Take a UTT trainee

BUILD A WIN-WIN PARTNERSHIP

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Troyes

MANAGERS

When needing
for the development
of your company to

→ innovate in some specific areas,
→ design new products,
→ start up a new production line,
→ take a fresh look
at your processes,
→ face an increase in activity...

Why not hire a UTT trainee?

A WIN-WIN PARTNERSHIP!

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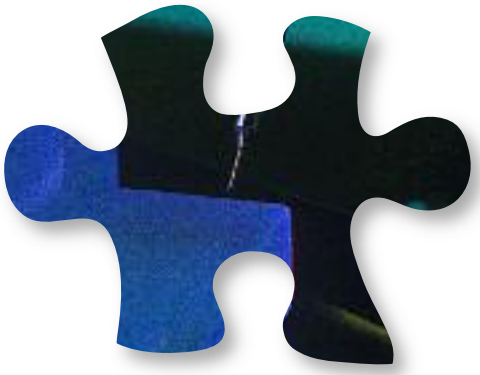
Item "Le partenariat entreprises"
"Stages en entreprises"
"Déposer une offre de stage"
Then, click on the flag
to access to the form in English

We have it!



UNIVERSITÉ DE TECHNOLOGIE DE TROYES

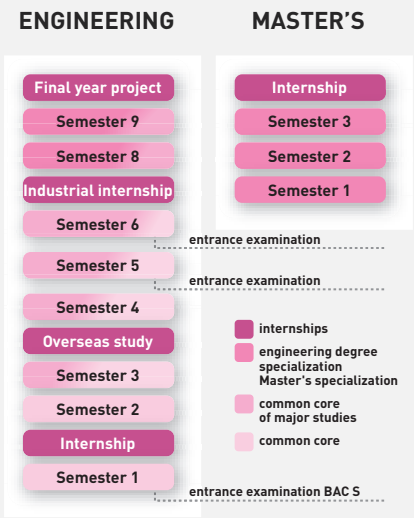
The five years long engineering curriculum includes two full-time "long placements":

→ UTT students start their fourth year with a 24 weeks long placement,

→ Future engineers carry out their final year project during the 24 weeks long placement of their last year of studies (at Masters level).

Each student is followed academically by a UTT teaching member of staff during those two periods.
Both placements are fundamental in helping shape full-fledged engineers.
Long placements usually start in February and September.

CURRICULUM OUTLINES



Placements to bring you a student's expertise or to carry out a specific project under the supervision of a UTT researcher may be set up under certain conditions.

YOUR CONTACT DETAILS

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SI

INDUSTRIAL SYSTEMS

The purpose of this major is to provide future engineers with the skills they will need to design and manage production systems, to manage and control production processes while not overseeing any of their dimensions be it scientific, technical or socio-economic.

AN OVERALL APPROACH OF PRODUCTION PROCESSES

The SI curriculum includes all the methods and techniques engineers need to manage an industrial plant and to optimize its performance.

When seeking to optimize an industrial process, engineers must consider the technical and financial requirements their companies must meet in terms of quality assurance and also from the point of view of man as the one element able to act and make decisions, the environment, innovation and competition. Thus, in the SI curriculum, particular emphasis is placed on the design of a production system, the management of production and maintenance operations the management of industrial projects, the risks deriving from both industrial processes and their impact on the environment and manufacturing techniques.

A DIVERSE RANGE OF SPECIALIZATIONS

After the Common Core studies of their major, students are offered to specialize in one of the three following fields:

→ **Production systems management:** this specialization includes all the courses the future engineer needs for the optimized design and management of different kinds of production systems: from common assembly lines and small production units to workshops and the factories. The curriculum addresses the manufacturing sector (the car industry, electronics...), process industries (the petrochemical industry, energy), and transport and services.

→ **Supply chain management:** the purpose of "Supply chain management" is to provide an overall and cross-disciplinary view of industrial activities and techniques with the aim of reducing costs and improving the level and quality of the services on offer.

The curriculum covers topics such as the flows, from raw materials to the distribution of finished goods and gives a comprehensive view of the supply chain, from the design stage to the after sales service, including issues connected with transport.

