Institut universitaire de technologie A

University of Lille



European partnership study opportunities





IUT A of Lille (institut universitaire de technologie A de Lille) established in 1966, has already turned out more than 30,000 graduates. For 50 years, IUT A has kept abreast of scientific and technological advances. Its permanent aim is to make young people efficient and adaptable. This original vocational training has proved to be successful over all these years both for companies and for students.

Our IUT is proud to offer diversified curricula:

- classical training
- training with apprenticeship (chemistry and business departments)
- multimedia training (electronics, biology and business departments)
- continuing education
- post-DUT courses
- \bullet licences professionnelles (eq. vocational bachelor degrees Eng).

Our constant concern is to provide each student with sound technological skills, as well as develop their human resources, particularly through the numerous contacts with industry and international cooperation with fifty foreign institutions, mainly in Europe. These partnerships will enable

our students to integrate professionally and be competitive or continue their studies. Thus, we fulfil our educational mission and hope to maintain the trust of companies, which will then offer placements and jobs to our graduates.

The following pages will present our IUT. They are not meant to give thorough information, but rather an overview of the courses offered by our seven departments. More detailed information can be obtained from our offices (addresses and telephone numbers hereafter).

I hope this brochure will help our students to make the right choice for their future.

François WAUQUIER
Director

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DUT = undergraduate vocational degree

*Vocational bachelor's degree

General information

IUT A of Lille is a faculty of engineering of the University of Lille, which offers training courses for an undergraduate vocational degree: DUT (diplôme universitaire de technologie).

It has: **7 departments** (chemistry, biological engineering, electronics and automatic control engineering, mechanical and production engineering, business studies, computer science, physics and applied sciences), **15 vocational** bachelor's degrees (3 years - 6 semesters) and a continuing education division.

It offers **4-semester courses** split over 2 years. The courses consist in lectures, seminars or tutorials (TD), laboratory sessions (TP), for a **weekly workload of about 50 hours** (35 hours/class contact) per student. Besides, tutored projects enable students to run some work of their own on a specific subject. At the end of the second year, students have to complete an **industrial placement** of at least 10 weeks. Attendance to all courses is compulsory.

The **curriculum** is clearly defined in a national syllabus approved by the Ministry of Education, which includes 300 hours of language and communication courses. Each department can adapt 10 to 20 % of the program in response to local or regional needs or opportunities.

There is a **continuous assessment** system over the 2 years. Repeating a class is only possible once, but the procedure is seldom used.

Provision is made for mature students, employees and unemployed people to prepare for the DUT in 2 or 3 years under the continuing education scheme.



Academic year at IUT A

The academic year is run on a semester basis for all departments' organization. ERASMUS students are welcome for full academic years, semesters or for 3-month projects.

The dates below are for information only and may be subject to slight variations:

Autumn semester:

- 2nd-year: 1st Monday in September/late January
 1st years 3rd Monday in September/late January
- 1st-year: 3rd Monday in September/late January

Spring semester:

- 2nd-year: early February/end of June (including industrial placement)
- 1st-year: early February/end of June



How to apply

Applications by both home and foreign students must be made through IUT A - admissions office by completing an application form and producing the transcripts of secondary school results. Applicants are advised to apply as early as possible, the closing date usually being in May.

Students are liable to pay for registration fees, service costs and Social Security. There are **no tuition fees**.

ERASMUS students are admitted **free of charge**, under formal agreement between their home universities and IUT A.

Applications are received at the international office of IUT A through their home institution.

Admission enquiries

General information

Address: IUT A de Lille, Cité scientifique - BP 90179 59653 VILLENEUVE D'ASCQ CEDEX - FRANCE Website: www.iut-a.univ-lille.fr Admissions office: Tel + 33 3 59 63 21 04

Applications

European students - contact the international office Tel: +33 3 59 63 21 07 - Fax: +33 3 59 63 21 08 E-mail: iut-ri@univ-lille1.fr

Educational information

Information on curricula and any pedagogical matters can be obtained directly from each department.

Chemistry

DUT



In full-time initial education, the course is run over 60 weeks over the 2 years, with an average workload of 30-hour class contact per week.

Contact

Tel: +33 3 20 67 73 10 Fax: +33 3 20 47 26 88 iut-chimie@univ-lille1.fr

Address: IUT A de Lille Département chimie BP 90179 59653 Villeneuve d'Ascq CEDEX **FRANCE**

Location

CREST

Le Recueil, rue de la recherche Villeneuve d'Ascq

Introduction and objectives of the

The chemistry department at IUT A of Lille offers a vocational course on a fulltime basis as well as under continuing education or apprenticeship schemes. This course has both theoretical and practical objectives: it aims at training highly skilled technicians, direct aides to engineers or researchers, in all the fields of chemistry and chemistry-related industries: research, development, production, analysis and

The DUT graduate in chemistry must be able to implement the engineer's ideas and to act as the interface between the engineer and the workers. Adaptability to different fields of activity, special concern with environmental issues and quality processes are key aspects of the course.

Career and study prospects

The most successful graduates can apply for further studies in chemistry to most of the engineering schools (écoles d'ingénieurs) in France: ENS, INSA, ENSAIT, ESTIT, ITECH.

Graduates of this course can find excellent employment opportunities in the following industrial areas:

- · Chemical and chemistry-related
- Pharmaceutical industries
- Petroleum and petrochemical industries
- Protection of the environment (water, air, soil, waste recycling)
- Rubber

Food industries

- · Glass and ceramic industries
- · Textile industries

This vocational training is composed of 60 ECTS divided into two semesters.

Contact

Address: IUT A de Lille Département Chimie BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

CREST

Le Recueil, rue de la recherche Villeneuve d'Ascq

Chemical and pharmaceutical industries

Speciality: Analysis, control and expertise in chemistry

Vocational bachelor's degree



Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Module 1:12 ECTS

General education Mathematics, English, management, communication

Course structure and content

Module 2:11 ECTS

Separative and non-separative analytical methods

NMR, UV/Visible, IRFT, Raman, AAS, ICP, MS, chromatography GC, HPLC, HRPC, TLC, CE, VOC, soil, air, water

Introduction and objectives of the

The vocational degree in chemistry and pharmaceuticals provides the students with in-depth knowledge of chemistry. The course aims to give the students an outstanding professional command of analytical chemistry and laboratory practice.

Admission requirements

The students eligible for the course are:

- Students who come from BTS and DUT in related subjects
- Students who have completed a secondyear industrial degree
- And, as the case may be, students who attended a two-year intensive course preparing for competitive entrance examinations in chemistry after accreditation of prior experiential learning (APEL).

This course is also open to students taking the in-service training scheme able to attend a full-time schedule. Admission is granted after assessing the student's application form, and the applicant's skills and motivation.

Career prospects

The successful graduate can work as an assistant engineer with a speciality in analytical chemistry, expertise, quality and process control. S/he will work in a laboratory where s/he will be in charge of the analyses and control of physical and chemical quality during the production process. Job prospects are excellent in private or public research laboratories and in international industrial companies involved in organic chemistry. Graduates can apply for a master's degree.

