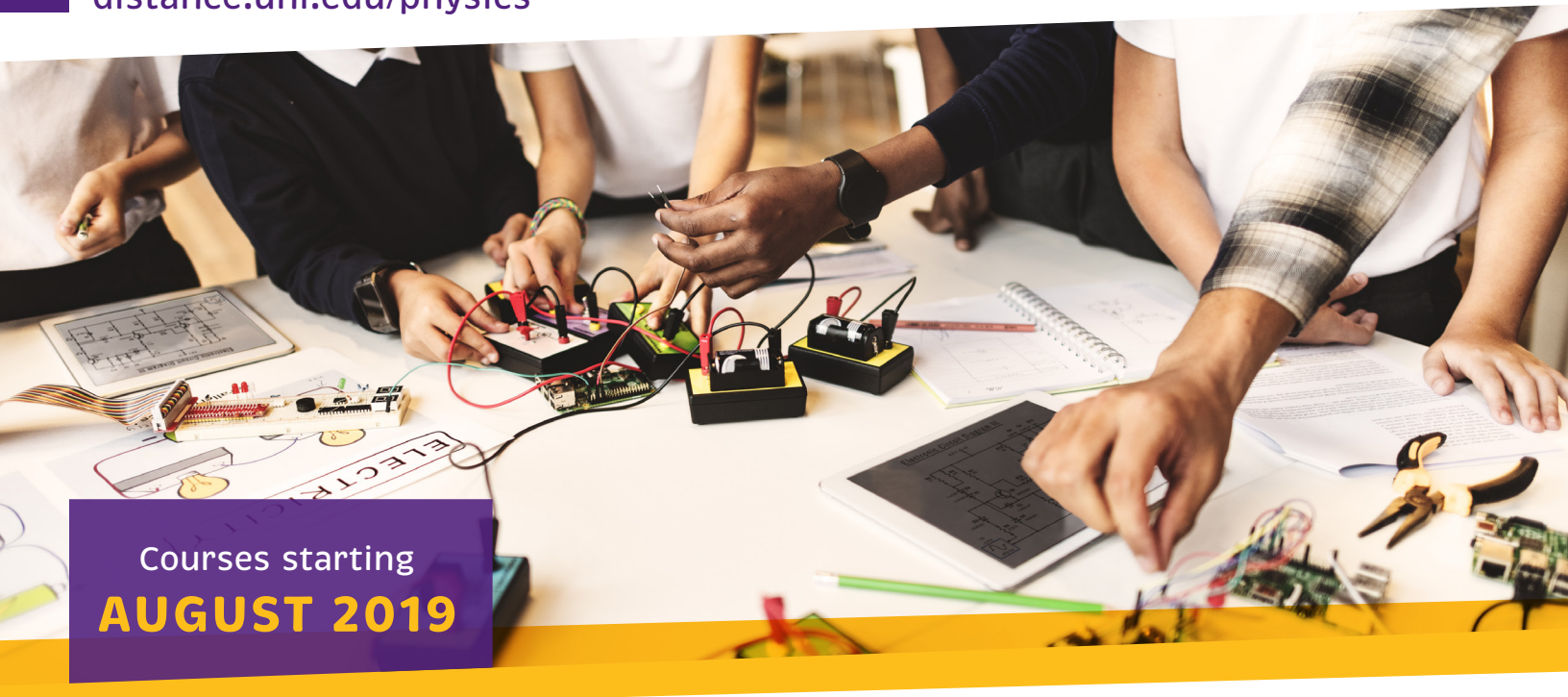


# PHYSICS COURSEWORK FOR IOWA 5-12 PHYSICS AND ALL SCIENCE ENDORSEMENTS

**UNI** at a **Distance**  
UNIVERSITY OF NORTHERN IOWA

[distance.uni.edu/physics](http://distance.uni.edu/physics)



Courses starting  
**AUGUST 2019**

## ELEVATE YOUR TEACHING

A new pathway for existing science and math teachers to become endorsed to teach physics has been created. This endorsement pathway will help improve teachers' physics content knowledge and better prepare Iowa students for a future in STEM. The coursework is designed for teachers who are licensed by the state of Iowa to teach 5-12 math or science and are interested in the Iowa 5-12 Physics Endorsement or the physics component of the Iowa 5-12 All Science Endorsement.

