

Human Biology Major

Students must complete requirements in one of the following areas of emphasis:

- Health Science
- Exercise Science
- Applied Public Health
- Nutritional Sciences/Dietetics
- General Human Biology
- Cytotechnology

Health Science

Code	Title	Credits
Supporting Courses ¹		41-44
BIOLOGY 201 & BIOLOGY 202	Principles of Biology: Cellular and Molecular Processes and Principles of Biology Lab: Cellular and Molecular Processes	
CHEM 207	Laboratory Safety (must take at the same time OR before taking chemistry)	
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory	
CHEM 212 & CHEM 214	Principles of Chemistry II and Principles of Chemistry II Laboratory	
Choose one (of 2) Anatomy and Physiology options:		
HUM BIOL 240 & HUM BIOL 241	Anatomy and Physiology and Anatomy and Physiology Lab	
or BOTH		
HUM BIOL 221 & HUM BIOL 222	Anatomy and Physiology I and Anatomy and Physiology II	
MATH 260	Introductory Statistics	
Choose one of the following courses:		
MATH 104	Precalculus	
MATH 202	Calculus and Analytic Geometry I	
MATH 203	Calculus and Analytic Geometry II	
Choose one of the following options:		
PHYSICS 103 & PHYSICS 104	Fundamentals of Physics I and Fundamentals of Physics II	
PHYSICS 201 & PHYSICS 202	Principles of Physics I and Principles of Physics II	
Writing Requirement ²		
WF 105	Research and Rhetoric	
Choose one of the following 3 options:		
COMM 133	Fundamentals of Public Address	
or COMM 166	Fundamentals of Interpersonal Communication	
OR		
Any literature course, e.g., ENGLISH 104 Introduction to Literature		
OR		
One year of any college-level foreign language		
Upper-Level Courses		32-33
Choose three of the following course options:		
BIOLOGY 303 or HUM BIOL 310	Genetics Human Genetics	
BIOLOGY 307	Cell Biology	
HUM BIOL 402	Human Physiology	
NUT SCI 300	Human Nutrition	

Required Courses

BIOLOGY 323 & BIOLOGY 324	Principles of Microbiology and Principles of Microbiology Laboratory
CHEM 302 & CHEM 304	Organic Chemistry I and Organic Chemistry Laboratory I
CHEM 303 & CHEM 305	Organic Chemistry II and Organic Chemistry Laboratory II
CHEM 330 or CHEM 311	Biochemistry Analytical Chemistry

Health Science Electives (minimum of 8 credits):³

BIOLOGY 304	Genetics Laboratory
BIOLOGY 308	Cell Biology Laboratory
BIOLOGY 340	Comparative Anatomy of Vertebrates
BIOLOGY 402	Advanced Microbiology
BIOLOGY 408	Molecular Biology Laboratory
BIOLOGY 411	Developmental Biology Laboratory
CHEM 331	Biochemistry Laboratory
HUM BIOL 341	Human Anatomy Laboratory
HUM BIOL 351	Kinesiology
HUM BIOL 361 & HUM BIOL 360	Human Physiology Lab - Exercise and Metabolism and Exercise Physiology
HUM BIOL 403	Human Physiology Laboratory
HUM BIOL 423	Immunology Lab
HUM BIOL 427	Cancer Biology Laboratory

Additional Upper-Level Electives

BIOLOGY 303	Genetics
BIOLOGY 304	Genetics Laboratory
BIOLOGY 307	Cell Biology
BIOLOGY 308	Cell Biology Laboratory
BIOLOGY 309	Evolutionary Biology
BIOLOGY 340	Comparative Anatomy of Vertebrates
BIOLOGY 345	Animal Behavior
BIOLOGY 346	Comparative Physiology
BIOLOGY 402	Advanced Microbiology
BIOLOGY 407	Molecular Biology
BIOLOGY 408	Molecular Biology Laboratory
BIOLOGY 410	Developmental Biology
BIOLOGY 411	Developmental Biology Laboratory
CHEM 311	Analytical Chemistry
CHEM 330	Biochemistry
CHEM 331	Biochemistry Laboratory
HUM BIOL 310	Human Genetics
HUM BIOL 318	Reproductive Biology
HUM BIOL 322	Epidemiology
HUM BIOL 324	The Biology of Women
HUM BIOL 331	Science and Religion: Spirit of Inquiry
HUM BIOL 333	Principles of Sports Physiology
HUM BIOL 360 & HUM BIOL 361	Exercise Physiology and Human Physiology Lab - Exercise and Metabolism
HUM BIOL 401	Art and Science
HUM BIOL 413	Neurobiology
HUM BIOL 402	Human Physiology
HUM BIOL 403	Human Physiology Laboratory

