

Bachelor of Science Degree **Mathematics and Physics** 2005-2006

Department of Mathematics

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Chairperson: Dr. Omar Hijab

Faculty Advisor: Dr. Boris

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Department of Physics

A116 Barton Hall
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Chairperson: Dr. C. Jeff Martoff

Faculty Advisor: Dr. Zbigniew

Dziembowski

www.temple.edu/physics

- **123** credits, **90** of which must be in CST/CLA courses
- **45** credits must be upper level (UL) coursework in either CST/CLA or UL course(s) that can be credited towards the major or declared 2nd major/minor chosen in consultation with an advisor.

- Appropriate Core Curriculum requirements:

Traditional Core 45 Core to Core

- The following requirements for the Mathematics & Physics Major:

Math Sequence: 0045 > C073 > C074 > C085 > 0086

First Year

- Calculus I (Math C085 or H095) ♦
- Calculus II (Math 0086 or H096) ♦
- Classical Physics I (Physics C087 or 0121) ♦
- Classical Physics II (Physics C088 or 0122) ♦

Second Year

- Calculus III (Math 0127) ♦
 - Basic Mathematical Concepts (Math W141) ♦ Math W141 can not be taken after Math W205 or 0247
 - Optics (Physics 0171) ♦
 - Mathematical Physics (Physics 0184) or Partial Differential Equations (Math 0351) ♦
 - Electricity & Magnetism with Lab (Physics 0187 & 0187L) ♦
 - Intro to Modern Physics with Lab (Physics 0188 & 0188L) ♦
 - Differential Equations (Math 0251) ♦
 - Introduction to Probability (Math 0233)
- [prereq Math 0086 w/ "C" or better; co-req Math 0127]

Third Year

- Linear Algebra (Math 0147 or 0148) [prereq one yr. of calculus]
- Thermodynamics (Physics 0231) ♦
- Modern Algebra (Math W205) [prereq Math 0147 or 0148]
- Advanced Calculus (Math 0247) [prereq Math 0127]
- Mechanics (Physics 0201) ♦
- Classical Electromagnetism (Physics 0211) ♦
- Advanced Calculus (Math 0248) [prereq Math 0247]

Fourth Year

- Computing for Scientists (Physics 0161) ♦
 - Experimental Physics (Physics W215) ♦
 - Mechanics (Physics 0202) ♦
 - Quantum Mechanics (Physics 0306) ♦
 - Numerical Analysis I (Math 0253) [prereq Math 0127, Math 0147 or 0148, and a course in computer programming]
 - Introduction to Functions of a Complex Variable (Math 0347)
- [prereq Math 0248]

Traditional Core

For students starting as freshmen or transferring with fewer than 45 credits.

- English C050 _____
- American Culture _____
- The Arts _____
- Individual and Society _____
- Studies in Race _____
- Foreign Language 2nd level * _____
- Foreign Language 3rd level * _____
- International Studies * _____
- International Studies (non western) * _____
- Science and Technology (SA) _____
- Science and Technology (SB) _____
- Quantitative Reasoning (QA) _____
- Quantitative Reasoning (QB) _____
- Intellectual Heritage X051 _____
- Intellectual Heritage X052 _____
- Writing Intensive Elective _____
- Writing Intensive Elective (Must be taken at Temple) _____
- Writing Intensive in Major (Must be taken at Temple) _____

* B.S.

- 2 International Studies (IS) 1 non western or
- 2nd level of a language + 1 IS or
- 3rd level of a language /Exempt ^

Core 45 +

For students receiving 45 credits or more in transfer.

- English C050 _____
 - American Culture _____
 - The Arts _____
 - Individual and Society _____
- } 2 of the 3
- Studies in Race _____
 - Science and Technology (SA or SB) _____
 - Quantitative Reasoning (QA or QB) _____
 - Intellectual Heritage X051 or X052 _____
 - Writing Intensive Elective (Must be taken at Temple) _____
 - Writing Intensive in Major (Must be taken at Temple) _____
 - Foreign Language _____
 - International Studies _____

* B.S.

- 1 International Studies (IS) or
- 2nd level of a language/Exempt^

Core to Core

For students who have completed an approved Associate's degree from a college that has an established transfer agreement with Temple.

- Writing Intensive Elective (Must be taken at Temple) _____
 - Writing Intensive in Major (Must be taken at Temple) _____
 - Library Skills (TILT) www.library.temple.edu
- (Must be taken in order to graduate)

^If English is your second language, speak with an advisor about possible exemption.
Revised 7/7/05

♦Courses have pre- and/or co-requisites, consult course descriptions for details.