

Life Sciences.

Thriving industry in Germany's heartland.



Thuringia has always been at the forefront of the life sciences. It brought forth the mercury-free thermometer, X-ray tube and microscope. In addition, Jena scientists were involved in sequencing human chromosomes 8, 21 and X.

Life sciences in Thuringia at a glance:

- › 530 companies*
- › 24,500 employees*
- › 5,200 students at 3 universities
- › 2 technology centers and incubators
- › 43 hospitals
- › 10 research institutions and development service providers

Core competencies in the Life Sciences sector:

Medical technology

- › Minimally invasive technology
- › Medical laser applications
- › Medical systems in ophthalmology and endoprosthetics
- › Implants and biomaterials
- › Medical measurement and sensor technology

Biotechnology

- › Functional genome research
- › Diagnostics
- › Functionalization of interfaces
- › Miniaturized and highly parallelized analysis systems
- › Food technology
- › Red and green biotechnology

Pharmaceuticals

- › Development and production of innovative therapeutic agents
- › Development and production of dressing materials
- › Production of sterile pharmaceuticals
- › Production of solid and liquid pharmaceuticals

Seize the opportunities our region offers.

Benefit from a world-class research infrastructure, highly skilled workers and a prime location in Europe's heartland.

We provide full-service support for any investment project – from site search to project implementation and future expansions. Please contact us.

 www.invest-in-thuringia.de/en/industries-technologies/life-sciences





Sought-after specialists with great ideas.

Life science specialists work hard and research harder in Thuringia. Their profound expertise is a big reason why the state's industry players are so enormously competitive.

Academic training

Around than 5,200 students are enrolled in study courses closely tied to life sciences, including:

Jena University of Applied Sciences

- › Biotechnology (B.Eng.)
- › Clinical Optometry (M.Sc.)
- › Emergency care and services (B.Sc.)
- › Health Care Management (MBA)
- › Laser and Optotechnologies (B.Eng./M.Eng.)
- › Medical Engineering (B.Eng./M.Eng.)
- › Miniaturized Biotechnology (M.Sc.)
- › Nursing Science and Management (M.Sc.)
- › Ophthalmic Optics/Optomety (B.Sc.)
- › Optometry/Ophthalmic Technology/ Vision Science (M.Sc.)
- › Pharmaceutical Biotechnology (M.Sc.)
- › Physiatics (B.Sc.)
- › Scientific Instrumentation (M.Sc.)

Ilmenau University of Technology

- › Biomedical Technology (B.Sc./M.Sc.)
- › Biotechnical Chemistry (B.Sc./M.Sc.)
- › Miniaturized Biotechnology (M.Sc.)

Friedrich Schiller University Jena

- › Biology (B.Sc.)
- › Biochemistry/Molecular Chemistry (B.Sc.)
- › Biochemistry (M.Sc.)
- › Bioinformatics (B.Sc./M.Sc.)
- › Biosciences (B.A.)
- › Chemical Biology (M.Sc.)
- › Dentistry (State examination)
- › Medical Photonics (M.Sc.)
- › Medicine (State examination)
- › Microbiology (M.Sc.)
- › Molecular Nutrition (M.Sc.)
- › Molecular Medicine (M.Sc.)
- › Molecular Life Sciences (M.Sc.)
- › Nutritional Sciences (B.Sc.)
- › Psychology (B.Sc./M.Sc.)
- › Pharmacy (Diploma, State examination)

Training, further education

Vocational and technical schools in Thuringia offer training for the following professions:

- › Biology/Physics/Chemistry laboratory technician
- › Medical laboratory assistant
- › Mechatronics technician
- › Microtechnologist
- › Precision optician
- › Industrial mechanic and industrial electrician

Moreover, workers in Thuringia benefit from a comprehensive range of further education and training opportunities in the life sciences sector. In addition to the "Jenaer Bildungszentrum" (training center of Schott, Carl Zeiss and JENOPTIK), the Ilmenau University of Technology and the Jena University of Applied Sciences offer various continuing education programs and science courses.

The Institute for Biomedical Engineering and Informatics at the Ilmenau University of Technology, for example, has been the organizer of the annual "International Summer School in Biomedical Engineering" for up and coming biomedical experts.



"We rely fully on Germany and on Thuringia. Here, we can guarantee top quality. Skilled and dedicated workers plus technology and manufacturing knowhow gained over decades are the key to our success."

Prof. Hans B. Bauerfeind
CEO of Bauerfeind AG, Zeulenroda-Triebes

Jena's Beutenberg campus.

In keeping with the motto „where life science meets physics“, 3,000 scientists work in Thuringia's most internationally acclaimed location for research and development.

At the Beutenberg campus in Jena scientists and experts in 10 university- and non-university-based institutes as well as in 50 young biotechnology and medical technology enterprises make discoveries and blast new trails.

