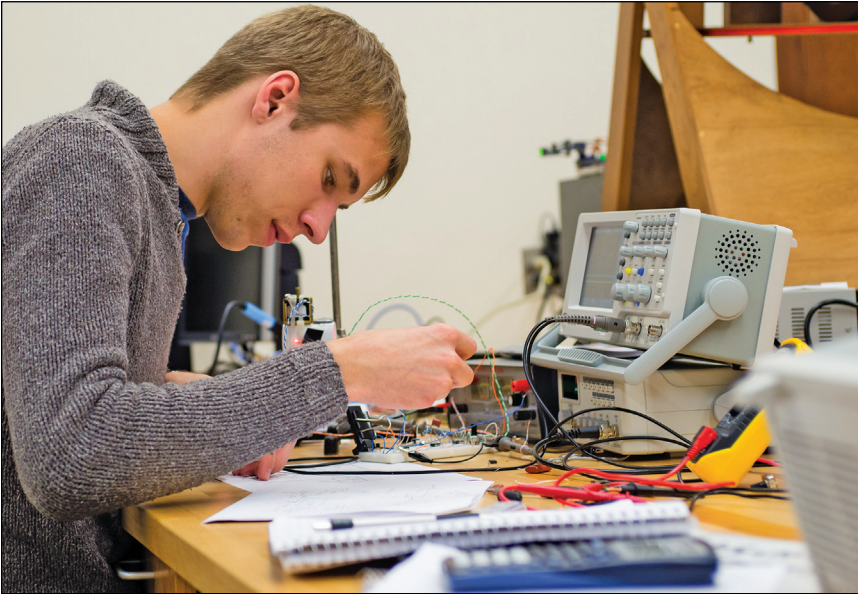


# COLLEGE OF NATURAL AND SOCIAL SCIENCES

## ENGINEERING 3+2



### 3+2 ENGINEERING FOUNDATIONS DUAL DEGREE

The 3+2 Engineering Foundations dual degree program is structured so students who spend three years in the dual-degree program at UNK and two years in the College of Engineering at UNL will be eligible to attain a bachelor's degree in Physics from UNK and a bachelor's degree in Engineering from UNL.

A strong understanding of physics forms the backbone of a solid engineering education, and the dual degree program addresses this need. While at UNK you will earn a BA in Physics while also gaining a strong background in engineering. Students will take the recommended general courses in physics, chemistry and math before transferring to UNL or any ABET-accredited engineering school. A student can then specialize in a wide variety of engineering fields such as civil, electrical, mechanical, chemical or other intensive areas.

#### Essential Skills in Engineering:

- Problem solving
- Brainstorming
- Analytical thinking
- Modeling and prototyping
- Optimization
- Communication

#### Engineering Habits of Mind:

Habits of mind are traits or ways of thinking that affect how a person looks at the world or reacts to a challenge.

- Creativity
- Optimism
- Persistence
- Systems thinking
- Conscientiousness
- Collaboration

### Student profile

"I have always had the desire to make a difference in the world, and for me becoming an engineer would be the way I would accomplish this," said Andrea Vargas, an international student from



ANDREA VARGAS

Colombia, South America.

"I saw UNK as the perfect platform to set the bases and pillars that would help build my career," Vargas said.

"What I like the most about the physics department is that teachers are always there to help you no matter what. I have had great teachers throughout the years that have led me to not only pass the class, but to understand it."

Attending UNK has changed Vargas in ways she never imagined. "UNK and Kearney might seem small, but it is amazing how such a small place can make such a huge impact in your life. The people and friends I have made along the way have been one of the best parts. I would definitely and highly recommend UNK. It's the best decision I have ever made."

### Did you know?

**Modern technology is physics-based.**

Any technology using electricity, magnetism, mechanics, heat, light, sound or optics comes from physics.

## Society of Physics Students

The Society of Physics Students is a professional association open to anyone interested in physics. Within SPS is the national physics honor society, Sigma Pi Sigma, for members who have demonstrated outstanding academic achievement.

- Biweekly meetings
- Community-building events
- Physics conferences
- SPS/Sigma Pi Sigma banquet
- School science fair judging
- High school senior recruiting days
- Movie nights in the UNK planetarium

## Scholarships:

- Liehs UNK Scholarship
- Beckmann Scholarship
- Morse Memorial Scholarship
- Nielsen Memorial Scholarship
- Royal Engineered Composites Scholarship

## F.Y.I – For your information

High school students thinking about studying physics in college should take as many advanced classes as possible in science and math. This will provide a foundation for college coursework.

UNK physics graduates find employment in industrial settings and government labs, or on college campuses, as well as in other science and technology fields. Unconventional settings include newspapers and magazines, and in government or business – any place where problem-solving and analytical skills are great assets.

**YOU CAN BE  
PART OF THE UNK  
EXPERIENCE**

For more information, contact:

UNK Engineering Foundations Program  
Physics & Astronomy Department  
University of Nebraska at Kearney  
Bruner Hall of Science  
(308) 865-8277  
engineering@unk.edu  
www.unk.edu/engineer

## 3+2 ENGINEERING FOUNDATIONS PROGRAM

THREE YEAR CLASS SCHEDULE: BS PHYSICS (UNK) + BS ENGINEERING (UNL)  
The schedule is a guideline. Consult with your academic adviser.

|  |  |
|--|--|
| <p><b>Semester 1 (17 credits)</b></p> <p>GS Democracy in Perspective<br/>GS Aesthetics (A ACE 7)<br/>MATH 115 Calculus I<br/>ENG 101 Intro to Academic Writing<br/>GS Portal 188</p>                 | <p><b>Semester 2 (17 credits)</b></p> <p>GS Social Science (SS ACE 6,9)<br/>GS Humanities (H ACE 5,8)<br/>MATH 202 Calculus II<br/>SPCH 100 Fundamentals of Speech<br/>ENG 102 Academic Writing/Research</p> |
| <p><b>Semester 3 (18 credits)</b></p> <p>CSIT 112 Programming in C<br/>PHYS 275/275L Physics I<br/>MATH 260 Calculus III<br/>CHEM 160/160L General Chemistry I</p>                                   | <p><b>Semester 4 (15 credits)</b></p> <p>ENGR 101 Intro to Engineering<br/>PHYS 276/276L Physics II<br/>MATH 305 ODE<br/>CHEM 161/161L General Chemistry II</p>  |
| <p><b>Semester 5 (17 credits)</b></p> <p>PHYS 346 Modern Physics<br/>PHYS 410 Math Tech. in Physics<br/>ENGR 215 Circuits I<br/>ENGR 130 CAD for Mech. Engineering<br/>GS Humanities (H ACE 5,8)</p> | <p><b>Semester 6 (16 credits)</b></p> <p>SPCH 154, 300 or 370 (ACE 2)<br/>PHYS 300-400 Elective (x2)<br/>ENGR 216 Circuits II<br/>GS Capstone 388</p>  |

All general studies classes listed are specified to satisfy UNL's ACE program. Any remaining ACE requirements will be completed at UNL.

For more information, visit <http://engineering.unl.edu/>



Photos by Lani Jensen Photography