

“Let us Introduce MS Biology Program”

The MS Biology program is slated to begin in Fall semester 2022. It is a two-year, thesis research-based Master’s Degree.

The program prepares graduates to enter many careers at a high level, or for professional school (medicine, dentistry, etc.) or for further Ph.D. studies.

Contact the faculty to discuss your interest and see if there is a place for you in their lab! We will try to make your interests a reality with our many expert research faculty:

General areas of interest available for study: Botany, Fungal science, Biomedical science, Virology, Wildlife studies, Behavioral medicine, Meditation physiology, Cellular and molecular methods in genetics, Genomics research methods, Medical microbiology, Electrophysiology, and more.



MISSION:

Rooted in Diné language and culture, our missions to advance quality post-secondary student learning and development to ensure the well-being of the Diné People.

MS Biology Faculty

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MISSION:

Earn your Master’s Degree from Diné College.

Dr. Oleksandr Makeyev's Laboratory

General research area:

Testing physical prototypes of our patented optimal configuration of the tripolar concentric ring electrode on real-life phantom data.

Envisioned Thesis Topics/Titles:

1. Validating the optimal design of tripolar concentric ring electrodes using physical electrode prototypes on real-life phantom data (i.e. confirming previously obtained analytical and finite element method modeling results for this design)
2. Assessing the possible effect of salt bridge shorting on recorded signal using physical prototypes of the optimal tripolar concentric ring electrodes on real-life phantom data
3. Directly comparing optimal and commercially available bipolar and tripolar concentric ring electrode configurations on real-life phantom data.

Envisioned careers for graduates:

electrophysiology (EEG, ECG, EMG, etc.), noninvasive and wearable sensors, signal processing.



Some of the Current Thesis/Research Project Options

Envisioned Careers for students that will be graduated from Dine College Labs!

The target research areas explored in Dr. Shazia Tabassum- Hakim's Laboratory

- Virology: HIV/HAV/HBV/HCV/ Dengue virus; genomics and antivirals
- Waterborne Infectious Diseases: Coliforms, non-coliforms, *H. pylori*, *Legionellosis*, *Giardiasis*, *Amoebic dysentery*, *Naegleria* infection
- Crowd Sourcing for new antimicrobials from desert soil against MDRs (ESKAPE pathogens, and *Candida* species)
- Micro RNAs target recognition and regulatory functions
- Microbial analysis of wastewater effluent and decision support for reclamation

Some of the Current thesis/ research project options:

- Microbial analysis of water; US-EPA and NN-EPA standards
- Microbial analysis of wastewater Effluent and possible use in Agriculture
- Analysis of metabolites from soil bacteria and herbs against MDRs (ESKAPE pathogens and *Candida*)
- MicroRNAs target recognition and regulatory functions
- Association of *H. pylori* from water samples with elevated number of peptic ulcers

Envisioned Careers for students that will be graduated from Hakim's Lab

Graduates can continue as PhD students, Join Pharmaceutical companies, Research Organizations, Clinical, Diagnostic and Industrial Laboratories, continue career in Medicine, Dentistry, Medical Laboratory Science National/ international Quality Control and accreditation forces and lot more!

Dr. Donald K. Robinson. Biology Graduate Program organization and funding Grant PI. Mentoring in meditation physiology studies.



Dr. Demetra Skaltsas' main areas of discipline expertise, and courses:

1. Plant pathology 2. Mycology 3. Medical mycology 4. Plant Biology. Courses:

AGR 533 3, cr. Plant Pathology, ENV 599, 3 cr. Vegetative Assessment. BIO 511, 3 cr., Fungal Biology, BIO 570, 3cr, Medical Mycology.