



# DEGREE WORKSHEET FOR:

## BS Physics

### 2014-2015 Catalog

### Degree Requirements – 120 credits

| YEAR 1- FALL (14 credits)                                                                       |             | YEAR 1- SPRING (15 credits)                    |             |
|-------------------------------------------------------------------------------------------------|-------------|------------------------------------------------|-------------|
| PHYS 240 General Physics I (LAC Area 6)                                                         | 5 credits   | PHYS 241 General Physics II                    | 5 credits   |
| MATH 131 <sup>1</sup> Calculus I (LAC Area 2)                                                   | 4 credits   | MATH 132 <sup>1</sup> Calculus II (LAC Area 2) | 4 credits   |
| CHEM 111 Principles of Chemistry I                                                              | 5 credits   | ENG 122 College Composition (LAC Area 1)       | 3 credits   |
|                                                                                                 |             | Liberal Arts Core <sup>2</sup> /Electives      | 3 credits   |
| YEAR 2- FALL (14 credits)                                                                       |             | YEAR 2- SPRING (16 credits)                    |             |
| PHYS 320 Mathematical Methods I                                                                 | 3 credits   | PHYS 321 Elementary Modern Physics             | 4 credits   |
| MATH 233 Calculus III                                                                           | 4 credits   | PHYS 420 Mathematical Methods II               | 3 credits   |
| CS or CG Elective Course                                                                        | 3 credits   | Math Elective                                  | 3 credits   |
| Liberal Arts Core <sup>2</sup> /Electives                                                       | 4 credits   | Liberal Arts Core <sup>2</sup> /Electives      | 6 credits   |
| <sup>3</sup> For students beginning their 3 <sup>rd</sup> year in odd years (2015, 2017, etc.)  |             |                                                |             |
| YEAR 3- FALL (15 credits)                                                                       |             | YEAR 3- SPRING (14 credits)                    |             |
| PHYS 340 Mechanics                                                                              | 4 credits   | PHYS 301 Seminar in Physics                    | 1 credit    |
| Physics Electives <sup>4</sup>                                                                  | 8 credits   | PHYS 341 Electricity and Magnetism             | 4 credits   |
| Liberal Arts Core <sup>2</sup> /Electives                                                       | 3 credits   | Liberal Arts Core <sup>2</sup> /Electives      | 9 credits   |
| YEAR 4- FALL (16-18 credits)                                                                    |             | YEAR 4- SPRING (16-18 credits)                 |             |
| PHYS 345 Quantum Mechanics I                                                                    | 3 credits   | PHYS 445 Quantum Mechanics II                  | 3 credits   |
| PHYS 360 Laboratory Physics I                                                                   | 2 credits   | PHYS 460 Laboratory Physics II                 | 2 credits   |
| PHYS 370 <sup>5</sup> Research I                                                                | 1-3 credits | PHYS 470 <sup>6</sup> Research II              | 1-3 credits |
| PHYS 440 Thermodynamics & Statistical Mechanics                                                 | 4 credits   | PHYS 448 Nuclear & Particle Physics            | 4 credits   |
| Liberal Arts Core <sup>2</sup> /Electives                                                       | 6 credits   | Liberal Arts Core <sup>2</sup> /Electives      | 6 credits   |
| <sup>3</sup> For students beginning their 3 <sup>rd</sup> year in even years (2014, 2016, etc.) |             |                                                |             |
| YEAR 3- FALL (16 credits)                                                                       |             | YEAR 3- SPRING (17 credits)                    |             |
| PHYS 340 Mechanics                                                                              | 4 credits   | PHYS 301 Seminar in Physics                    | 1 credit    |
| PHYS 360 Laboratory Physics I                                                                   | 2 credits   | PHYS 341 Electricity and Magnetism             | 4 credits   |
| PHYS 440 Thermodynamics & Statistical Mechanics                                                 | 4 credits   | PHYS 448 Nuclear & Particle Physics            | 4 credits   |
| Liberal Arts Core <sup>2</sup> /Electives                                                       | 6 credits   | PHYS 460 Laboratory Physics II                 | 2 credits   |
|                                                                                                 |             | Liberal Arts Core <sup>2</sup> /Electives      | 6 credits   |
| YEAR 4- FALL (15-17 credits)                                                                    |             | YEAR 4- SPRING (13-15 credits)                 |             |
| PHYS 345 Quantum Mechanics I                                                                    | 3 credits   | PHYS 445 Quantum Mechanics II                  | 3 credits   |
| PHYS 370 <sup>5</sup> Research I                                                                | 1-3 credits | PHYS 470 <sup>6</sup> Research II              | 1-3 credits |
| Physics Electives <sup>4</sup>                                                                  | 8 credits   | Liberal Arts Core <sup>2</sup> /Electives      | 9 credits   |
| Liberal Arts Core <sup>2</sup> /Electives                                                       | 3 credits   |                                                |             |

**Admission Requirement – No separate admission requirement.**

**Minor Required – No Minor required.**

**Contact Information – Department of Physics and Astronomy**

**Ross Hall Room 0232, 970-351-2961**

**Program Web Page: <http://www.unco.edu/nhs/physics/index.html>**

This worksheet is a recommended schedule to complete your bachelor's degree in 4 years. Every UNC student must meet the following requirements in order to graduate with a bachelor's degree: earn a minimum of 120 semester credit hours; possess a minimum of a 2.00 cumulative grade point average; have at least 40 credit hours in courses designated as Liberal Arts Core; meet all degree requirements in the student's major field of study. Each major and/or emphasis may have additional requirements necessary for graduation.

**Students must consult with their major advisor to receive information on any additional graduation requirements.**

## **Notes**

<sup>1</sup>Students who lack sufficient preparation in mathematics may need to start in MATH 124 (4) -- College Algebra, MATH 125 (3)--Plane Trigonometry, or MATH 127 (4)--Elementary Functions. Please consult your Physics faculty advisor.

<sup>2</sup>To satisfy the Liberal Arts Core requirements using this plan, students need to select courses from Area 7 and/or 8 that also count for Areas 3, 4, or 5.

<sup>3</sup>Since some of the major courses are offered every other year, two plans are provided -- one for the student's 3rd year commencing in an even year and one for it commencing in an odd year. If a student starts the physics major in 2014-2015 and stays on track, their 3<sup>rd</sup> year would begin in 2016, an even year.

<sup>4</sup>Suggested physics electives are: PHYS 343, PHYS 347, PHYS 447, PHYS 455, AST 301 or AST 302.

<sup>5</sup>Students must select a senior research topic and have it approved by their physics faculty advisor in order to register for their final year of classes.

<sup>6</sup>HON 451 may be substituted for PHYS 470.

A minimum 2.0 cumulative grade point average is required in PHYS prefix courses for graduation.