HUM BIOL 422	Immunology
HUM BIOL 426	Cancer Biology
HUM BIOL 444	Endocrinology
NUT SCI 300	Human Nutrition
NUT SCI 327	Nutritional Biochemistry
NUT SCI 350	Life Cycle Nutrition
NUT SCI 427	Nutrigenomics and Advanced Nutrient Metabolism
NUT SCI 486	Medical Nutrition Therapy II: An Integrative and Functional Approach
Maximum of ONE Psychology course	
PSYCH 308	Physiological Psychology (Maximum of ONE Psychology Course)
PSYCH 435	Psychopathology
PSYCH 450	Health Psychology

Total Credits**73-77**

- ¹ It is highly recommended that as **freshmen**, pre-medical and pre-dental students take BIOLOGY 201, BIOLOGY 202 and CHEM 211, CHEM 212, CHEM 213, CHEM 214 and consult and adviser.
- ² Satisfied with an ACT English score of 32 or higher.
- ³ Requires a minimum of two upper-level laboratory courses within the Health Science electives

Exercise Science

Code	Title	Credits
Supporting Courses		27
BIOLOGY 201 & BIOLOGY 202	Principles of Biology: Cellular and Molecular Processes and Principles of Biology Lab: Cellular and Molecular Processes	
CHEM 207	Laboratory Safety (must take at the same time OR before taking chemistry)	
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory	
CHEM 212 & CHEM 214	Principles of Chemistry II and Principles of Chemistry II Laboratory	
HUM BIOL 116	First Aid and Emergency Care Procedures (First Aid/CPR Requirement may be met with Red Cross Certification))	
HUM BIOL 210	Prevention and Treatment of Athletic Injuries	
MATH 260	Introductory Statistics	
PHYSICS 103 or PHYSICS 201	Fundamentals of Physics I Principles of Physics I	
Choose one (of 2) Anatomy and Physiology Options:		
HUM BIOL 240 & HUM BIOL 241 or BOTH	Anatomy and Physiology and Anatomy and Physiology Lab	
HUM BIOL 221 & HUM BIOL 222	Anatomy and Physiology I and Anatomy and Physiology II	
Writing Requirement ¹		0-3
WF 105	Research and Rhetoric	
Choose one of the following 3 options:		
COMM 133 or COMM 166	Fundamentals of Public Address Fundamentals of Interpersonal Communication	
OR		
Any literature course, e.g., English104 Introduction to Literature		
OR		
One year of any college-level foreign language		
Strongly recommended, but not required.		
NURSING 200	Fundamentals of Healthcare Terminology	
Upper-Level Courses		30

HUM BIOL 333	Principles of Sports Physiology
HUM BIOL 351	Kinesiology
HUM BIOL 360 & HUM BIOL 361	Exercise Physiology and Human Physiology Lab - Exercise and Metabolism
NUT SCI 300	Human Nutrition
Choose one of the following courses:	
BIOLOGY 303 or HUM BIOL 310	Genetics Human Genetics
Organic Chemistry options	
CHEM 300 & CHEM 301	Bio-Organic Chemistry and Bio-Organic Chemistry Laboratory
OR	
CHEM 302 & CHEM 304	Organic Chemistry I and Organic Chemistry Laboratory I
Additional Courses ²	
BIOLOGY 303	Genetics
BIOLOGY 304	Genetics Laboratory
BIOLOGY 307	Cell Biology
BIOLOGY 308	Cell Biology Laboratory
BIOLOGY 309	Evolutionary Biology
BIOLOGY 323	Principles of Microbiology
BIOLOGY 324	Principles of Microbiology Laboratory
BIOLOGY 340	Comparative Anatomy of Vertebrates
BIOLOGY 345	Animal Behavior
BIOLOGY 346	Comparative Physiology
BIOLOGY 402	Advanced Microbiology
BIOLOGY 407	Molecular Biology
BIOLOGY 408	Molecular Biology Laboratory
BIOLOGY 410	Developmental Biology
BIOLOGY 411	Developmental Biology Laboratory
CHEM 303	Organic Chemistry II
CHEM 305	Organic Chemistry Laboratory II
CHEM 330	Biochemistry
CHEM 331	Biochemistry Laboratory
HUM BIOL 341	Human Anatomy Laboratory
HUM BIOL 403	Human Physiology Laboratory
HUM BIOL 423	Immunology Lab
HUM BIOL 427	Cancer Biology Laboratory
HUM BIOL 310	Human Genetics
HUM BIOL 318	Reproductive Biology
HUM BIOL 322	Epidemiology
HUM BIOL 324	The Biology of Women
HUM BIOL 331	Science and Religion: Spirit of Inquiry
HUM BIOL 361	Human Physiology Lab - Exercise and Metabolism
HUM BIOL 401	Art and Science
HUM BIOL 402	Human Physiology
HUM BIOL 413	Neurobiology
HUM BIOL 422	Immunology
HUM BIOL 426	Cancer Biology
HUM BIOL 444	Endocrinology
HUM BIOL 495	Teaching Assistantship
HUM BIOL 497	Internship
HUM BIOL 498	Independent Study