Module 3:15 ECTS

Method validation

Metrology, method validation, sampling, handling HSEQ, GMP, GLP, formulation, cosmetics

Module 4: 22 ECTS

Vocational education

Conferences, tutored projects, corporate training

1st year

S1:30 ECTS

TU 1.1: 17 ECTS Technology and chemistry: chemistry - basic techniques, inorganic & organic chemistry, analytical chemistry J 1.2: 13 ECTS General and scientific education: communication skills, metrology and electricity, computing, personal and professional project

S2:30 ECTS

computing

TU 2.1: 17 ECTS Analytical chemistry, chemical engineering, practical work: chemistry - basic techniques, inorganic chemistry 2: 13 ECTS Communication, English, tutored project, practical work: physics - optics, mathematics,

2nd year

S3:30 ECTS

TU 3.1: 19 ECTS Practical work: analytical chemistry, inorganic & organic chemistry, chemical engineering TU 3.2: 11 ECTS Professional communication, maths, English, tutored project, AC electricity

S4:30 ECTS

TU 4.1: 8 ECTS Chemical engineering, practical work: analytical chemistry, industrial materials, green chemistry TU 4.2: 10 ECTS Professional situations, communication, chemometrics/quality/first aid, electronics TU 4.3: 12 ECTS Internship (10 weeks)



During the 2nd year the student has the opportunity to choose his/her option between biological and biochemical analysis, dietetics or food science.

Contact

Tel: +33 3 59 63 21 60 Fax: +33 3 59 63 21 62 iut-biologie@univ-lille1.fr

Address: IUT A de Lille Département génie biologique BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the

The course aims at training highly skilled technicians in the following fields:

- · Quality control and assurance
- Research and development:
- in public laboratories (university, SRC, INSERM, INRA)
- in private laboratories (institut Pasteur, small and medium enterprises)
- Dietetics
- · Sales engineering

Career prospects

- · New biotechnologies (biological, genetic, enzymatic engineering)
- Food sectors (production, consumption, nutrition...)
- Health areas (biochemical and biological analysis, dietetics...)
- · Pharmaceutical industries
- Environmental areas

1st year

2nd year

S1:30 ECTS

TU 1.1: 8 ECTS

Mathematical tools. physics, computing tools, differentiated instructional strategies TU 1.2: 8 ECTS General chemistry and organic chemistry, biochemistry, chemistry and biochemistry: analysis tools

TU 1.3: 8 ECTS Biology and general physiology, biology and cell physiology, microbiology and immunology bases TU 1.4: 6 ECTS

English, writing and communication skills. personal professional project, tutored project

TU 2.1: 8 ECTS General

S2:30 ECTS

and organic chemistry, applied physics, biochemistry TU 2.2: 8 ECTS Microbiology and immunology, biology and applied physiology, professional environment adaption TU 2.3: 6 ECTS (depends on speciality) complementary module 1, complementary module 2, complementary module 3 TU 2.4: 8 ECTS Statistical tools, English, writing and communication skills. personal professional project, tutored project

S3 & S4: 60 ECTS

Option Biological and biochemical analysis TU 3.1: 9 ECTS Analytical and medical biochemistry, haematology – haemostasis, medical microbiology TU 3.2: 9 ECTS Physiopathology: pharmacology, biology and cell culture, molecular biology

TU 3.3: 6 ECTS Instrumentation, data analysis, biochemical analytical techniques

TU 3.4: 6 ECTS English, writing and communication skills, personal professional project, tutored project TU 4.1: 10 ECTS Biochemistry, immunology: haematology, cell biology: pathology, microbiology, pharmacology: toxicology, immunology: techniques

TU 4.2: 8 ECTS Hygiene, safety and legislation, English, expression and communication skills, tutored project TU 4.3: 12 ECTS Internship (10 weeks)

Option Food science

TU 3.1: 9 ECTS Industrial physics, unitary operations, complementary module: further scientific education TU 3.2: 9 ECTS Biochemistry and food physical chemistry, food microbiology, biochemistry and food physical chemistry TU 3.3: 6 ECTS Quality safety and sustainable development, data analysis- biocomputing, complementary module: general training

TU 3.4: 6 ECTS English, communication, tutored project, personal professional project

TU 4.1: 10 ECTS Electronics engineering: automation and control, food technology: manufacturing process, applied biochemistry and physics - chemistry, industrial microbiology and genetics, complementary modules

TU 4.2: 8 ECTS English, communication, tutored project, quality-safety: sustainable development, management and

TU 4.3: 12 ECTS Internship (10 weeks)

Option Dietetics TU 3.1: 9 ECTS Physiology and biochemistry, human nutrition, food preparation and culinary skills TU 3.2: 9 ECTS Dietary intakes, physiology physiopathology and nutrition, diagnoses and medical nutrition therapies TU 3.3: 6 ECTS Regulations, ethics, healthcare quality, quality-safety, sustainable development, management of catering services systems TU 3.4: 6 ECTS English, communication skills, tutored project, personal professional project TU 4.1: 10 ECTS Food science and technology, nutritional pathology, dietary care approach, psycho sociology, therapeutic dietetics, case studies TU 4.2: 8 ECTS Data analysis, English, communication, TU 4.3: 12 ECTS Internships (7 and 8 weeks)

Management of organizations

1st speciality: Food safety and quality (SQAL) 2nd speciality: Safety and quality in the health care practices (SQPS)

Vocational bachelor's degree



Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département génie biologique BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the

The aim of this course is to train people able to restore the consumer's or hospital patient's confidence and ensure safety and quality for the services provided. There is an increasing demand for qualified executives (bachelor's graduates) in these fields. In France and Europe, the food and the health care industries have been made aware of quality and safety in their

In order to meet these expectations, IUT A of Lille in partnership with institut Pasteur de Lille has created this vocational degree called management of organizations. This degree can be completed in one year and includes two specialities either on food or health care practices.

Admission requirements

The students eligible for the course are: • Full-time students: second-year students who have completed the fourth semester of an undergraduate degree in biology, food, microbiology and related BTS, DUT or another diploma level III and after accreditation of prior experiential learning (APEL)

- People doing in-service training schemes (employees, job seekers, housewives) who want to graduate from the course.
- Students taking the in-service training scheme able to attend a full-time schedule.

Admission is granted after assessing the student's application form, and the applicant's skills and motivation.

Career prospects

The job opportunities after completing the course are quality consultant and quality

Many food safety and quality graduates work as quality manager or assistant, certification assistant or manager, hygiene assistant in food industries.

Safety and quality in the health care practices work as quality executive, internal/quality certified auditor, healthcare waste manager, quality manager in hospitals, clinics, laboratories, and old people's homes..

This vocational degree also enables graduates to join a teaching training college and sit for the CAPLP2 or CAPES (competitive teaching examinations).

