building structures | **45** | 18 | 18 | 9 |  | 5 | 5 |
| Building Materials 2 | **45** | 21 | 9 | 15 |  | 4 | 4 |
| Roads and pavements | **45** | 21 | 15 | 9 |  | 4 | 4 |
| ***Methodological Teaching Units : MTU 3*** |  |  |  |  |  |  |  |
| Public Works Drawing | **45** |  |  | 45 |  | 4 | 4 |
| Project planning | **45** |  | 15 | 30 |  | 5 | 5 |
| Workshop 3: tutored projects | **60** |  |  |  | 60 | 4 | 4 |
| ***Discovery Teaching Units : DTU 3*** |  |  |  |  |  |  |  |
| **Construction and its environment** | **33** | 21 |  | 12 |  | 2 | 2 |
| ***Transversal Teaching Units : TTU 3*** |  |  |  |  |  |  |  |
| Expression and communication 3 | **21** |  | 12 | 9 |  | 1 | 1 |
| English language 3 | **21** |  | 12 | 9 |  | 1 | 1 |
| **Total** | **360** | **81** | **81** | **138** | **60** |  | **30** |

**Semester 4 :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Teaching units and subjects** | **WW** | **Weekly Workload** | **Coef** | **Credits** |
| **14-16 Weeks** | **L** | **T** | **PW** | **Others** |  |  |
| ***Fundamental Teaching Units : FTU 4*** |  |  |  |  |  |  |  |
| Engineering structures | **33** | 15 | 12 | 6 |  | 5 | 5 |
| Roads and other networks | **33** | 15 | 12 | 6 |  | 5 | 5 |
| ***Methodological Teaching Units : MTU 4*** |  |  |  |  |  |  |  |
| Installation and site management : | **36** |  | 12 | 24 |  | 6 | 6 |
| Public works | **200** |  |  |  | 200 | 8 | 8 |
| ***Discovery Teaching Units : DTU 4*** |  |  |  |  |  |  |  |
| **Health and Safety** | **24** | 15 |  | 9 |  | 3 | 3 |
| ***Transversal Teaching Units : TTU 4*** |  |  |  |  |  |  |  |
| Expression and communication 4 | **24** |  | 15 | 9 |  | 2 | 2 |
| English 4 | **21** |  | 12 | 9 |  | 1 | 1 |
| **Total** | **371** | **45** | **63** | **63** | **200** |  | **30** |

**Semester 5 :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Teaching units and subjects** | **WW** | **Weekly Workload** | **Coef** | **Credits** |
| **14-16 Weeks** | **L** | **T** | **PW** | **Others** |
| ***Fundamental Teaching Units : FTU 5*** |  |  |  |  |  |  |  |
| Networks: Plumbing & Electricity | **45** | 18 | 18 | 9 |  | 4 | 4 |
| Envelope, heating & air conditioning | **45** | 18 | 18 | 9 |  | 4 | 4 |
| Building pathology and renovation | **39** | 21 | 12 | 6 |  | 3 | 3 |
| ***Methodological Teaching Units : MTU 5*** |  |  |  |  |  |  |  |
| General construction procedures | **45** | 15 | 15 | 15 |  | 4 | 4 |
| Site installation and management : | **45** |  | 15 | 30 |  | 5 | 5 |
| Building | **60** |  |  |  | 60 | 4 | 4 |
| ***Discovery Teaching Units : DTU 5*** |  |  |  |  |  |  |  |
| **Procurement code and legislation** | **39** | 21 | 9 |  |  | 3 | 3 |
| ***Transversal Teaching Units : TTU 5*** |  |  |  |  |  |  |  |
| **Entrepreneurship and business creation** | **45** |  | 15 | 30 |  | 3 | 3 |
| **Total** | **360** | **96** | **108** | **99** | **60** |  | **30** |

**Overall summary of training excluding S6**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Teaching units**  | **Workload for 5 semesters** | **TWW** | **%WW** | **Credits** | **%****Credits** |
| **L** | **T** | **PW** | **OThers** |
| **FTU** | 264 | 198 | 123 | / | 585 | 33% | 61 | 41% |
| **MTU** | 36 | 96 | 243 | 480 | 855 | 47% | 66 | 44% |
| **DTU** | 72 | 39 | 21 | / | 132 | 7% | 10 | 6% |
| **TTU** | 0 | 123 | 102 | / | 225 | 13% | 13 | 9% |
| **Total** | **372** | **456** | **489** | **480** | **1797** | **100** | **150** | **100%** |

**Semester 6 :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Internship and final year project** | **WW** | **Weekly Workload** | **Coef** | **Credits** |
| **14-16 Weeks** | **L** | **T** | **PW** | **Others** |
| **Internship (8 to 12 weeks)** | **300** |  |  |  | 300 | 18 | 18 |
| **Fibal Year Project (3 to 4 weeks)** | **100** |  |  |  | 100 | 12 | 12 |
| **Total** |  |  |  |  | **400** |  | **30** |