

BACHELOR OF SCIENCE DEGREE PHYSICS

COORDINATE MAJOR

FOR ADDITIONAL INFORMATION, PLEASE CONTACT THE [DEPARTMENT OF PHYSICS AND ASTRONOMY](#)

(1) UNIVERSITY REQUIREMENTS

Writing Requirement

Tier I: LB 133 4
Tier II: Satisfied by completing the Lyman Briggs College History, Philosophy and Sociology of Science and Senior requirements listed below.

Integrative Studies in Arts & Humanities (IAH)

IAH 201-210* 4
IAH 211-241*† 4

Integrative Studies in Social, Behavioral & Economic Sciences (ISS)

ISS 200-level course* 4
ISS 300-level course*‡ 4

*National, International, & Multicultural Diversity
Students must include at least one "N" course and one "I" course in their Integrative Studies programs. A "D" course may meet either an "N" or an "I" requirement, but not both.

†Beginning Summer 2013, LB 331, 333, and 336 will fulfill the IAH "B" university requirement (IAH 211 or higher). Please consult your LBC advisor for specific details for your program.

‡Beginning Summer 2013, LB 332, 334, and 335 will fulfill the ISS 300-level university requirement. Please consult your LBC advisor for specific details for your program.

Mathematics, Biological and Physical Sciences

Satisfied by the Lyman Briggs College requirements in Mathematics, Biological and Physical Sciences (see below).

Minimum number of credits required: 120

Minimum cumulative and major grade point average: 2.0

(2) LYMAN BRIGGS COLLEGE REQUIREMENTS

Biological Sciences (9 cr.)

Complete ONE of the following groups of courses
(1) LB 144 & 145 9
(2) BS 161, 162, 171, & 172 10

Chemistry (8-9 cr.)

Complete ONE of the following groups of courses
(1) LB 171, 171L, 172, & 172L 9
(2) CEM 141, 142, & 161 8
(3) CEM 151, 152, & 161 8

Physics (8-10 cr.)

Complete ONE of the following groups of courses
(1) LB 273, 274* 8
(2) PHY 183, 184, 191 & 192* 10

Mathematics (6-7 cr.)

Complete ONE of the following groups of courses
(1) LB 118 & 119* 8
(2) MTH 132 & 133* 7

History, Philosophy & Sociology of Science (11-12 cr.)

LB 133 4
LB 330-336, 355, 490E; ENG 473A; HST 425; SOC 368 7-8

Senior Seminar (4 cr.)

LB 492 4

*Physics & Mathematics courses also meet graduation requirements for major

(3) MAJOR REQUIREMENTS

Complete ALL of the following courses (29 cr.)

LB	220	Calculus III	4*
MTH	235	Differential Equations	3
PHY	215	Thermodynamics and Modern Physics	3†
PHY	321	Classical Mechanics I	3
PHY	410	Thermal and Statistical Physics	3
PHY	440	Electronics	4
PHY	451	Advanced Laboratory	3
PHY	471	Quantum Physics I	3
PHY	481	Electricity and Magnetism I	3

*MTH 234 can be substituted for LB 220

†PHY 215B can be substituted for PHY 215

Complete TWO additional math courses, 300 or above (6 cr.)

MTH	3XX+	Math 300 Level or above (May also use LB/PHY 415 Methods Theoretical Physics)	6-8
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Complete ONE of the following groups of courses (4-6 cr.)

(a) Thesis cluster

PHY	390	Physics Journal Seminar	1
PHY	490	Senior Thesis	3

- OR -

(b) Lecture course cluster

PHY	491	Atomic, Molecular, and Condensed Matter Physics	3
PHY	492	Nuclear and Elementary Particle Physics	3

The completion of PHY 390 & 490, or PHY 491 & 492, fulfills the Physics department's capstone course requirement.

IMPORTANT: These guidelines are presented for planning purposes only. Students MUST consult a department advisor for confirmation of major requirements.