Course structure and content

1st speciality: S5 & S6

TU 1: Quality management

TU 2: Financial business

TU 2EC3: Management TU 3: English, communication

TU 4: Food safety 1

TU 5: Sensory analysis

TU 6: Tutored project 1

TU 7: Scientific and statutory health monitorina

TU 8: Food quality control

TU 9: Food safety 2

TU 10: Complementary module

TU 11: Tutored project 2

TU 12: Internship either in France or abroad (14 weeks)

TU 8: Quality in the health care

practices 1 TU 9: Quality in the health care

2nd speciality: S5 & S6

TU 1: Quality management

TU 2EC3: Health-care structures

TU 3: English, communication

TU 4: Quality in the health care

TU 5: Medical waste management

TU 7: Scientific and statutory health

TU 2: Financial business

TU 6: Tutored project 1

funding

practices

monitoring

practices 2 TU 10: Complementary module

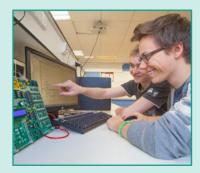
TU 11: Tutored project 2

TU 12: Internship either in France or

abroad (14 weeks)

Electronics and automatic control engineering

DUT



Contact

Tel: +33 3 59 63 21 90 Fax: +33 3 59 63 21 92 iut-geii@univ-lille1.fr

Address: IUT A de Lille Département GEII BP 90179 59653 Villeneuve d'Ascq CEDEX **FRANCE**

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the

The course at the electronics and automatic control engineering department aims at training highly-skilled technicians with a good command of areas using electronics, automatic control, PLC (programmable logic controller), industrial computing, supervision, real time, electrotechnics, power electronics, networks, LAN (local area network) modern communication instruments.

Providing future graduates with a scientific, technical and human background will enable them to continue or resume higher studies and facilitate any promotion in their career.

There is a certain international dimension: Students can carry out their training period abroad within the Erasmus programme.

Career and study prospects

Owing to the breakthrough of electronics and automatic control in a wide range of domains, students can find excellent opportunities in the following areas as:

- designer and/or production and/or maintenance assistant engineers:
 - Aeronautics, telecommunications..
 - Biomedical laboratories; food industries...
 - Electrical and electronic industries...

• technical salesmen:

- Industrial sales
- International sales
- Team management

The most successful graduates can apply for further studies in electronics or automatic control to most of the engineering schools (écoles d'ingénieurs) in France. Others apply to further university courses in related disciplines.

1st year

S1:30 ECTS

TU 1.1: 12 ECTS Energy, digital electronics, computing, electronic

TU 1.2: 10 ECTS Software tools, studies and production, digital electronics, logical synthesis, digital electronics, logical synthesis, methodology, introduction to project management, tutored project TU 1.3: 8 ECTS English, communication, mathematics, mechanics, electromagnetism

S2:30 ECTS

TU 2.1: 12 ECTS Energy, electronic systems, embedded computing, industrial automation & networks TU 2.2: 9 ECTS Software tools, tutored project, introduction to project management, personal and professional project, digital electronics, logical synthesis TU 2.3: 9 ECTS English, communication, mathematics, electromagnetism - sensors

2nd year

S3:30 ECTS

TU 3.1: 11 ECTS Energy, automation, electronic systems, programming, networks, renewable energy: production and storage TU 3.2: 11 ECTS Software tools. supervision, product life cycle, digital electronics, logical synthesis, digital electronics, tutored project, personal and professional project TU 3.3: 8 ECTS English, communication, mathematics, propagation CEM

S4:30 ECTS

TU 4.1: 12 ECTS Internship (11 weeks) TU 4.2: 12 ECTS Tutored project, digital signal processing, personal and professional project, digital electronics, logical synthesis, implementation of "field programmable gates arrays" (FPGA), industrial networks, electrical distribution NFC 15-100 TU 4.3: 6 ECTS English, communication, company knowledge, statistical methods - reliability

Industrial production management

Speciality: Packing techniques

Vocational bachelor's degree



This course consists of 60 ECTS (european credits transfer system) spread over 2 semesters and taught at two sites: IUT A of Lille and LICP of Tourcoing.

46 % of the core subjects are provided by industrial partners.

Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département GEII BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the

Companies are regularly called upon to adapt and change their packaging. In this context, this vocational bachelor's degree aims to train in one year professionals specialized in packaging innovation, capable of implementing all stages of design to achieve packaging and adapt to major user sectors and taking the environment into account.

Graduates are able to:

- Lead and control a manufacturing process, a production or packaging line and manage the control and quality progress of the production
- Set up and maintain automated production systems
- Develop technological solutions with the
- · Negotiate the sale or purchase of products or services
- Participate in developing new strategies for quality management of production
- Manage an operational team through communication and organization
- Follow an international business relation

Admission requirements

The students eligible for the course are:

• Undergraduates with a BTS (industrial product design, mechanical and industrial automatisms, technical engineer assistant, industrial maintenance, industrialization of mechanical products, electrical engineering, industrial computing and networking services)

computing, industrial engineering and maintenance, industrial logistics quality and organization) • Students who have completed the first 4 semesters of the general science

and technology degree in mechanics / mechanical engineering / civil engineering (course choice mechanics, mechanical engineering course) or the general science and technology degree, mention electronics / electro technology / automation (industrial production route)

• Undergraduates with a DUT (mechanical

engineering and industrial automation,

electrical engineering and industrial

Admission is granted after assessing the student's application form, and the applicant's skills and motivation after taking an interview and writing a covering letter.

Career prospects

Graduates will be employed by manufacturers of packaging and accessories or by packaging users. Many graduates can work as:

- manufacturing or production line
- technical staff member for quality control
- · packaging design office manager
- packaging buyer
- head of regulatory and standardized follow up
- · travelling salesman

Course structure and content

S5:30 ECTS

TU 1: 7 ECTS Technical and business English; communication techniques TU 2: 8 ECTS The world of packaging (current, opportunities); vocabulary and packing techniques; scientific knowledge; recycling materials and rates; printing techniques, manufacturing processes; eco-design. TU 3: 8 ECTS The process (automation, mechanization), packaging tools (automation, industrial networking, maintenance); safety and ergonomics. TU 4: 7 ECTS Analysis of production (productivity, waste, value analysis); supply chain; quality assurance (traceability, certification)

S6:30 ECTS

TU 5: 7 ECTS European legislation and marketing, company and labour law, packaging and packed products, legislation, business management, product and services management (purchase, sale)

TU 6: 4 ECTS Project leadership and marketing, concepts of project management (actors, organization, constraints); operational management (conflict management, team leadership)

TU 7: 7 ECTS Tutored project TU 8: 12 ECTS Internship either in France or within the Erasmus programme (12 to 14 weeks)

Multi-technological systems

Speciality: Rail transport maintenance

Vocational bachelor's degree V



The course is divided into three parts: general education, scientific and technological education and professional education.
The structure of the course consists of 470 hours of

tutorials, 120 hours of tutored projects and a 15-week industrial placement. 30 hours are also devoted to an integration module. It represents a year of 60 ECTS.

Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département GEII BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the course

This vocational degree is designed to provide students with specific skills in maintenance. The course lays the emphasis on the new security, reliability and efficiency requirements in the transport materials and infrastructures. Subjects include electricity, electrical engineering, management and communication. Students are also required to improve their organizational skills in order to be able to supervise team work and manage technical projects. This vocational degree aims to train People who can rapidly enter the job market and are flexible enough to meet the economic needs and manage the new technologies.

Professionals and industrialists are involved in the teaching of many courses so that the students can be acquainted with the job market requirements. The former also provide support before and during the work placement and supervise tutored projects.

