

**PHYSICS**  
**DEPARTMENT OF PHYSICS**  
**COLLEGE OF LETTERS & SCIENCES**  
**(38 UNITS) BS/BA/BSE**

**Calculation Skills**

MATH 152 Elementary Functions (5 units) *Pre-req: MATH 141(C or better)*

MATH 253 Calculus & Analytical Geometry I (5 units) *Pre-req: MATH 152/Un-req: MATH 243 and MATH 250*

MATH 254 Calculus & Analytical Geometry II (5 units) *Pre-req: MATH 250 (B or better) or MATH 253*

MATH 255 Calculus & Analytical Geometry III (3 units) *Pre-req: MATH 254* **BA/BS ONLY**

**Physics Requirements**

**Freshman year**

PHYSICS 190 Horizons of Engr.&Phys. (1 unit, taken twice as Fresh. & Soph.) (*offered Fall only*)

**AND**

PHYSICS 180 Physics for Scientists and Engineers I (5 units) *Co-req: MATH 253, (offered in Fall only)*

PHYSICS 181 Physics Sci/Engr. II (5 units) *Pre-req: PHYSICS 180/Co-req: MATH 254 (offered Spring only)*

**OR**

PHYSICS 140\* Principles of Physics I (5 units) *Pre-req: MATH 152, Co-req: MATH 253#, (offered in Fall only)*

PHYSICS 141\* Prin. of Physics II (5 units) *Pre-req: PHYSICS 140/Co-req: MATH 254# (offered Spring only)*

**Sophomore Fall Semester**

PHYSICS 305 Mechanics-Statics (3 units) *Pre-req: PHYSICS 181 or PHYSICS 141; and MATH 254*

PHYSICS 190 Horizons of Engr.&Phys. (1 unit, taken twice as Fresh. & Soph.) (*offered Fall only*)PHYSICS 324

Methods of Theor. Physics (3 units) *Pre-req: PHYSICS 181 or PHYSICS 141; and MATH 254*

(Notes: \*While the Physics 140 series is allowed for BSE emphasis, it is *strongly* recommended that physics majors take the 180 series especially if considering Graduate School. The 140 sequence is *not* permitted in the Industry and Engineering emphases.

#Co-requisite of Math 253 and Math 254 in PHYSICS 140 and 141 are necessary to prepare physics majors for PHYSICS 305 and 324 taken in sophomore year.)

**Chemistry Requirements (for Engineering & Industry emphases only)**

CHEM 102 Introductory Chemistry (5 units) *Pre-req: MATH 141*

CHEM 104 Introductory Chemistry (5 units) *Pre-req: CHEM 102*

**CompSci Requirements (for Engineering/Graduate School/Industry emphases only)**

COMPSCI 173 Intro to Fortran Programming (3 units) *Pre-req: MATH 152 or 143 or Co-req: Math 253*

**Important Facts:**

- Physics majors should **declare** as soon as possible.
- Students with low math placement should immediately see Physics Chair Dr. Steven Sahyun\*\*.
- Very important for students to begin the **Math and Physics sequences** in Freshman Fall Semester
- **Four emphases:** Industrial, Engineering, Education and Graduate School
- PHYSICS 100 (GM), PHYSICS 120 (GL), PHYSICS 130 (GL), PHYSICS 150 (GM), PHYSICS 212 (GL) and PHYSICS 240 (GM) do not count towards major.
- Most common minors are Math (finishing unique math requirements place most students only 3 units away for finishing Math minor), Chemistry, Management Computer Systems and Biology
- A **Three-Two Year Degree Program** in Engineering is available with UW-Milw and UW-Mad.
- Physics majors cannot minor in physics

**Sample Career Options: (for other options, see <http://www.aip.org/statistics/trends/emptrends.html>)**

Teachers, Lab Techs, Engineer, Military Research, Analyst, Law School and Patent Lawyer

**Note: This is intended to be a guide and is not a binding document. Students have the ultimate responsibility to use their Advising Report (AR) for monitoring their course of study.**

**\*\*Contact Information (revised March 2008):**

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