

## **ZRENJANIN**

Zrenjanin is the biggest city of the Serbian part of Banat and it is its political, economic, cultural, and sports center and the third largest in AP Vojvodina right after Novi Sad and Subotica with around 140 thousand inhabitants in the municipality and about 80 thousand inhabitants living in the city itself. Over 20 nations live in it: Serbs, Hungarians, Romanians, Slovaks and others. It was established in the 14<sup>th</sup> century on the river Begej.

In the former Yugoslavia it was known as "the biggest food factory in the Balkans", because its food industry was the biggest in the country and it was the main supplier of the entire market of the former Yugoslavia. Unfortunately, it faced difficulties during the period of wars and sanctions, so some of its factories are now closed and some are trying to regain their former reputation.

But in spite of this hard period for its industry, today, Zrenjanin is one of the most attractive cities for investment in Serbia with respect to the conditions created for doing business. It was confirmed in 2006 by the US Agency for International Development, the USAID. Many new factories have been opened and many new industries have been started in the past 10 years, so now it has food, textile, chemical, metal and pharmaceutical industry.

Today, when you come to Zrenjanin, you are coming to the city of culture, arts, sports and to the city of bridges. There are many attractive historical buildings, the National Museum, the National Theatre, the Courthouse, the Town Hall and many others. It is also a tourist destination especially interesting for hunting tourism, then there is a natural resort Carska bara, two ethno villages, a golf court, picnic areas. Many cultural events are organized in it, the most popular is the traditional tourist and commercial event called "Beer Days", which takes place in the last week of August.

In 2007, it was declared the City of the Future and, in 2008, the World Bank ranked it first among the cities/towns in Serbia with regard to the overall organization of its business environment.

Another advantage of Zrenjanin is its position: at the crossroad of major inland routes and waterways, 50 kilometers away from Novi Sad, 75 from Belgrade, and 50 from the border with the European Union (Romania), Zrenjanin is nowadays an open city, ready to accept new ideas, way of business thinking or development of new technologies. Zrenjanin is also the city of traditional hospitality and opportunities for a pleasant stay in its environs.

## **THE COLLEGE HISTORY**

Technical College of Applied Sciences in Zrenjanin was established in 1960 and it has educated mechanical and technology engineers since then. More than 5,000 students have graduated either from its Technology Department or Mechanical Engineering Department. They all joined the army of engineers and professionals who have made the work of manufacturing companies possible and improved and contributed to many other areas important for people's life and work: ecology, medicine, mining, power production and supply, information science and others. Many of its graduate students now work as plant managers, they design machines, devices, tools and technologies and they are responsible for quality control, laboratory work or they found employment within small and medium sized enterprises sector. Some of them also continued their education in faculties all around the country.

Classes at College are organized in a building occupying an area of about 7000 m<sup>2</sup>, in one lecture theatre, numerous classrooms and about thirty laboratories with machines and devices used for practicals. Cooperation established between the College and manufacturing

companies in the city and its neighborhood provides the students with a detailed insight into production. The students can learn about production technology of chemical, food, textile and mechanical products and familiarize with responsibilities and duties of engineers. More than forty teachers and about twenty instructors and demonstrators take part in lectures and practicals organized for students.

The College has a library with a reading room where the students can find about 20,000 books, textbooks, journals and other reading material necessary for their studies and future profession. Several dozens of textbooks, course books, exercise books and other material have been printed in the College printing office, all used by the students to provide an easier way to follow lectures and prepare exams.

When the new Law on Higher Education was adopted in 2005 the College started with the preparation of documentation necessary for accreditation of the institution and the undergraduate programs. In 2007 the College was accredited as a college of applied sciences along with the new accredited programs of study and was renamed Technical College of Applied Sciences in Zrenjanin. The new undergraduate programs were: Production Mechanical Engineering and Computer Technologies (with two modules, Production Mechanical Engineering and Computer Technologies) and Process and Agricultural Mechanical Engineering (with two modules, Process Mechanical Engineering and Agricultural Mechanical Engineering). Technology Department accredited two undergraduate programs, Food and Chemical Technology (with two modules, Food Technology and Chemical Technology) and Textiles and Clothing Design. One more semester was added, so now the studies last for six semesters. Accreditation of the institution and the undergraduate programs meant that the College joined the unique European education system.