## PROGRAM OUTCOMES

The sequence of courses is designed to help participants learn how to:

- Build and demonstrate competencies in physics content knowledge and scientific practices.
- Implement research-based active-learning strategies and resources that engage students in a physics classroom in alignment with the Next Generation Science Standards (NGSS).
- Assess students' conceptual understanding and problem-solving competencies.

## FLEXIBLE DELIVERY

Coursework can be completed in 1 to 2 years; online courses will be offered during fall, spring and 8-week summer sessions, while on-campus courses are offered during the summer. Online courses are offered using a combination of Adobe Connect or Zoom, and Blackboard, a dynamic platform that will enhance your learning experience and sense of community with fellow classmates.



### ENROLL IN A COURSE

Please see the 'Program Schedule' tab at [distance.uni.edu/physics](http://distance.uni.edu/physics) for course details and enrollment information.



### NOT READY TO ENROLL?

Visit [distance.uni.edu/physics](http://distance.uni.edu/physics) to complete an online interest form and receive additional information.



### HAVE QUESTIONS?

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## Course offerings *(tentative)*

units in parentheses following course titles

### Fall 2019

- PHYSICS 1511** General Physics I (4)  
**PHYSICS 4159/5159** Physics of Sensors and Robotics (3)

### Spring 2020

- PHYSICS 4080/5080** Resources for Teaching Physics (2)

### Summer 2020

- PHYSICS 1512** General Physics II (4)  
**PHYSICS 4186/5186** Studies in Mechanics (2-3)\*  
*\*On the UNI campus*

### Fall 2020

- PHYSICS 1511** General Physics I (4)

### Spring 2021

- PHYSICS 4080/5080** Resources for Teaching Physics (2)

### Summer 2021

- PHYSICS 1512** General Physics II (4)  
**PHYSICS 4186/5186** Studies in Electricity & Magnetism+ (2-3)\*  
*\*On the UNI campus*

*Delivery of this program is subject to minimum enrollment requirements.*

## COURSEWORK IS DESIGNED FOR:

- **Math teachers who hold the Iowa Math Grades 5-12 endorsement** – those who currently hold an Iowa teaching license must complete 12 credits of physics coursework, plus a secondary science methods course to meet the Iowa Board of Educational Examiners (IBOEE) minimum requirement for this endorsement.
- **Chemistry teachers who hold the Iowa Chemistry Grades 5-12 endorsement** – those who currently hold an Iowa teaching license must complete 12 credits of physics coursework to meet the IBOEE minimum requirement for this endorsement.
- **Secondary science teachers and undergraduate science teaching majors who have 30 hours in the broad area of science** must complete 15 credits of physics coursework to meet the IBOEE minimum requirement for this endorsement.
- **Secondary science teachers and undergraduate science teaching majors who are working on the Iowa All Science Grades 5-12 endorsement** can complete 9 credits of physics coursework to meet the physics requirement of the IBOEE All Science Endorsement.
- **Teachers needing to earn physics credit**

*The University of Northern Iowa does not discriminate in employment or education. Visit [uni.edu/policies/1301](http://uni.edu/policies/1301) for additional information.*

## AFFORDABILITY

UNI strives to make an undergraduate or graduate education an affordable investment. All students in a UNI at a Distance program pay the same tuition, regardless of location.

### Tuition & fees for 2019-20\*

**\$320** per unit of undergraduate credit

**\$509** per unit of graduate credit

**\$38** technology fee per course

*\*Tuition and fees may be adjusted by the Iowa Board of Regents and are expected to increase in May.*