They learn to:

- Conduct the maintenance and manage the planning department
- Improve material performance (reliability, efficiency...)
- Supervise technicians and workers and liaise with engineers
- Devise technological solutions with the customer
- Take part in the development of new supervision strategies

Admission requirements

The course is eligible for students who have completed the fourth semester of a degree in a similar subject and other

undergraduate degrees (BTS or DUT) or another diploma Level III. People not being holder of these qualifications can be admitted after accreditation of prior experiential learning (APEL).

Admission is granted after assessing the student's application form, and the applicant's skills and motivation. This course is open to students taking vocational training schemes able to attend a full-time schedule.

Career prospects and partnerships

There are excellent job prospects in rail transport (trolleybus, underground, train...) and in other maintenance fields as works maintenance manager, maintenance consultant, electronic maintenance technician, logistics manager, electronic quality control technician...

Our main industrial partners (SNCF, Alstom, Eurotunnel, Transpole, RATP, Bombardier, Ségula...) are thoroughly involved in the training.

Course structure and content

Module 1:12 ECTS

General education

Communication, English, corporate management and project, law and economics

Module 2:11 ECTS

Maintenance of rolling stock and fixed materials

Organization and maintenance methods, analysis and maintenance of rolling stock and fixed materials, maintenance and logistical policy

Module 3:15 ECTS

Guided transport technology

Functional analysis of materials and power transmission, electrical energy in fixed and moveable equipment, electronics of embedded systems and communications

Module 4: 22 ECTS

Professional education

Tutored project, conferences and industrial placement (15 weeks)

Networks and telecommunications

Speciality: Computing and industrial networks

Vocational bachelor's degree



The Networks and telecommunications vocational degree is composed of 440 hours of tutorials, 160 hours of tutored projects and a 12-week industrial placement. The 440 hours of tutorials are divided into 120 hours dedicated to professional practice (English, communication, project management) and 320 hours of academic courses.

Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address:

IUT A de Lille Département GEII BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the course

The course aims at training executives knowledgeable in fundamentals, basic technological skills and the tools/ methods necessary for the definition, implementation and development of processes in the fields of micro and industrial computing. The emphasis is laid on:

- in-depth fundamentals and technological skills related to technical training in the field of professional computing
- the learning and developing of autonomy and team work
- the good command of the tools and methods necessary to face the rapidly evolving computing activities

The networks and telecommunications vocational training offers employment opportunities for second-year university undergraduates (DUT, BTS and DEUST), for students who come from the 4th semester of a scientific or technological degree and for graduates with a scientific or technological diploma (level III in computing).

There is a certain international dimension: Students can carry out their training period abroad. Teachers will help them in their research and in obtaining grants in partnership with the department of international relations of IUT A.

Admission requirements

Admission is granted after assessing the student's application form, and the applicant's skills and motivation.

Career prospects

- Computer engineer
- R&D technical executive network
- Technician, network
- Architect
- Mobile resources manager
- Network program designer...

Course structure and content

S5 & S6: 60 ECTS

TU 1: 6 ECTS Design of software (structured and object-oriented programming)

TU 2: 6 ECTS Computer architecture, microprocessors and interfaces (microsystems, real-time systems)

TU 3: 6 ECTS Systems management - industrial networks supervision

TU 4: 6 ECTS Project management and communication

TU 5: 6 ECTS Integration project

TU 6: 6 ECTS Information systems

TU 7: 4 ECTS English

TU 8: 8 ECTS Technological projects

TU 9: 12 ECTS Work placement (12 weeks)

Mechanical and production engineering

DUT



The course is available on a full-time initial training over 4 semesters (under certain conditions, students can be admitted straight into the 3rd semester) as well as under a continuing education scheme.

Contact

Tel: +33 3 20 67 73 20 Fax: +33 3 20 67 73 21 iut-gmp@univ-lille1.fr

Address: IUT A de Lille Département GMP BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

CREST

Le Recueil, rue de la recherche Villeneuve d'Ascq

Introduction and objectives of the course

The French mechanical industry is the fourth largest in the world and comprises 7,000 companies. Students must be able to cope with these companies' requirements: developing a total quality approach, designing at low cost and having a good command of ISO 9000 and 14000 norms.

Therefore they are trained in the areas of quality, design, manufacturing, production management, automation, robotics, CAD/CAM, materials... Optional modules offer students additional skills in the field of textiles. The industrial placement allows students to step in the industrial world.

Besides its educational missions, the mechanical and production engineering department develops research and technological transfer activities, at local, national, and international levels.

Career and study prospects

The most successful graduates can apply for further studies to most of the engineering schools in France (école nationale supérieure d'arts & métiers...). Others apply to further university courses in related disciplines. A lot of French secondary schools value the GMP graduate's skills and encourage their students to take up this specialist subject in order to continue into higher education.

1st year

S1:30 ECTS

TU 1.1: 10 ECTS Mechanical engineering: study, dimensioning of structures: testing the strength of materials, mechanics: basic principle statics, materials science: material property

TU 1.2: 9 ECTS Production engineering: basis of the production process, organisation and methods: introduction on the production process, metrology: measures and control, electricity – electronics and automatism (EEA), EEA: basics of automatism

TU 1.3: 11 ECTS Mathematics, expression, personal and professional project: professional environment, foreign languages, methodology and individual assistance, informatics

S2:30 ECTS

TU 2.1: 10 ECTS Mechanical engineering, dimensioning of structures, mechanics: dynamics of solid, materials science
TU 2.2: 8 ECTS Production engineering, organisation and methods, metrology: three-dimensional metrology and surface processing, EEA
TU 2.3: 12 ECTS Mathematics, communication, personal and professional project, foreign languages, organization and industrial management

2nd year

S3:30 ECTS

TU 3.1: 10 ECTS Mechanical engineering, mechanical engineering: CAD / CAM, dimensioning of structures: elasticity – combined testing of materials, mechanics: dynamics and energetics, material selection

TU 3.2: 11 ECTS Production engineering: prepare production using a CN machinery, organisation and methods, metrology, EEA: data processing, organization and industrial management

TU 3.3: 9 ECTS Mathematics, communication, personal and professional project, foreign languages, informatics: databases, synthetic report and project

S4:30 ECTS

TU 4.1: 6 ECTS Mechanical engineering, dimensioning of structures: energy methods and final element modelling, mechanical engineering and dimensioning of structures, synthetic report and project TU 4.2: 6 ECTS Production engineering, organisation and methods, study CAD/CAM process chain, EEA: automation of a continuous system, synthesis works and project Mathematics, communication, foreign languages, organization and industrial management TU 4.4: 12 ECTS Internship (10 weeks)

Industrial transformation

Speciality: Inspection, monitoring and preventive maintenance of industrial facilities

Vocational bachelor's degree



The student has three "large areas" of training, which are: general training, scientific and technological training and vocational training.

The partnership with the professional world has existed for more than fifteen years. It is part of a total quality approach.

Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address:
IUT A de Lille
Département GMP
BP 90179
59653 Villeneuve d'Ascq CEDEX
FRANCE

Location

CREST

Le Recueil, rue de la recherche Villeneuve d'Ascq

Introduction and objectives of the course

The vocational bachelor's degree "industrial transformation" aims to train professionals in the inspection, monitoring and conditional preventive maintenance, operational and capable of integrating directly within an existing organization or setting up an organization with the required monitoring.

