

Modern Physics

Mr. Bryant

"CONFUSION IS THE SWEAT OF LEARNING" – RHETT ALLAIN

SYLLABUS

Welcome to Modern Physics!

What is modern physics anyway??

In our modern physics class we will explore the physics important in understanding electromagnetism, special and general relativity, as well as nuclear, particle, and quantum physics—ideas developed from the late 19th through the 20th and 21st centuries.

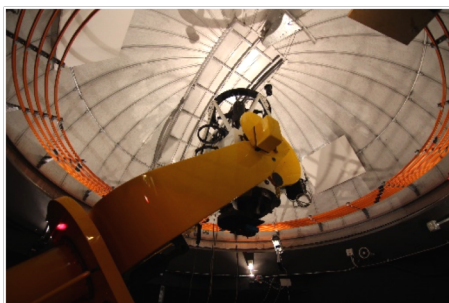
A short list of expectations:

- ➔ Please take the class seriously but not somberly!
- ➔ Make every effort to be here every day and on time.
- ➔ Help to care for the books, room, and equipment.
- ➔ Have a calculator close by every day.
- ➔ Consume food and drinks outside of class—except water in a reusable container.
- ➔ Phones should be set on silent and stowed in a safe place during class unless students ask to use them for an educational purpose.



THE BIG PICTURE

I want you to **do well** in this course,
to feel **comfortable** while you are here,
to approach the class **without fear**,
and to leave it **without regret**.



An Interactive Classroom

Our classroom environment will be one that I hope is interactive and collaborative. It's my hope that as I present material, students will be asking questions and checking their own understanding.

As we work together to learn some of the newest ideas in physics, we will build mental (and sometimes physical) models to help us understand. Groups will use whiteboards to share ideas within their groups and between groups. This approach requires students to come to class ready to learn, interact, and share.

Because some of the topics we will discuss involve high speeds and energies not available to us in a high school laboratory, we will make extensive use of models and computer simulations when needed.

Contact Information

matthew.bryant2@warren.kyschools.us

(Don't forget the "2!")

<http://www.mrbryant.net>

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Approximate point breakdown
(subject to change)

Quarter 1	Point Value
Circuits Quiz	50
Magnetism Test	100
EMI Test	100
Wave Optics Test	100
Labs	120
Class/Homework	280

Quarter 2	Point Value
Special Relativity Test	100
Nuclear Physics Test	100
Particle Physics Quiz	50
Quantum Quiz	50
Gen. Relativity Quiz	50
Labs	125
Class/Homework	275
Final Project/Exam	100



What to expect...

At Home (HW)

Homework reading, note-taking, and puzzle solving will be assigned from time to time.

You may need to complete unfinished classwork at home as well.

Please check the class calendar on www.mrbryant.net for assignments.

In Class (IC)

We will do a great deal of small group puzzle-solving and lab work in class.

When assisting others, your paper should always remain in your possession. "Coach" your colleagues rather than simply "hand-over" your solutions.

We will rotate lab partners and on lab days every student is required to submit their own paper stapled together with their partners. To encourage lab group communication & participation I will only score one student's lab paper per group—every group member earns that score.

Late Work Policy

Work submitted after the due date and prior to taking the unit assessment (quiz or test) can earn up to half-credit.

Late work submitted after the unit assessment will be recorded as a zero.

Late work due to an excused absence will not be penalized, but students should set up a new due date with Mr. Bryant.

Students have lots of opportunities to improve even after a "bad day" or two.

Bonus Points

Students can earn up to two bonus points each Monday.

One point can be earned by bringing in a *guardian signed* copy of your current Infinite Campus grade in Physics.

One point can be earned by bringing a *handwritten* copy of the agenda for the week ahead (available at www.mrbryant.net).

Students should *not* expect additional extra credit opportunities.

PHYSICS HELP

While our interactive classroom allows for lots of student help in class, but I'm also usually available before & after school—just set up a time with me.

I am happy to check your answers before you submit your regular work...this applies both in class and outside of class!

ESS on Thursdays is another option that's especially useful if you need a ride home. If I know some students are staying for ESS I am often available to stay as well.

ADDITIONAL PHYSICS PRACTICE AT
<http://www.physicsclassroom.com/>

Guardians & Students

I have read and understand the "Welcome to Modern Physics with Mr. Bryant" document.		
Guardian Signature		Date:
Guardian Email		
Student Signature		Date:
Printed Student Name		Block:
I have emailed Mr. Bryant <i>from my school email address.</i>	Yes / No (circle one) Students, do not submit without sending email.	Earned Points ____/5

Dear Caregiver,

I'm so delighted to have your student for physics this semester. Physics and teaching have been my passions since I began teaching 19 years ago and I'm always excited to meet new students and engage them in science.

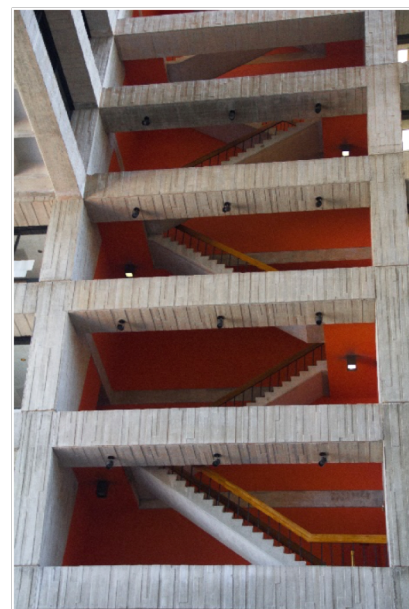
Thanks for reading the Welcome to Modern Physics with Mr. Bryant document and all the other paperwork the science department and school sends home. Please feel free to contact me with any questions or concerns – email is the best way to start:

matthew.bryant2@warren.kyschools.us

If you'd like to share something with me about your student's goals or your hopes for them this school year, feel free to use the space in the middle of the page. →

Sincerely,

Matt Bryant, NBCT
Physics Teacher
South Warren High School



Required Classroom Materials

- 1 or 1.5 inch 3-Ring Binder
- Loose-Leaf Paper
- Scientific Calculator
- \$10 Lab Fee (see separate letter)

Requested Classroom Materials

- Dry Erase Markers
- Kleenex (tissues)
- Hand sanitizer
- Clorox Wipes

Guardians, also look for, Science Department Welcome Letter, Science Lab Fee Letter, & Physics Lab Safety Contract...