NUT SCI 327	Nutritional Biochemistry
NUT SCI 350	Life Cycle Nutrition
NUT SCI 427	Nutrigenomics and Advanced Nutrient Metabolism
NUT SCI 486	Medical Nutrition Therapy II: An Integrative and Functional Approach
(Only) ONE course in Psychology may be used for upper-level electives.	
PSYCH 308	Physiological Psychology
PSYCH 435	Psychopathology
PSYCH 450	Health Psychology

Total Credits **57-60**

¹ Satisfied with an ACT English score of 32 or higher

² Verify 1 course is Laboratory Elective

Applied Public Health

Code	Title	Credits
Supporting Courses		41-44

BIOLOGY 201 & BIOLOGY 202	Principles of Biology: Cellular and Molecular Processes and Principles of Biology Lab: Cellular and Molecular Processes
CHEM 207	Laboratory Safety
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory
CHEM 212 & CHEM 214	Principles of Chemistry II and Principles of Chemistry II Laboratory
NUT SCI 212	Science of Food Preparation
NURSING 200	Fundamentals of Healthcare Terminology
WF 105	Research and Rhetoric ¹

Select one (of 2) Anatomy and Physiology Options:

HUM BIOL 240 & HUM BIOL 241 or BOTH	Anatomy and Physiology and Anatomy and Physiology Lab
HUM BIOL 221 & HUM BIOL 222	Anatomy and Physiology I and Anatomy and Physiology II

MATH

MATH 104	Precalculus
MATH 260	Introductory Statistics

Select one (of 3) options:

COMM 133 or COMM 166	Fundamentals of Public Address Fundamentals of Interpersonal Communication
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OR

Any literature course, e.g., ENGLISH 104 Introduction to Literature

OR

One year of college-level foreign language

Upper-Level Courses **30**

Required:

BIOLOGY 323 & BIOLOGY 324	Principles of Microbiology and Principles of Microbiology Laboratory
HUM BIOL 322	Epidemiology
NUT SCI 312	Quantity Food Production and Service
NUT SCI 421	Community and Public Health Nutrition
HIMT 360	Healthcare II: Survey of Disease & Treatments

Choose one:

BIOLOGY 402	Advanced Microbiology
HUM BIOL 427	Cancer Biology Laboratory

Select one option for organic chemistry:

CHEM 300 & CHEM 301	Bio-Organic Chemistry and Bio-Organic Chemistry Laboratory
CHEM 302 & CHEM 304	Organic Chemistry I and Organic Chemistry Laboratory I

Electives, as needed, to acquire 30 credits of upper level coursework. Options to fulfill this requirement include upper level courses in Human Biology, Nutritional Science, Biology and Psychology.

Total Credits**71-74**

¹ May be satisfied with an ACT English score of 32 or higher

Nutritional Sciences/Dietetics

Note: Students must have a grade of C or better in CHEM 211 and BIO 201 in order to declare their major in Nutritional Science