Jena's Beutenberg campus is home to:

- › Fraunhofer Institute for Applied Optics and Precision Engineering
- › Leibniz Institute for Age Research – Fritz Lipmann Institute (FLI)
- › Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute (HKI)
- › Leibniz Institute of Photonic Technology (IPHT)
- › Max Planck Institute for Biogeochemistry (MPBGC)
- › Max Planck Institute for Chemical Ecology (MPCE)
- › Friedrich Schiller University Jena – Institute of Applied Physics
- › Friedrich Schiller University Jena – Center for Molecular Biomedicine
- › Friedrich Schiller University Jena – Center for Innovation Competence (ZIK) Septomics
- › University Clinic Jena of the Friedrich Schiller University – Section Experimental Virology, Institute for Medical Microbiology
- › BioInstrumentation Center
- › Technology and Innovation Park Jena

Further research institutions in Thuringia

Reap the benefits of an environment that uniquely combines competencies in biology, chemistry, physics, medicine, biotechnology and microsystems technology.

- › Institute for Bioprocessing and Analytical Measurement Techniques (iba), Heilbad Heiligenstadt
- › Research Center for Medical Technology and Microbiology (fzmb), Bad Langensalza
- › Institute of Biomedical Engineering and Informatics (BMTI), Ilmenau University of Technology
- › Institute of Chemistry and Biotechnology, Ilmenau University of Technology

In addition, numerous competence clusters add their expertise to the life sciences sector, including OptoNet (optics industry) and medways (medical technology).

medways

medways e. V. is a Jena-based association of leading German research institutions, manufacturers and universities that aims to develop new ophthalmological diagnostic and therapeutic techniques as well as medical devices for the global market. By connecting biotechnology and equipment design, for example, medways experts help to promote the development of bioinstruments.

Medways also advises companies on medical product certification, quality management and pre-launch market analyses, assists firms at trade shows and conferences and holds continuing education seminars and courses. Medways also offers end-to-end management of research projects – from identifying potential projects and applying for funding to coordinating and monitoring activities.

THIMEDOP - Thuringian Innovation Center for medical engineering solutions

Thimedop is a platform for the ongoing specialized dialogue between clinicians, scientists, and the industry. The main focus is to identify innovative technologies and procedures for the diagnosis and therapy for e.g. diseases strongly correlated with age. Thuringia's technological strengths in optics, photonics, sepsis and aging research are joining in this platform.





“The city of Jena/Thuringia suits perfectly with its unique eco system of R&D for our company at the interface between life science and precision engineering.”

Dr. Claudia Gärtner, CEO,
microfluidic ChipShop GmbH



Successful in Thuringia.

Thuringia offers outstanding growth opportunities in medical devices, biotechnology and pharmaceuticals. It has attracted major market and technology leaders from around the globe.

ALERE Technologies GmbH

Founded in Jena, the company has been part of Abbott since 2017. As such, it is one of the world leaders in rapid diagnostics at the point of care, with a focus on cardio metabolic disease, infectious disease and toxicology.

Analytik Jena AG

Analytik Jena AG is a global supplier of analysis and automation solutions that enable specific and highly sensitive tests, e.g. by means of high-throughput screening, in the pharmaceuticals, life sciences, food and environmental sector. Since 2013, the company belongs to the Swiss Endress+Hauser Group.

Bauerfeind AG

Bauerfeind AG is a premier manufacturer of medical devices such as bandages, orthoses, compression stockings and orthopedic inlays. Material and design award winners many times over, Bauerfeind products make a significant contribution to maintaining and restoring health.

Carl Zeiss Meditec AG

Carl Zeiss Meditec AG ranks among the world's leading providers of system solutions in the field of ophthalmology. For many years now the company has been able to rely on its outstanding technological competence for developing innovative ophthalmology products.

microfluidic ChipShop GmbH

In the lab-on-a-chip technologies microfluidic ChipShop is a global leading supplier of microfluidic chips from a unique catalogue as well as of customer-specific complete systems consisting of microfluidic component, operating unit and related assay.

Wacker Biotech GmbH

Jena-based Wacker Biotech GmbH has over 25 years of experience in biotechnology. Its cutting-edge site at the Beutenberg campus develops stable, highly efficient processes for the production of biotherapeutics and therapeutic proteins for customers under cGMP conditions.

Selected companies

AEROPHARM GmbH, Rudolstadt
Aesculap Suhl GmbH, Suhl
Asclepion Laser Technologies GmbH, Jena
ASKION GmbH, Gera
audifon GmbH & Co. KG, Kölleda
Bayer Weimar GmbH & Co. KG, Weimar
biolitec AG, Jena
EPSa Elektronik & Präzisionsbau Saalfeld GmbH, Saalfeld
EVER Pharma Jena GmbH, Jena
Geratherm Medical AG, Geschwenda
Gothplast Verbandplasterfabrik GmbH, Gotha
Ibismed Medizintechnik GmbH, Kahla
Jenapharm GmbH & Co. KG, Jena
Jenoptik AG, Jena
Königsee Implantate GmbH, Allendorf
Mathys Orthopädie GmbH, Mörsdorf
NTI - Kahla GmbH Rotary Dental Instruments, Kahla
Occlutech GmbH, Jena
Otto Bock Health Care GmbH, Königsee
rmw Kabelsysteme GmbH, Crossen an der Elster
Röchling Medical Neuhaus GmbH & Co. KG, Neuhaus am Rennweg
Siemens Healthcare GmbH, Röntgenwerk Rudolstadt, Rudolstadt
Trumpf Medizin Systeme GmbH & Co. KG, Saalfeld
Vivisol Deutschland GmbH, Kundenservicezentrum Arnstadt

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