The training aims to make these professionals independent and adaptable to any type of company with concerns about the availability and security of their facilities. The vocational bachelor's degree touches a broad career field, because it includes all the corporate training companies without being limited to chemistry or petrochemical industry. This extended field of competence is related to the fact that many of the methodological and technical tools are common across these sectors. They can be used either by inspection services, or by industrial control companies, or by maintenance services, or by companies which provide services in industrial maintenance.

Admission requirements

This degree is opened to:

- Students who have successfully completed the 2nd year in an industrial degree
- Students who have completed the first four semesters of the degree of the sciences and technology or engineering domain
- Graduates of the DEUST of the industrial domain

- Graduates of the DUT (industrial engineering and maintenance, electrical and industrial computer engineering, mechanical and production engineering)
- Graduates of a vocational BTS (industrial automation, industrial maintenance, electrical engineering, industrial and automatic control, mechanics and industrial automation, technical engineer assistant).

The selection is based on an application dossier containing a cover letter and the transcript of records.

Career prospects and partnerships

The graduate can join the internal maintenance department of a company or in a service providing company in industrial maintenance.

- Assistant engineer of the inspection services: in chemical and petrochemical industries
- Assistant engineer in non-destructive monitoring: they are recruited by different organizations and monitoring companies
- Assistant engineer in conditional preventive maintenance: vibratory monitoring, monitoring of lubricants, monitoring of the overheating of electrical equipment.

This vocational bachelor's degree results from the joint efforts of the University of Lille - science and technology, lycée Béhal of Lens and the representatives of various stakeholders in the field of inspection, monitoring and predictive maintenance.

Course structure and content

S5 & S6 : 60 ECTS

TU 1: Project management

TU 2: Eco-design, methodology for implementing a monitoring system, prevention of industrial risk

TU 3: Regulation of construction and industrial monitoring, strength of materials, choice of materials, fracture and fatigue, assembly techniques

TU 4: Vibratory monitoring, vibratory analysis, applied mathematics

TU 5: Detection oriented non-destructive control tools and analysis of material defects, CND tools, radiation protection

TU 6: Detection oriented non-destructive control tools and other operation related defect analysis, lubricant monitoring, thermometry

TU 7: Tutored project

TU 8: Internship (15 weeks)

Industrial production

Speciality: Eco-design of innovative products

Vocational bachelor's degree



Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département GMP BP 90179 59653 Villeneuve d'Ascq CEDEX **FRANCE**

Location

CREST

Le Recueil, rue de la recherche Villeneuve d'Ascq

Introduction and objectives of the

Eco-design addresses every step of a product life cycle as well as environmental criteria: choice of materials, design, energetic balance, manufacturing, recycling and recoverability. The objective of this approach is twofold: to reduce the negative impact of a product on the environment and foster innovations that can help protect it. Eco-design enhances the mechanical trades and ensures their continuity by implementing innovative technologies that are applicable to many areas of daily life: production of renewable sources of energy, transport (railway, automobile), packaging, home automation.

The technical staff trained in the vocational bachelor's degree will have the technical, scientific and organizational resources required towards that goal by companies with an eco-designed approach. Through a comprehensive process of designing a product and its life cycle, they will be able

- Interpret environmental regulations
- Practise environmental management
- Set up specifications starting from a need and translate them into a functional
- Practise eco-design and the analysis of
- Negotiate technological solutions with economic partners
- Support innovative projects and technological challenges

Admission requirements

This course is eligible for students holding a: BTS: CPI, manufacturing, mechanical

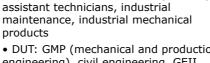
and industrial automation, engineering

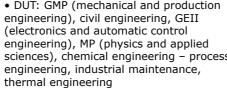
- DUT: GMP (mechanical and production engineering), civil engineering, GEII (electronics and automatic control engineering), MP (physics and applied sciences), chemical engineering - process engineering, industrial maintenance,
- degree industrial science and technology engineering or industrial production)

Career prospects and partnerships

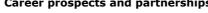
Among the potential jobs for graduates

- Technical staff for research research development - quality control
- manager; environmental manager
- products
- Professional associations and unions:





• 4th semester of year 3 of a bachelor's (course of mechanics, mechanical



entering the job market we can mention:

- Manufacturing manager; production
- Task-scheduling launching planning
- · Technical salesman of eco-designed

More than 40 % of the courses are provided by industrial and institutional partners: Ademe, Afnor, Alstom, Auchan, CCI Grand Lille, CD 2E, GEA, KSB, SKF, Visteon,...

- Professional support: poles of competitiveness: I-trans, Maud, Up Tex,...
- AFAV, Alliances, CETIM, FIM, FEDEREC, **UIMM**



S5: 30 ECTS

TU 1: 10 ECTS Sustainable development, eco-design, life cycle analysis, energetic balance, acoustic optimization, electromagnetic constraints

TU 2: 12 ECTS Research of innovative solutions, creativity, thermodynamics, process and quality control, statistics, choice of materials, chemistry and environment

TU 3: 8 ECTS Regulatory and environmental constraints, environmental communication, ecotoxicology, ergonomics, technical English applied to environment

S6:30 ECTS

TU 4: 8 ECTS Industrial maintenance, production logistics, end of life products, environmental management, recoverability and eco-design marketing, quality tools, corporate development

TU 5: 4 ECTS Mechanical engineering, structural design, mechanical manufacturing processes TU 6: 6 ECTS Tutored project TU 7: 12 ECTS Internship (16 weeks)











Management, design and industrialization

Speciality: Innovative textiles

Speciality: Industrial computer vision

Industrial production management

Vocational bachelor's degree



Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département GMP BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

CREST Le Recueil, rue de la recherche Villeneuve d'Asca

Introduction and objectives of the course

Vocational bachelor's degree

The aim is to train executives with indepth knowledge of textile products. The training is partly provided by our industrial partners as: Onera, Pronal, Dickson Constant, Potencier Broderies, Tibtech... The training is completed by special events (Fetex), exhibitions (TechTextiles) and many company visits. There is a strong partnership between IUT A and the ENSAIT of Roubaix, which received the support of the managerial branch (UIT Nord) and the textile companies association (ClubTex).

Admission requirements

The students eligible for the course are:

- Students with a two-year undergraduate degree in related subjects (industrial product design, mechanical processes, electrical engineering, mechanical engineering)
- Students who have successfully completed the fourth semester of a scientific and technological degree

Admission is granted after assessing the student's application form, and the applicant's skills and motivation after taking an Interview and writing a covering letter

Career prospects

Many graduates can work as: technical executive, industrial engineering executive, manager...

The targeted sectors are: medical textiles, geotextiles, civil engineering, textile distribution...

Course structure and content

S5:30 ECTS

TU 1: Communication skills

TU 2: Project management

TU 3: Basic textiles

S6:30 ECTS

TU 4: Design of innovative textiles

TU 5: Product management

TU 6: Tutored project

TU 7: Internship (14 weeks)



This vocational training consists of 440 hours of tutorials, 100 hours of tutored projects and a 12-week industrial placement. This curriculum includes various subjects.

Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département GMP BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

CREST

Le Recueil, rue de la recherche Villeneuve d'Ascq

Introduction and objectives of the course

Reaching optimal quality in the production of manufactured goods is a challenge that the European industry faces on world markets. This is why several manufacturing plants have been equipped with robots which control automatically the quality of manufactured goods (metrology, visual control). This development entails an important demand for highly qualified technicians able to set up, parameterize and maintain such an advanced vision system.

Subjects include industrial computer vision, robot vision and control quality. Students learn to:

- Set up industrial vision automation systems
- Use and monitor automation machines
- Manage the industrial production quality control processes
- Devise technological solutions for the customer
- · Work with engineers
- Develop new strategies of production quality control

The course is also an introduction to the quality control requirements in industrial production and develops the students' organizational skills to make them able to supervise team work and manage technical projects.

Admission requirements

The students eligible for the course are:

- Students with a two-year undergraduate degree in related subjects (industrial product design, mechanical and automation processes, computer science and industrial network, electrical engineering, mechanical engineering)
- Students who have successfully completed the fourth semester of a

scientific and technological degree (electronic or electrical engineering and automation speciality)

Admission is granted after assessing the student's application form, and the applicant's skills and motivation after taking an interview and writing a covering letter.

Career prospects

Many graduates can work as:

- industrial process control laboratory technicians,
- automation system coordinators,
- · quality control managers,
- industrial research and development managers...

Course structure and content

S5:30 ECTS

TU 1: Industrial control, programming TU 2: Quality management and

metrology

TU 3: Mechanical design and modelization

TU 4: Signal analysis

TU 5: English

TU 6: Communication techniques

S6:30 ECTS

TU 7: Industrial vision

TU 8: Electrical maintenance

TU 9: Design methodologies

TU 10: Tutored project

TU 11: Work placement (16 weeks)



During the 2nd year, the student has to choose between 3 options: management and management of organizations, accounting and financial management systems or human resources management.

Contact

Tel: +33 3 28 77 84 70 Fax: +33 3 28 77 84 77 iut-gea@univ-lille1.fr

Address: IUT A de Lille Département GEA BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

Bâtiment SH3 Campus Cité scientifique Villeneuve d'Ascq

Introduction and objectives of the course

The course at the business and administration studies department aims at developing:

- A general knowledge of the principles and methods used in management
- An operational skill in management techniques and practices
- The ability to give added value to their knowledge and skills:
 - in the course of their professional activity $% \left(1\right) =\left(1\right) \left(1\right)$
 - while continuing into higher education

Our IUT has a wide international cooperation with European Union partners in Belgium, Denmark, Finland, Greece, Portugal, Scotland, also central and East European countries and Canada where the students can complete and enrich their training.

Career and study prospects

There are excellent career opportunities in a very wide range of companies (banks, commercial and industrial firms, mailorder businesses, etc) and administrations (local and regional councils, governmental departments, national agencies...). Graduates will work as direct aides to chief accountants, personnel managers, and/or small and medium-sized company managers.

Graduates can apply for further studies to most business schools (écoles de commerce) and as well as to university master's degrees in technical and conventional subjects areas.

1st year

2nd year

S1:30 ECTS

TU 1: 15 ECTS

Communication, foreign languages 1 & 2, digital tools for information and communication, economics, law, social psychology and social organizations, personal and professional project

TU 2: 15 ECTS
Law of obligations,
management,
marketing, financial
accounting, taxation
and VAT, mathematics
and statistics

S2:30 ECTS

TU 3: 14 ECTS

project

Communication, foreign languages 1 & 2, IT environment, economics, French and European public institutions, design and survey methods personal professional project

Business law, human resources management, inventory, analysis of summarized documents, taxation of individuals, probabilities, calculation and cost analysis, financial mathematics, business game, tutored

S3 & S4: 60 ECTS

Option Management and management of organizations

TU 3.1: 12 ECTS Communication, foreign languages 1 & 2, corporate law, general culture, economics, law, taxation of legal entities, business strategy, statistical analysis for management, simulation and management strategy

TU 3.2: 18 ECTS Database management system, communication for management, personal professional project, financial analysis for administration in organizations, company setup, financial analysis, operational marketing, operational management of human resources, quality management, logistics and production TU 4.1: 14 ECTS Communication, foreign languages 1 & 2, information system for management, economics, administrative law, professional statistical applications, practical case study, competition law, management applied to a particular industry (international trade), international management
TU 4.2: 16 ECTS Tutored project and internship (10 weeks)

Option Accounting and financial management systems

TU 3.1: 12 ECTS English, economics, labour law, corporate law, taxation of legal entities, business strategies, statistical analysis for management, business software, simulation and management strategy

TU 3.2: 18 ECTS Database management system of financial accounting, communication, accounting, personal professional project, financial management, calculation and cost analysis, tutored project

TU 4.1: 14 ECTS Management, English, communication, tax and accounting specificities of companies, payroll software, financial analysis, administrative law, professional statistical applications, personal professional project
TU 4.2: 16 ECTS Tutored project and internship (10 weeks)

Option Human resources management

TU 3.1: 12 ECTS English, economics, labour law, corporate law, taxation of legal entities, business strategy, statistical analyses for management, methodology and management, business software, management simulation and strategy
TU 3.2: 18 ECTS Communication in HR organizations, HR

TU 3.2: 18 ECTS Communication in HR organizations, HR software, corporate law, HR management, HR administration, management of jobs and skills

TU 4.1: 14 ECTS Communication, English, management planning and management control, economics, administrative law, professional statistical applications, case studies, social dynamics and report in an organization, payroll management TU 4.2: 16 ECTS Tutored project and internship (10 weeks)

Management of organizations

Speciality: International trade assistant manager

Vocational bachelor's degree



Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département GEA BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

Bâtiment SH3 Campus Cité scientifique Villeneuve d'Ascq

Introduction and objectives of the course

Hauts-de-France is a region with a long industrial history which managed to cope with globalization thanks to the development of many distribution companies: mail order sales, large retail chains and more recently, clothing and sports companies as well as home improvement stores... Many companies have specialized or expanded their activity abroad and gained a significant foothold, mainly in the food industry market.

The course aims at training graduates in the following fields:

- Globalization: languages, negotiation, civilization...
- International management methods
- The supply chain (supplying, freight, storage, distribution)
- Working with other countries outside the EU (which involves specific knowledge of customs clearance formalities for example)

Admission requirements

The student must practise foreign languages, understand foreign mentality and international management systems. Skills in English will be assessed by an achievement test. Courses in a second foreign language are available for all levels, especially in Dutch. The course is aimed at DUT or BTS graduates in this field. Admission is granted after assessing the student's application form, and the applicant's skills and motivation.

Career prospects

There are excellent career opportunities in international logistics.

The jobs targeted by this training scheme are:

- logistics assistant,
- international buyer,
- export manager,
- international freight supervisor,
- Personal assistant in multinationals...