→ **Operational safety, risks and environment:** this specialization aims at producing competent engineers in the field of risk control in industrial plants or risky infrastructures, the prevention of major industrial accidents, and sustainable development. It enhances in a balanced way a future engineer's ability to identify risks and to implement prevention or impact management policies (especially those connected with the environment), to carry out quantitative safety surveys (measurement of reliability levels and maintainability, accident probability calculations), to optimize and manage maintenance and surveillance strategies with integrated support logistics, to devise and implement environmental analysis and steps in the field of eco-design, recycling and pollution.

YOUR CONTACT DETAILS

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SIT

INFORMATION SYSTEMS AND TELECOMMUNICATIONS

The Information Systems and Telecommunications major aims at providing students with the skills that will make them capable of designing, integrating and optimizing computer solutions for the management of information in companies.

THE INFORMATION SYSTEMS AND TELECOMMUNICATIONS ENGINEER

The drift in the computer sector towards more customer (professions, users and organizations)-oriented jobs, has triggered the emergence of the information system concept. This trend has been reinforced by the leading role played by the information in companies. Today, a company's information stock is as important as its capital stock. The term "information" describes a complex heterogeneous reality that requires sophisticated formalization tools and adequate storage means.

A DIVERSE RANGE OF SPECIALIZATIONS

The major includes general courses on information processing, computing basics, the management of information systems and networks, and computing project management.

There are four specializations among which the students can choose:

→ **Information systems management:** this specialization focuses on the main computer applications (decision making tools, cooperative work), and on the management of information systems projects (including the management of information systems, the sociology of organizations, audits, knowledge management, process modeling).

→ **Softwares management** gives particular emphasis to project management in the field of information systems, especially from the point of view of the integration of software components (distributed systems, software quality, rapid prototyping, Service Oriented Architectures).

→ **Networks integration** aims at providing a good command of the technologies companies use and of the knowledge of network operators (IP networks, network security, mobile networks, Quality of Service networks, network simulation).

→ **Mobile technologies and embedded systems** deals with networks' uses and applications and content optimization from the point of view of communication constraints (embedded systems, multimedia coding techniques, telephone to computers coupling, global positioning techniques and Geographic Information Systems).

YOUR CONTACT DETAILS

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SM

MECHANICAL SYSTEMS

This major aims at producing engineers capable of designing and building machines, structures, equipments or any type of mechanical systems using a diverse range of technologies including mechanics, automation, computer science and materials science. It also provides the engineering skills one needs to adequately control the design and building of complex mechanical systems.

THE MECHANICAL SYSTEMS ENGINEER

The mechanical engineer's core skills are mechanical.
The curriculum begins with common core courses focusing on classical mechanics, design, materials resistance, manufacturing techniques... These are followed by a set of courses furthering the students' knowledge in automation, computer science, production management project management and structure calculations in order for them to later meet the needs of the industrial sector.

A DIVERSE RANGE OF SPECIALIZATIONS

After their Common Core studies, students select among the four specializations the Mechanical Systems major offers:

→ **Integrated mechanical design** Product development is becoming increasingly complex, now mixing mechanics, computer science, automation, thermal science... while development cycles are becoming increasingly shorter and companies are expanding. Therefore, when finalizing a development project, the mechanical engineer must now possess the ability to work on a cooperative basis with all participants in a production process.

→ **Production systems design** As they are growing more and more complex, production systems now need to be designed and built by a new breed of engineers possessing a wide range of cross-disciplinary skills. Mechanics, manufacturing processes, automation control, and industrial engineering are but some of the topics dealt with for the purpose of producing highly skilled staff.

→ **Information technology for mechanical engineering** Engineers now heavily rely on computer-aided design in such areas as Technical Data Management Systems, product modelling, or mechanical simulations. Undergraduates are therefore trained to describe and develop innovative computer solutions that will provide valuable aid to designers. Their training in both mechanics and computer science ensure that their computer solutions will fully meet the needs of the mechanical engineer at the design stage.

