UNT | COLLEGE OF ENGINEERING
Department of
Biomedical Engineering

Positions for Ph.D. Students in Systems and Synthetic Biology

Multiple Ph.D. student positions are available at Dr. Clement Chan's Lab at the University of North Texas, Department of Biomedical Engineering. These positions provide full support of tuition and stipend for completing our Ph.D. program. We are located within the Dallas-Fort Worth area, which is a major metropolitan in U.S., ranking #4 by population size and #6 by economic outputs. Our campus is close to the DFW international airport that provides direct flights to most major cities. The region is highly diverse with a wide range of shops, restaurants, and entertainment and recreation facilities.

Research Topics. Our research group is in the field of systems and synthetic biology. We use skills and techniques from various disciplines to understand and engineer biological systems at molecular to cellular levels, aiming to develop biological devices for tackling environmental, biomedical, and industrial problems. These scientific disciplines include protein science and engineering, genetic and cellular engineering, computational biology, omics sciences, and bioinformatics. Previous work of our principle investigator, Dr. Chan, can be found from this link: https://www.ncbi.nlm.nih.gov/myncbi/clement.chan.1/bibliography/public/. We are looking for Ph.D. students to join our recently funded projects in the list below, which involves research in basic biological science, bioengineering, and industrial collaborations. Students are particularly encouraged to join us if they are interested or have experience in the following techniques:

- Cloning and genome editing
- Confocal microscopy and flow cytometry
- Protein X-ray crystallography
- Protein engineering
- Machine learning
- Next-generation sequencing for genomics and transcriptomics
- Mass spectrometry for proteomics and metabolomics

Ph.D. Student Training. This is designed as a 5-year program. Ph.D. training is focused on scientific research and students will get full financial support by serving as research assistant in our lab. Ph.D. students may potentially gain teaching experience by serving as teaching assistant but these opportunities are not guaranteed as we only have limited TA positions. This program also has a coursework component; students are required to take courses in Biomedical Engineering and they can take courses in other departments based on their interest, such as Biology, Computer Science, Electrical Engineering, etc. Furthermore, we have budgeted sufficient funding from our grants for Ph.D. students to travel for presenting their research at national conferences. For more information of our admission requirements and program plan, please refer to our departmental website: https://biomedical.engineering.unt.edu/graduate.

Projects for Ph.D. students. The followings are some of our funded projects that Ph.D. students can participate. There is further information of these projects on the funding agency websites.

NIH 1R15GM135813-01
Design and construct modular transcriptional repressors to facilitate the development of living diagnostics (https://reporter.nih.gov/search/Twzwh9rafEq7sfsWrHjtRQ/project-details/9879608)

NSF 1914538
Developing modular repressors as in vivo biosensors in various organisms (https://www.nsf.gov/awardsearch/showAward?AWD_ID=1914538)

If there are any questions about our lab and program, feel free to contact Dr. Clement Chan (tszyanclement.chan@UNT.EDU). Candidates may get to know more about our group from our lab website (www.ClementChanLab.org).