Course structure and content

S5:30 ECTS

TU 1: 10 ECTS International civilization and general culture, international management and cultural, global economic geography TU 2: 11 ECTS International communication, new information technologies, foreign languages 1 & 2 TU 3: 9 ECTS International relations, international marketing and distribution

S6:30 ECTS

TU 4: 8 ECTS International trade techniques, international logistics, international transport and customs TU 5: 7 ECTS International environment

TU 6: 4 ECTS Tutored project
TU 7: 10 ECTS Internship (15 weeks)

DUT

Vocational bachelor's degree



Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département GEA BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

Bâtiment SH3 Campus Cité scientifique Villeneuve d'Ascq

Introduction and objectives of the course

This vocational degree aims to train men and women working as social workers and accountants (involved in the drawing-up of the payroll).

The vocational degree for social workers and accountants must be completed in one year. The academic year is divided into 2 semesters amounting to 450 hours of tutorials, 150 hours of tutored projects and 16 weeks of industrial placement from January to April. This vocational degree features an introduction to administrative practices, tax returns and employment law (contracts and documents).

It gives second-year students in accountancy additional skills by means of:

- An elaborate reflection and enforcement of social and labour legislation
- New subjects such as international accounting, international law, professional ethics, applied computing, legal and financial
- English, pay and social administrative practices (documents, formalities...)

What is worth mentioning about the course is the operational use of the computing tool. Courses are provided by professionals and consist of class contact hours and tutored projects.

Admission requirements

Admission is granted after assessing the student's application form, and the applicant's skills and motivation.

The students eligible for the course are:

- Full-time students and apprentices: students who come from BTS and DUT in related disciplines or second-year students in the service sector or accountancy (For example: second and third year students in the legal field, business, management, accountancy or assistant in small and medium-sized firms, assistant BTS, DUT GEA, BTS legal careers,...)
- People in training schemes (including people attending in-service training) and accounting firms employees or the like. This course is also open to students in vocational training schemes able to attend a full-time schedule after an accreditation of prior experiential learning (APEL).

Career prospects

Job prospects are excellent in accounting firms, in administrative or accounting departments, in the human resources departments of medium-sized firms, etc. It is possible to apply for a master's degree in human resources and management.

Course structure and content

S5:30 ECTS

TU 1: 5 ECTS Employment contract management
TU 2: 5 ECTS Labour law II: implementing and changing the working contract
TU 4: 5 ECTS Labour law III: settlement of industrial disputes
TU 5: 5 ECTS Social law I: social security (or insurance)
TU 6: 5 ECTS Professional tools: improvement of the students'

computing and administrative skills

TU 7: 5 ECTS Litigation law: the main

aspects of litigation law are developed

S6:30 ECTS

TU 3: 5 ECTS Labor law III: settlement of industrial disputes TU 8: 5 ECTS International law: international labour and social law TU 9: 10 ECTS Tutored project: refers to current legal and economic events TU 10: 10 ECTS Internship (16 weeks)

Computer science



Contact

Tel: +33 3 59 63 22 20 Fax: +33 3 59 63 22 22 iut-info@univ-lille1.fr

Address: IUT A de Lille Département informatique BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the course

Training flexible computing professionals with skills in software development as well as system design and analysis. Developing both the theoretical and practical skills of students, thus enabling them to adapt to the professional environment immediately with excellent prospects of furthering their careers. The profession of computer engineer requires creativity, method and dedication.

Career and study prospects

The most successful graduates can apply for further studies in most French engineering schools (écoles d'ingénieurs). Others apply for further university courses in related subjects, in which they usually are successful.

There are career opportunities in such diverse fields as:

• System analysis and development, working as software analysts/ programmers and system consultants, in

the IT departments of major commercial, industrial or administrative organizations and banks.

- Implementation and maintenance of software systems in a wide range of companies.
- User support, acting as a link between company IT departments and end-users.

1st year

S1:30 ECTS

TU 1.1: 17 ECTS Introduction to computer systems, introduction to algorithms and programming, data structures and fundamental algorithms, introduction to databases, document and digital interface design, integrated project – discovery TU 1.2: 13 ECTS Discrete mathematics, linear algebra, economic environment, company organisation and operation, English for computing, communication, personal professional project – understanding the professional world

S2:30 ECTS

TU 2.1: 16 ECTS Architecture and programming of basic computer system mechanisms, network architecture, fundamentals of objectoriented programming, fundamentals of object-oriented design, man and machine interaction fundamentals, database systems development and administration, integrated project project description and planning TU 2.2: 14 ECTS Graphs and languages, analysis and digital methods, accounting, financial, legal and social environment, computer project management, communication, English, personal professional project

2nd year

S3:30 ECTS

TU 3.1: 12 ECTS Principles of operating systems, network services, advanced algorithms, server-side web programming, advanced object-oriented design, advanced database systems

TU 3.2: 12 ECTS Probabilities and statistics, mathematics modelling, information and communication technology law, management (information systems), communication - professional communication, collaborating in English TU 3.3: 6 ECTS Software engineering methodology, integrated project - working as an IT professional, personal professional project - clarifying one's project

S4:30 ECTS

TU 4.1: 10 ECTS System and

network administration, distributed programming, web programming, design and development of mobile applications, additional computing with a view to immediate employment, integrated project – additional elements TU 4.2: 8 ECTS Entrepreneurship workshops, operational research and decision-making support, communication – corporate communication, working in English TU 4.3: 12 ECTS Internship (10 weeks)

Computer and software

Speciality: Development and internet/intranet administration

Vocational bachelor's degree

Vocational bachelor's degree



The course is split over three periods and consists of 460h of tutorials, 200h of tutored project and a 3-month placement.

A significant part of the curriculum is devoted to our corporate partners' interventions.

Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département informatique BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the course

This vocational bachelor's degree aims to train highly skilled programmers able to develop and administer software architectures related to the implementation of Internet websites, ranging from software development to the administration of computer networks, discussions with the actors of the information system and the project manager/customer interface.

Admission requirements

Applicants will first be shortlisted and then selected after testing their skills and motivation.

The course is eligible to students with a DUT in computer science with a sound knowledge of software design and programming.

It is eligible to students with a DUT or BTS in computer science, to students in the computer science bachelor's degree course who have successfully validated 4 semesters, and to wage-earners with a few years' experience in the field of programming and analysis.

Admission is granted after assessing the student's application form, and the applicant's skills and motivation.

Career prospects

Many graduates can work as:

- web developers,
- · systems administrators,
- · data base administrators...

The targeted sectors are digital services, scientific and technical activities, communication and information, financial and insurance activities, commercial activities.

Course structure and content

S5: 30 ECTS

TU 1: 6 ECTS Software engineering TU 2: 6 ECTS Basic knowledge in databases and web TU 3: 6 ECTS Operation systems (systems, network, security)

(systems, network, security)
TU 4: 6 ECTS Mathematics (statistics, cryptography)

TU 5: 6 ECTS Expression and communication skills, project management, English, web marketing, corporate culture - level 1

S6:30 ECTS

TU 6: 10 ECTS Expression and communication skills, project management, English, web marketing, corporate culture - level 2 TU 7: 10 ECTS Professionalisation TU 8: 10 ECTS Projects and work placement (12 weeks)

Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département informatique BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the course

Computer networks and telecommunications

Speciality: Design, management of network infrastructure

This vocational degree provides specific skills in the design, monitoring, administration, optimisation and evolution of network infrastructure and associated systems.