In 2008 the College accredited one-year graduate programs – specialist programs of study. Two specialist programs were accredited: Specialist studies in Technology and Specialist studies in Mechanical Engineering.

In 2010, the year when the College celebrated its 50<sup>th</sup> anniversary, two new undergraduate programs were accredited: Technology Engineering with four modules: Food Technology, Petrochemistry, Environmental Protection and Cosmetics and Pharmacy. The accreditation of this undergraduate program showed that the College tried to respond to the needs of the labor market in an effective and flexible way and thus offered new contents to the education market of this region. The other new accredited undergraduate program, Engineering Management with two modules (Computer Science and Technology), meant that the College stepped into a new area of education – management. After the 2012 accreditation the College started a new Mechanical Engineering undergraduate program as well as a new module within Engineering Management, Crisis Management.

## **PROGRAMS OF STUDY**

The College organizes the following programs of study:

- undergraduate programs of study:
  1. Technology Engineering with four modules: Food Technology, Petrochemistry, Environmental Protection and Cosmetics and Pharmacy.
  2. Engineering Management with two modules: Computer Science and Crisis Management
  3. Textiles and Clothing Design
  4. Mechanical Engineering with modules Production Mechanical Engineering, Process Mechanical Engineering, Agricultural Mechanical Engineering and Automatic Control
- graduate specialist programs of study:
  - Specialist studies in Technology and
  - Specialist studies in Mechanical Engineering.

- supplementary programs of study:

## **FACULTY**

The College employs 33 teachers and 7 instructors and demonstrators of whom 17 hold PhD degree, 17 hold MSc degree, 4 teachers hold a specialist degree, 1 holds BSc in Mathematics and 1 painter holds BA in fine arts.

## **CONFERENCES AND JOURNALS**

The College organizes a conference entitled “Education for Entrepreneurship, Engineering and Management” every year. The papers presented at the conference are published in the Proceedings.

## **INFORMATION SYSTEM SUPPORT**

Technical College of Applied Sciences in Zrenjanin has three computer classrooms and labs:

- The Internet club where the students can write their projects and graduation papers, prepare for their examinations, browse the Internet, etc.,
- Multimedia Classroom occupying an area of 77 m<sup>2</sup> with 10 computers and 20 seats used for laboratory exercises
- Computer laboratory occupying an area of 52 m<sup>2</sup> with 10 computers and 20 seats used for laboratory work and programming

The College also owns a mobile computer laboratory with 10 laptop computers with wireless network.

## **PROJECTS**

The College policy includes permanent development and investment in new laboratories and equipment in order to improve its work in all areas. In 2007 it implemented the project entitled “Center for Research, Development and Transfer of Technologies” which provided the College with the most modern equipment at that time used for research and education. Currently there are three projects supported by the EU which are being implemented: “Entrepreneurial Baby-boom in Banat”, “Welders’ Training and Certification in Banat” and of course, the one in partnership with your University entitled “Center for Numerical Simulation and Digital/Rapid Prototyping” thanks to which the College will provide new equipment and software. One of the project activities comprises creation of a CAD/CAM laboratory. The laboratory will be used to:

- teach theory and offer training in machine parts development using CNC machine tools
- provide research work needed for projects and graduation papers
- provide research work for teachers

The laboratory will be used by undergraduate students of Production Mechanical Engineering and Computer Technologies as well as the students of graduate specialist studies in Mechanical Engineering. The equipment which will be provided within the project: CAD software, CAM software, CNC milling machine for educational purposes, various multi-purpose cutting tools, laptop computer and a video beam