OVERVIEW

Degree
- Master of Science (M.Sc.)

Duration
- 3 semester (1.5 yrs)

Start
- Annually in October (the winter semester)

Admission requirements
- Completed B.Sc. in Bio Sciences, Biomedical Sciences or Informatics
- Successfully completed assessment test
- English level C1
- German level A2

More information: www.th-deg.de/Studieninteressierte/ Bewerbung/language_requirements_German-English_DEG.pdf

Course language
- English

Fees
- €72 student union fee per semester
- International applicants and students: www.th-deg.de/en/apply#international

APPLICATION

Application period

th-deg.de/deadlines-m

Online application
- In the Primuss portal at www.th-deg.de/en/apply

Notice of acceptance or denial
- In the Primuss portal

Enrolment
- Information available in the letter of admission

Prep courses
- See www.th-deg.de/prep-courses (no obligation)

Semester start
- 01 October

STUDY LOCATION

Deggendorf Institute of Technology
Dieter-Görlitz-Platz 1
94469 Deggendorf
Germany

🌐 www.th-deg.de/deggendorf-en

CONTACT

You are interested in the Master course in Life Science Informatics and would like to find out more?

Enquiries about the course
🌐 www.th-deg.de/lsi-m-en

General enquiries about studying at DIT
✉ welcome@th-deg.de
🌐 www.th-deg.de/en/advice

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pioneering & vibrant

Master
LIFE SCIENCE
INFORMATICS

pioneering & vibrant

DEGREE DESCRIPTION

This postgradaute degree is an interdisciplinary subject area connecting biomedical aspects with computational analysis expertise, using tools able to handle and interpret the flood of data created by the Next Generation Sequencing technology.

Learn how to digitally process and correlate data that are generated by the sequencing of human, animal or microbial material, in order to make it usable for the purpose of biomedical research, as well as molecular diagnostics and development of targeted therapies.

This understanding of human genome through Next Generation Sequencing technology will qualify you as a Life Science Informatics graduate to later work at the exciting forefront of medical technology; for example in break-through innovations such as:

DISEASE

PREVENTION | MONITORING | TREATMENT
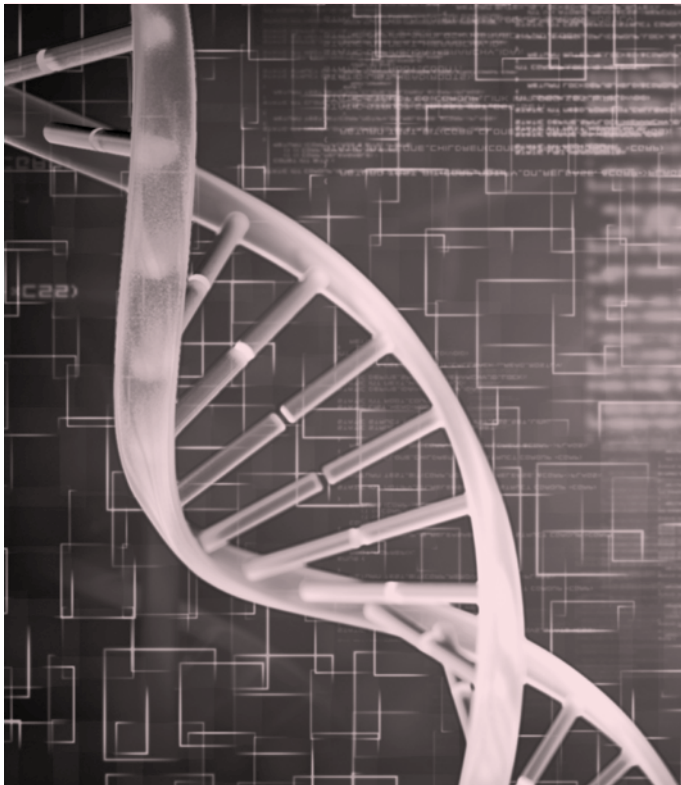
COURSE CONTENT

Biomedical research currently makes use of various computerbased analyses to identify and analyse genes that are predictive for the prognosis or therapeutic response of a disease (personalised medicine and molecular diagnostics).

The analysis and evaluation of these data sets requires knowledge of both, medical/ scientific basics in combination with application-oriented computer science knowledge.

These skills are taught in an application-oriented manner within the Life Science Informatics Master's programme.

1. Sem.	• Biomedicine for Computer Scientists • Informatics for Life Scientists • Life Science I • Informatics I • Biostatistics I • Sequencing Technologies • Biomedical Data Analysis
2. Sem.	• Life Science II • Informatics II • Biostatistics II • Data Mining and Machine Learning • Bioinformatic-Algorithms und Data Structures • Data Visualisation
3. Sem.	• Master thesis • Master colloquium • Master seminar

All lectures and exams are conducted in English, therefore fluent English skills are crucial for all students.

COURSE STRUCTURE

After successfully completing the Master's degree in Life Science Informatics you will be highly knowledgable about the following bio-informatics analysis concepts:

- Unix command line usage
- Data formats and repositories
- NGS quality control
- Sequence alignments
- Data visualization and interpretation
- Genome variation and SNP calling
- RNA-Seq and gene expression analysis
- ChIP-Seq analysis
- Biomedical Software tool usage
- Machine Learning
- Bioinformatic algorithms
- Biostatistic data analysis (in R)
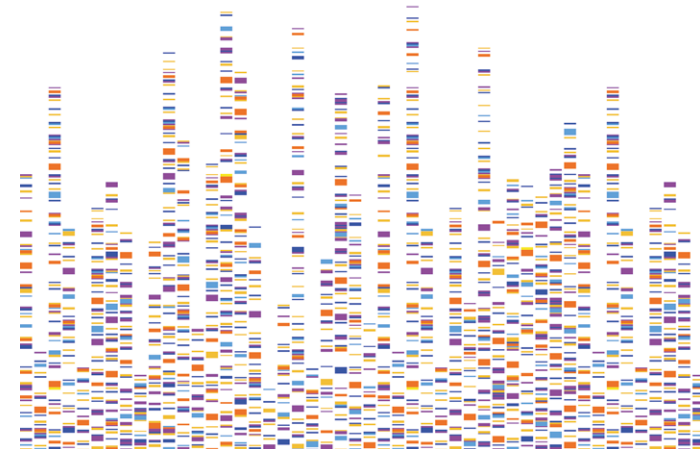
CAREER PROSPECTS

The amount of data that is generated during the decoding of human material must be processed and correlated in order to make it usable: This is the task of Life Science Informatics.

Career opportunities are particularly:

- at universities
- in pharmaceutical companies
- in clinical and/or scientific research institutions
- in bioinformatics companies
- in biotech companies
- in the biomedical industry

If you belong to the best, then you have optimal conditions to study for a PhD after the master thesis.