Admission requirements

The course is eligible to undergraduate students with a degree in computing or networks (DUT, BTS students taking a computer science Bsc who have successfully completed 4 semesters, DEUST)

The course is eligible to students in initial or further education or in professional training contracts. It is available to wage-earners with a few years' experience in the relevant field.

Admission is granted after assessing the student's application form, and the applicant's skills and motivation.

Career prospects

Many graduates can work as:

- · web developers,
- systems administrators,
- data base administrators...

The targeted sectors are digital services, scientific and technical activities, communication and information, financial and insurance activities, commercial activities.

Course structure and content

S5 & S6: 60 ECTS

 $\mbox{TU 1: 6}$ ECTS Design and maintenance of network infrastructure for hardware and protocols

TU 2: 6 ECTS Implementation and management of corporate IP and communication departments; network security

TU 3: 6 ECTS Implementation of a company LAN; implementation and use of a solution for network supervision

 $\,$ TU 4: 6 ECTS Management and corporate communication bases, principles of project management

TU 5: 6 ECTS Design of a teaching-related network solution designed for team work
TU 6: 6 ECTS Implementation of a communication and online collaborative

infrastructure for the company

TU 7: 4 ECTS Understanding and writing in scientific and technical English

TU 8: 8 ECTS Design of a global network solution for team work

TU 9: 12 ECTS Work placement (12 weeks)



The course is available on a full-time initial training over 4 semesters (under certain conditions students can be admitted straight into the second year); a multimedia scheme is likely to be developed within 2 years.

Contact

Tel: +33 3 59 63 22 50 Fax: +33 3 59 63 22 52 iut-mp@univ-lille1.fr

Address: IUT A de Lille Département MP BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the course

The department of applied sciences trains industrial executives who are able to adapt to modern techniques of measurement and control in many sectors of research and industry. The DUT graduate in physics and applied sciences is a versatile engineer. At the end of the 4-semester course, he/she has acquired not only a good theoretical background but also a sound technological know-how in a wide range of physicochemical methods, thanks to a sound practical training.

The first year focuses on the fundamental scientific knowledge and practical skills required for the understanding of basic physical and chemical phenomena. During the second year the student has to choose between two options: Physical-chemical methods and control or Instrumental techniques.

Career and study prospects

There are excellent career opportunities in such diverse industrial sectors as: instrumentation and sensors, metrology, quality control, electrical and electronic industries, mechanical construction, chemical and chemistry-related firms, data processing, signal processing...

The most successful graduates can apply for further studies to most of the engineering schools (écoles d'ingénieurs) in France. Others apply for further university courses in related disciplines. They are usually quite successful.

1st year

S1:30 ECTS

TU 1.1: 10 ECTS English, communication skills, vocabulary, tutored project, mathematics
TU 1.2: 9 ECTS Computer algorithms, mathematics (geometry), data processing (CAD), metrology and sensors

TU 1.3: 11 ECTS Electrical systems, molecular and atomic structures, chemical balance, thermodynamics, thermal machines

S2:30 ECTS

TU 2.1: 10 ECTS Technical English, communication: integration techniques, mathematics, tutored project 2, personal professional project

TU 2.2: 10 ECTS Electromagnetism and applications, electronics, informatics instrumentation, materials structures, materials properties TU 2.3: 10 ECTS Oxidation reduction and chemical kinetics, marketing & materials, optics, thermal transfers

2nd year

S3:30 ECTS

TU 3.1: 11 ECTS Technical English, communication skills, metrology, statistics, tutored project
TU 3.2: 9 ECTS Fluid mechanics, optics, photonics, vibratory mechanics
TU 3.3: 10 ECTS Signalisation, instrumentation, spectroscopic techniques, electrotechniques, electronic instrumentation

S4:30 ECTS

TU 4.1: 9 ECTS Technical English, tutored project, electrochemical analysis & separation analytical techniques – renewable techniques, automation

TU 4.2: 9 ECTS Measurement and control chain, programming embedded systems, optoelectronics, acoustic measurements, elective module (mathematics, physics, chemistry, RDM - resistance of materials)

TU 4.3: 12 ECTS Internship (10 weeks)

Environmental protection

Speciality: Metrology applied to environmental and biological measurements

Vocational bachelor's degree



This degree trains professionals in metrology capable on the one hand to analyze the metrological requirements within a regulatory framework, and on the other hand to characterize, validate and estimate an uncertainty whether it is in environmental metrology-related areas or biological measurements.

Contact

Tel: +33 3 59 63 21 14 Fax: +33 3 59 63 21 11 iut-lp@univ-lille1.fr

Address: IUT A de Lille Département MP BP 90179 59653 Villeneuve d'Ascq CEDEX FRANCE

Location

IUT A de Lille Campus Cité scientifique Avenue Paul Langevin Villeneuve d'Ascq

Introduction and objectives of the course

The development of new standards or the characterization of reference materials is necessary. Metrology is a key parameter in assessing the biological, chemical, eco toxicological and environmental risks. Companies must adapt quickly to the current evolutions and metrological constraints whether it is the current level of measurement traceability or the connection of their instruments in order to control the manufacturing processes and thus ensure the quality of products on an international level.

One of the major objectives in the industries is to assess and quantify their performance in order to meet their requirements either on measuring chains or to issue examination certificates within the context of legal metrology.

The aim of the vocational bachelor's degree is to meet the current and future needs of people in the trade. It addresses metrology and its versatility within the company so as to develop the students' critical sense of measurements, their capacity to control processes and to estimate uncertainties.

Admission requirements

The vocational bachelor's degree 'environmental protection' is primarily intended for undergraduates with:

- BTS: biological analysis, biochemistry, biotechnology, chemistry, physical techniques for industries and laboratories, technical engineer assistants.
- DUT: physics, biological engineering, chemistry, chemical engineering, process engineering, hygiene, safety and environment

• Students having completed a 2nd year at university: science and technology bachelor's degree, major chemistry, physics and physical sciences, life sciences.

Admission is granted after assessing the student's application form, (including a cover letter and their school records) and after an individual interview.

Career prospects and partnerships

- Assistant engineer in measurements and certifications
- Assistant engineer in qualification and metrology of production management
- Technician in charge of measuring devices
- Reference technician in an analytical laboratory or in a hospital
- Assistant project manager in measurements and certifications organisations

The vocational bachelor's degree involves many partners in education, thus allowing continuous adaption to the various technological developments. These partners provide the industrial dimension, expertise and experience in areas such as corporate metrology, the perfect command of measurement and project management.

Course structure and content

S5:30 ECTS

TU 1: 8 ECTS General and quality metrology TU 2: 8 ECTS Measuring chain TU 3: 8 ECTS Analytical techniques and methods TU 4: 6 ECTS Professional communication and corporate knowledge

S6:30 ECTS

TU 5: 3 ECTS Specific environmental metrology and regulations
TU 6: 3 ECTS Metrology in environmental measures
TU 7: 3 ECTS Metrology in biological measures
TU 8: 3 ECTS Measures and instrumentations
TU 9: 6 ECTS Tutored project
TU 10: 12 ECTS Work placement (16 weeks)

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Contact

International office: From Monday to Friday from 8:30 am to 12:30 am and from 1:30 pm to 5:00 pm

Tel: + 33 3 59 63 21 07 E-mail: iut-ri@univ-lille1.fr



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