Code	Title	Credits
Supporting Courses		35-38
BIOLOGY 201 & BIOLOGY 202	Principles of Biology: Cellular and Molecular Processes and Principles of Biology Lab: Cellular and Molecular Processes	
CHEM 207	Laboratory Safety (must take at the same time OR before taking chemistry)	
COMM 133	Fundamentals of Public Address	
MATH 260	Introductory Statistics	
WF 105	Research and Rhetoric ¹	
Select one (of 2) Anatomy and Physiology options:		
HUM BIOL 240 & HUM BIOL 241	Anatomy and Physiology and Anatomy and Physiology Lab	
or BOTH		
HUM BIOL 221 & HUM BIOL 222	Anatomy and Physiology I and Anatomy and Physiology II	
NUT SCI 201	Survey of Nutrition Related Professions	
NUT SCI 212	Science of Food Preparation	
PSYCH 102 or PSYCH 203	Introduction to Psychology Introduction to Lifespan Development	
Required Courses		
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory	
CHEM 212 & CHEM 214	Principles of Chemistry II and Principles of Chemistry II Laboratory	
Required Upper-Level Courses		45-46
BIOLOGY 303 or HUM BIOL 310	Genetics Human Genetics	
BIOLOGY 323 & BIOLOGY 324	Principles of Microbiology and Principles of Microbiology Laboratory	
CHEM 300 & CHEM 301	Bio-Organic Chemistry and Bio-Organic Chemistry Laboratory	
Select one (of two) physiology options		
HUM BIOL 360 & HUM BIOL 361 or HUM BIOL 402	Exercise Physiology and Human Physiology Lab - Exercise and Metabolism Human Physiology	
NUT SCI 300	Human Nutrition	
NUT SCI 312	Quantity Food Production and Service	
NUT SCI 350	Life Cycle Nutrition	
NUT SCI 421	Community and Public Health Nutrition	
NUT SCI 427	Nutrigenomics and Advanced Nutrient Metabolism	
NUT SCI 485	Medical Nutrition Therapy I: An Integrative and Functional Approach	

NUT SCI 486	Medical Nutrition Therapy II: An Integrative and Functional Approach
NUT SCI 487	Nutritional Science Seminar

Choose one of the following options:

NUT SCI 327	Nutritional Biochemistry
CHEM 330 & CHEM 331	Biochemistry and Biochemistry Laboratory

Additional Courses (NOT REQUIRED) to Consider

NUT SCI 495	Teaching Assistantship
NUT SCI 497	Internship
NUT SCI 498	Independent Study

Total Credits**80-84**

¹ Satisfied for students with an ACT English score of 32 or higher.

s/Dietetics Emphasis.

General Human Biology

Code	Title	Credits
Supporting Courses		30-35
BIOLOGY 201 & BIOLOGY 202	Principles of Biology: Cellular and Molecular Processes and Principles of Biology Lab: Cellular and Molecular Processes	
CHEM 207	Laboratory Safety (must take at the same time OR before taking chemistry)	
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory	
CHEM 212 & CHEM 214	Principles of Chemistry II and Principles of Chemistry II Laboratory	
WF 105	Research and Rhetoric ¹	
Choose one (of 2) Anatomy and Physiology options:		
HUM BIOL 240 & HUM BIOL 241	Anatomy and Physiology and Anatomy and Physiology Lab	
or BOTH		
HUM BIOL 221 & HUM BIOL 222	Anatomy and Physiology I and Anatomy and Physiology II	
MATH 260	Introductory Statistics	
Choose one of the following 3 options:		
COMM 133 or COMM 166	Fundamentals of Public Address Fundamentals of Interpersonal Communication	
or		
Any literature course, e.g., ENGLISH 104 Introduction to Literature		
or		
One year of any college-level foreign language		
Upper-Level Courses		30-31
Organic Chemistry - choose one option		
CHEM 300 & CHEM 301	Bio-Organic Chemistry and Bio-Organic Chemistry Laboratory	
OR		
CHEM 302 & CHEM 304	Organic Chemistry I and Organic Chemistry Laboratory I	
Choose one course from three of the four areas:		
Genetics		
BIOLOGY 303 or HUM BIOL 310	Genetics Human Genetics	
Physiology (one of two options)		
HUM BIOL 402	Human Physiology	

