

# Matthew A Bryant

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## Employment

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Physics Teacher, South Warren High School, Bowling Green, KY—2012-2016, 2017-present  
Lecturer, Kent State University, Kent, OH—2016-2017  
Science Department Chair, South Warren High School, Bowling Green, KY —2014-2016  
Science Department Chair, Archbishop Hoban High School, Akron, OH —2004-2012  
Physics Teacher, Archbishop Hoban High School, Akron, OH—1999-2002 & 2003-2012  
Adjunct Instructor, Kent State University Geauga Campus, Twinsburg, OH —2000

## Education

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### **M.A., University of Akron, Akron, OH 2009**

Field of Study: Secondary Science Education, Emphasis Physics

Master's Project Title: *Dialogue concerning the Moribund and the Practical*

### **B.S., Kent State University, Kent, OH, 1999**

Field of Study: Science Education, Emphasis Physics

Graduated *summa cum laude*

## Graduate Physics Coursework

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### **Ohio State University, Columbus, OH—2002-2003**

PHYSICS 555: Fields and Waves I

PHYSICS 656: Fields and Waves II

PHYSICS 657: Fields and Waves III

PHYSICS 730: Methods of Theoretical Physics

PHYSICS 801: Graduate Seminar

PHYSICS 816: Topics in Physics

PHYSICS 880.20: Special Topics (Physics Education Research)

PHYSICS 999: Graduate Research

## Credentials

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### **National Board Teacher Certification**

Science--Adolescent & Young Adulthood--Physics 2017-2022

### **Ohio**

Professional License, High School (7-12): Physics, General Science. Renewal in 2023.

### **Kentucky**

Professional Certificate for Teaching Physics, Grades 8-12. Renewal in 2022.

## Teaching Competencies

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### General Physics

Conceptual Physics  
 Honors and Advanced Placement Physics  
 Algebra and Calculus Based Physics  
 Introductory Astronomy

### Secondary Interests

Inquiry Learning  
 Physics Labware/Probeware  
 Flipped Classroom/Video Lecture  
 Photography

## Courses Taught

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### South Warren High School, Bowling Green, KY—2012-2016, 2017-present

Introduction to Photography  
 Physics I  
 Pre-Advanced Placement Physics I  
 Modern Physics  
 Advanced Placement Physics B  
 Astronomy  
 Advanced Placement Physics C: Mechanics (2016 Ave. Student Score 3.933/5.000)

### Kent State University, Kent, OH—2016-2017

PHY 11030: Seven Ideas That Shook the Universe  
 PHY 13001: General College Physics I  
 PHY 21040: Physics in Entertainment & the Arts  
 PHY 21430: Frontiers in Astronomy

### Archbishop Hoban High School, Akron, OH—1999-2002 & 2003-2012

Earth Science  
 Astronomy  
 Conceptual Physics  
 College Preparatory Physics  
 Honors Physics  
 Advanced Placement Physics C: Mechanics (2012 Ave. Student Score 4.333/5.000)  
 Advanced Placement Physics C: Electricity & Magnetism (2012 Ave. Student Score 4.000/5.000)

### Ohio State University, Columbus, OH -- 2002-2003

PHYSICS 107: Physics by Inquiry, Electric Circuits (*Laboratory Instructor*)  
 PHYSICS 131H: Honors Physics, Particles & Motion (*Recitation Instructor*)  
 PHYSICS 132H: Honors Physics, Electricity & Magnetism (*Recitation Instructor*)

### Kent State University Geauga Campus, Twinsburg, OH—Fall 2000

PHY 11030: Seven Ideas That Shook the Universe

## Professional Activities

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### AP Physics Reader

Educational Testing Service (ETS), Kansas City, Missouri (June 2015, 2016, 2018)  
 Applied a standardized rubric in reading and scoring student answers on the Advanced Placement Physics I Exam. Met and collaborated with colleagues on best practices for addressing student needs in AP and non-AP Physics courses.

### Teacher in Residence

University of Wyoming, Laramie, Wyoming (Summer 2010, 2011, 2012, 2014, 2015)  
 Developed and implemented science lessons in conjunction with the Bernard Harris ExxonMobil Summer Science Camp run through the Department of Physics and Astronomy for forty-eight 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> grade students during a

10-day in-residence camp at the University of Wyoming. Also assisted with logistical planning and with team-building and camaraderie of the campers.

