

# BACHELOR OF SCIENCE DEGREE

## PHYSIOLOGY

### COORDINATE MAJOR

FOR ADDITIONAL INFORMATION, PLEASE CONTACT THE DEPARTMENT OF PHYSIOLOGY ADVISING OFFICE

#### (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.

†Summer 2013 to Summer 2017: LB 331, 333, and 336 will fulfill the IAH "B" university requirement (IAH 211 or higher). Please consult your LBC Academic Advisor for specific details for your program.

‡Summer 2013 to Summer 2017; LB 332, 334, and 335 will fulfill the ISS 300-level university requirement. Please consult your LBC Academic Advisor for specific details for your program.

# Beginning Fall 2017; LB 321a, 322a, 323a, 324a, 325a, 326a and 327a will fulfill the IAH university requirement (IAH 211 or higher).

@ Beginning Fall 2017; LB 321b, 322b, 323b, 324b, 325b, 326b and 327b will fulfill the ISS 300-level university requirement.

Please contact your LBC Academic Advisor for specific details for your program. If you fulfilled the LB 331, 332, 333, 334, 335 or 336 requirement you do not need the new Fall 2017 courses.

##### Mathematics, Biological and Physical Sciences

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

#### (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, 162 9

##### Physics (8 cr.)

Complete ONE of the following groups of courses  
 (1) LB 273, 274\* 8  
 (2) PHY 183, 184, 191, & 192\*\* 10  
 (3) PHY 231, 232, 251, & 252\* 8

##### Mathematics (6-7 cr.)

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

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

LB 133 4  
 LB 321-327, 330-336, 355, 490E; ENG 473A; HST 425; SOC 368 7-8

##### Senior Seminar (4 cr.)

LB 492 4

\*Physics and Mathematics courses also meet graduation requirements for major

\*\*Students choosing to complete PHY 183 and 184 must also take PHY 191 and 192 for a total of 10 credits

Minimum number of credits required: 120

Minimum cumulative and major grade point average: 2.0

### (3) MAJOR REQUIREMENTS

Complete ALL of the following courses (17 cr.)

BMB	461	Advanced Biochemistry I	3
BMB	462	Advanced Biochemistry II	3
CEM	251	Organic Chemistry I	3
CEM	252	Organic Chemistry II	3
CEM	255	Organic Chemistry Laboratory	2
PSL	431	Human Physiology I	4
PSL	432	Human Physiology II	4
PSL	450	Physiology in Health & Disease	3
PSL	475L	Capstone Laboratory in Physiology	2

Complete ONE of the following courses (3-4 cr.)

ANTR	350	Human Gross Anatomy & Structural Biology	3
IBIO	320	Developmental Biology	4
IBIO	328	Comparative Anatomy & Biology of Vertebrates	4

Complete ONE of the following courses (3-4 cr.)

STT	200	Statistical Methods	3
STT	201	Statistical Methods	4
STT	231	Statistics for Scientists	3
STT	464	Statistics for Biologists	3

Complete ONE of the following courses (3 cr.)

CEM	383	Introductory Physical Chemistry I	3
PSL	425	Physiological Biophysics	3

Complete ONE of the following courses (2 cr.)

PSL	420	Membrane Biophysics: An Introduction	2
PSL	421	Adult & Embryonic Stem Cells	2
PSL	438	Topics in Biology & Cell Phys of Cancer	2
PSL	439	Special Topics in Physiology	2
PSL	440	Topics in Cell Physiology	2
PSL	441	Topics in Endocrinology	2
PSL	442	Topics in Cardiovascular Physiology	2
PSL	443	Topics in Respiratory Physiology	2
PSL	444	Topics in Reproductive Physiology	2
PSL	445	Topics in Environmental Physiology	2
PSL	446	Topics in Sensory Physiology	2
PSL	447	Topics of Brain Function	2
PSL	448	Topics in Gastrointestinal Physiology	2
PSL	449	Topics in Neurophysiology & Neural Development	2

Complete 12 credits in non-science courses beyond the credits that are counted toward University requirements. HPS courses used to satisfy Lyman Briggs College requirements may be used towards these 12 credits; see an academic advisor for more information.

**IMPORTANT: This advising guide is presented for planning purposes only. It is the student's responsibility for knowing and following University, college and departmental requirements as stated in the [Academic Programs Catalog](#).**

**The Academic Advisors will provide information and suggest others based on expressed interests. It is the student's responsibility for enrolling in classes and selecting the number of credits per semester for success. Appointments are made using the [Student Success Dashboard](#).**

# Physiology

## Course Planning Guide

### **Major Requirements to be completed within Year 1 and 2:**

**Calculus and Statistics** (LB 118 & 119)

**Chemistry** (LB 171/171L & LB 172/LB 172L)

**Biology** (LB 144 & 145)

**Organic Chemistry** (CEM 251& 252)

**Physics** (LB 273 & 274)

**Statistics** (STT 200, 201, OR 231)

### **Major Requirements to be completed within Year 3 and 4:**

**Biochemistry** (BMB 461 & 462)

**Chemistry** (CEM 255)

**Anatomy** (ANTR 350, IBIO 320 OR IBIO 328)

**Physiology** (PSL 431, PSL 432, PSL 450, PSL 475L, PSL 425 or CEM 383)

**PSL writing** (2 credits-see list of choices)

### **Major Requirements to be completed prior to Graduation:**

**Non-Science courses** (12 credits needed)\*

### **University/College Requirements to be completed prior to Graduation:**

**Tier I Writing** (LB 133)

**Integrative Studies in Social Science** (ISS 200-level & LB 32XB)

**Integrative Studies in Arts & Humanities** (IAH 201-210 & LB 32XA)

**History, Philosophy, Sociology of Science** (2 upper-level HPS courses\*\*)

**Senior Seminar/Capstone** (LB 492)

\*HPS courses can count in this 12 credits

\*\*Can double as ISS 3XX and IAH 211+

*IMPORTANT: This sample plan is to generate ideas for scheduling your courses and is based on a 15-credit-per-semester model for 4-year graduation with a calculus math placement score. Each student's plan will be different and based on individual needs, careers goals, math placement, and other factors. The minimum number of credits for graduation is 120.*