→ **Digital simulation in mechanical engineering** Numerical simulation aimed at structure calculation and materials shaping is becoming increasingly important in the world of product design and manufacturing of mechanical products. There is a wide range of needs that can be fulfilled thanks to numerical simulation: time to market and weight and vibration reduction, optimization of products and of products size, simulation in product shaping and manufacturing processes.

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MTE

MATERIALS SCIENCE AND TECHNOLOGY

MTE engineers are provided with all the skills and abilities needed to implement an integrated approach of the selection, development, buying and selling of industrial materials. Materials engineers also have the ability to manage all the constraints deriving from environmental issues or the economic or technical background. The materials involved range from metals to polymers through ceramic materials, wood, concrete and glass and also include nanomaterials and optoelectronic materials and components.

PROVIDING AN INNOVATIVE APPROACH OF MATERIALS

Up to 80% of a manufacturing company's turnover is devoted to the purchase of materials. Supply sources are diverse and all materials-related and economic, technological or environmental issues are now closely intermingled. The UTT Materials engineer is trained into implementing an integrated approach by acting as cross-disciplinary interface between a number of departments. Namely, the materials engineer is trained into:

- choosing materials for a specific industrial application, while taking into account their economic and environmental impact,
- selecting these materials while being fully aware of all supply channels,
- follow and control materials transformation,
- keeping updated on the legal constraints and recycling channels,
- guiding the development of new materials that will respond to correspondingly new technological and socio-economic needs and constraints.

A DIVERSE RANGE OF SPECIALIZATIONS

The purpose of the initial phase of the curriculum is to provide students with core scientific knowledge. It is made of a common set of scientific courses on physicochemical properties followed by additional knowledge on the methods of characterization and materials selection and shaping. This is the common foundation for three distinct specializations:

→ **Materials economics and environment**
The purpose of this specialization is to train engineers capable of controlling the impact of industrial production on the environment (eco-design, recycling and products lifecycle), combined with knowledge in economics and materials selection.

→ **Technology and trade of materials and components:** this specialization aims at increasing the future engineers' skills in materials purchasing and cost reduction. Students also learn how to deal with buyers, and suppliers of materials and components.

→ **Transformation and quality of materials** produces "general" engineers in the field of science and materials engineering with a focus on metallurgy (processing, manufacturing and transformation of materials), plastics –processing industries, the structure and microstructure of materials, advanced materials (either solid or in thin layers) and surface treatments.

YOUR CONTACT DETAILS

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MASTER OF SCIENCE, TECHNOLOGIES AND HEALTH

→ MECHANICS AND PHYSICS EMPHASIS

3 specializations:

- **SMM**
  MECHANICAL SYSTEMS AND MATERIALS SCIENCE
  Main objective: to design and build tomorrow's mechanical systems.
- **ONT**
  OPTICS AND NANOTECHNOLOGIES
  Main objective: being able to see and understand the infinitely small.
- **IAMC**
  COMPOSITE AGRO-MATERIALS ENGINEERING
  Main objective: to understand, design and build tomorrow's materials.

→ INFORMATION TECHNOLOGY AND COMMUNICATION SCIENCES EMPHASIS

3 specializations:

- **SSI**
  INFORMATION SYSTEMS SECURITY
  Main objective: providing companies with secure access to information.
- **OSS**
  SYSTEMS' OPTIMIZATION AND SECURITY
  Main objective: control Industrial performance in a safe environment.
- **TICOR**
  INFORMATION TECHNOLOGIES FOR THE MANAGEMENT OF KNOWLEDGE AND NETWORKS
  Main objective: to manage knowledge and networks.

→ MANAGEMENT AND ENGINEERING EMPHASIS

3 specializations:

- **IMSGA**
  GLOBAL APPLIED SECURITY MANAGEMENT AND ENGINEERING
  Main objective: to provide students with useful off-the-beaten-track knowledge of security.
- **SMI-LES**
  SPORT, MANAGEMENT AND ENGINEERING - LOGISTICS AND SECURITY OF SPORTING EVENTS
  Main objective: to provide a 360-degree expertise in the organization of sporting events.
- **IMEDD**
  SUSTAINABLE AND ENVIRONMENTAL MANAGEMENT AND ENGINEERING
  Main objective: to create sustainable wealth.

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