### **Franco-American Teacher in Training Institute (FATITI) Mentor Teacher**

College of Education, University of Akron, & Archbishop Hoban High School, Akron, Ohio (2006, 2007, & 2008)  
Served as a mentor teacher for visiting French student teachers through the FATITI program through the University of Akron. Advised and supervised their development and implementation of physics lessons for college preparatory and honors physics classes.

### **Physics Teacher Mentor**

College of Education, University of Akron, Akron, OH (2006-2007)  
Served as mentor teacher for six in-service Summit County science teachers studying to become certified physics teachers through an Ohio Core Program Grant: *Preparing Career Professionals for Physics* funded through the Ohio Department of Education. Met weekly to assist with physics assignments and conducted a “Technology in Physics Labs” workshop for all program participants.

### **Research Experience for Teachers**

Department of Physics and Astronomy, University of Wyoming, Laramie, WY (June-July 2004 & June 2006)  
Observed and recorded astronomical data at the Wyoming Infrared Observatory (2.2-meter telescope). Reduced astronomical images for photometry. Organized and wrote education grant for the Hubble Space Telescope E/PO program. Implemented grant proposal and developed curriculum for teaching light and color.

## School Service and Professional Affiliations

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### **Departmental & School Activities**

Member-District Common Physics Curriculum, Warren County Public Schools, Bowling Green, KY, June, 2018  
Presenter-*Teaching Waves with the NGSS*, Kentucky/Appalachian Association of Physics Teachers, Marshall University, March, 2018  
Role Playing Games Club Advisor, South Warren High School, 2017-present  
Colloquium Speaker-*Teaching, from the Core*, Kent State University, 2017  
Student Technology & Leadership Program Advisor, South Warren High School, 2015-2016  
Science Club Advisor, South Warren High School, Bowling Green, KY, 2014-2016  
Key Club Advisor, South Warren High School, Bowling Green, KY, 2013-2015  
Academic Council Member, Archbishop Hoban High School, Akron, OH 2004-2012  
Scheduling Specialist, Archbishop Hoban High School, 2010-2012  
Balsa Wood Model Bridge Teams Advisor, Archbishop Hoban High School, 2008-2012  
Academic Challenge Team Advisor, Archbishop Hoban High School, 2008-2009  
Science Olympiad Advisor, Archbishop Hoban High School, 2004-2008  
Student Council Moderator, Archbishop Hoban High School, 2000-2002

### **Professional Development Activities**

Einstein Plus at Perimeter Institute of Theoretical Physics, Waterloo, ON, July 2018  
National Science Teachers Association National Conference, Atlanta, GA, March 2018  
Flipped Classroom Two-Week Workshop, Kent, OH, June 2017  
National Board Certified Teacher Component 4 (of 4), May 2017  
Peer Instruction Workshops w/ Dr. Eric Mazur, Kent, OH, February 2017  
National Board Certified Teacher Components 2 & 3 (of 4), May 2016  
National Science Teachers Association National Conference, Nashville, TN, April 2016  
Advanced Placement Physics Reading, Kansas City, MO, June 2015 & 2016  
National Board Certified Teacher Component 1 (of 4), May 2015  
National Science Teachers Association National Conference, Chicago, IL, March 2015  
National Science Teachers Association Regional Conference, Louisville, KY, October 2012  
National Science Teachers Association Regional Conference, Nashville, TN, December 2010  
iPad in Education Workshop, Columbus, OH, October 2010  
AP Physics B/C Institute, St. Johnsbury, VT, July 2009

### **Membership in Academic Organizations**

National Science Teachers Association  
American Association of Physics Teachers  
Phi Delta Kappa

### Awards

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Warren County Public Schools Golden Apple Award, February 2014

( <https://youtu.be/YN4n4vScrTo?t=3m45s> )

Hazel Brown Outstanding Teaching Assistant Award, Ohio State University, May 2003

John Wiley Award in Physics, Kent State University, 1996

### References

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Available upon request