HUM BIOL 360	Exercise Physiology
Nutrition	
NUT SCI 300	Human Nutrition
Cell Biology	
BIOLOGY 323	Principles of Microbiology
or BIOLOGY 307	Cell Biology
Additional Courses ^{2, 3}	
any 300-level HUM BIOL course	
any 400-level HUM BIOL course	
BIOLOGY 302	Principles of Microbiology
BIOLOGY 303	Genetics
BIOLOGY 304	Genetics Laboratory
BIOLOGY 307	Cell Biology
BIOLOGY 308	Cell Biology Laboratory
BIOLOGY 309	Evolutionary Biology
BIOLOGY 323	Principles of Microbiology
BIOLOGY 324	Principles of Microbiology Laboratory
BIOLOGY 340	Comparative Anatomy of Vertebrates
BIOLOGY 345	Animal Behavior
BIOLOGY 346	Comparative Physiology
BIOLOGY 402	Advanced Microbiology
BIOLOGY 407	Molecular Biology
BIOLOGY 408	Molecular Biology Laboratory
BIOLOGY 410	Developmental Biology
BIOLOGY 411	Developmental Biology Laboratory
CHEM 302	Organic Chemistry I
CHEM 303	Organic Chemistry II
CHEM 304	Organic Chemistry Laboratory I
CHEM 305	Organic Chemistry Laboratory II
CHEM 330	Biochemistry
CHEM 331	Biochemistry Laboratory
NUT SCI 300	Human Nutrition
NUT SCI 327	Nutritional Biochemistry
NUT SCI 350	Life Cycle Nutrition
NUT SCI 427	Nutrigenomics and Advanced Nutrient Metabolism
NUT SCI 486	Medical Nutrition Therapy II: An Integrative and Functional Approach
(Only) ONE Psychology courses may be used toward upper-level requirements	
PSYCH 308	Physiological Psychology
PSYCH 435	Psychopathology
PSYCH 450	Health Psychology

Total Credits**60-66**

- ¹ Satisfied with an ACT English score of 32 or higher
- ² Select upper-level courses with assistance of a faculty adviser. A maximum of one PSYCH course can be applied to the major.
- ³ Verify 3 courses are Laboratory Elective

Cytotechnology

- UW-Green Bay is affiliated with two schools of cytotechnology: the Mayo Clinic and UW-Madison.
- Students complete 92 credits at UW-Green Bay, including all general education requirements, and then take an 11-month, 32-credit clinical internship at one of the cooperating institutions.
- After completion of the internship, students will graduate with a degree in Human Biology and be eligible for professional certification.

Code	Title	Credits
Supporting Courses		31-34
BIOLOGY 201 & BIOLOGY 202	Principles of Biology: Cellular and Molecular Processes and Principles of Biology Lab: Cellular and Molecular Processes	
CHEM 207	Laboratory Safety	
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory	
CHEM 212 & CHEM 214	Principles of Chemistry II and Principles of Chemistry II Laboratory	
WF 105	Research and Rhetoric ¹	
Select one (of 3) options:		
COMM 133 or COMM 166	Fundamentals of Public Address Fundamentals of Interpersonal Communication	
or		
Any literature course, e.g., ENGLISH 104 Introduction to Literature		
or		
One year of college-level foreign language		
Select one (of 2) Anatomy and Physiology options:		
HUM BIOL 240 & HUM BIOL 241	Anatomy and Physiology and Anatomy and Physiology Lab	
or BOTH		
HUM BIOL 221 & HUM BIOL 222	Anatomy and Physiology I and Anatomy and Physiology II	
Math		
MATH 104	Precalculus	
MATH 260	Introductory Statistics	
Upper-Level Courses		53-54
Select one course from three of the four areas:		
Genetics		
BIOLOGY 303 or HUM BIOL 310	Genetics Human Genetics	
Physiology		
HUM BIOL 402	Human Physiology	
HUM BIOL 360 & HUM BIOL 361	Exercise Physiology and Human Physiology Lab - Exercise and Metabolism	
Nutrition		
NUT SCI 300	Human Nutrition	
Cell Biology		
BIOLOGY 323 or BIOLOGY 307	Principles of Microbiology Cell Biology	
Choose 6 credits of the following elective courses: ²		
HUM BIOL 310	Human Genetics	
HUM BIOL 318	Reproductive Biology	
HUM BIOL 322	Epidemiology	
HUM BIOL 331	Science and Religion: Spirit of Inquiry	
HUM BIOL 341	Human Anatomy Laboratory	
HUM BIOL 351	Kinesiology	
HUM BIOL 361	Human Physiology Lab - Exercise and Metabolism	
HUM BIOL 401	Art and Science	
HUM BIOL 413	Neurobiology	
HUM BIOL 422	Immunology	
HUM BIOL 426	Cancer Biology	
HUM BIOL 444	Endocrinology	

BIOLOGY 303	Genetics
BIOLOGY 304	Genetics Laboratory
BIOLOGY 307	Cell Biology
BIOLOGY 308	Cell Biology Laboratory
BIOLOGY 309	Evolutionary Biology
BIOLOGY 323	Principles of Microbiology
BIOLOGY 324	Principles of Microbiology Laboratory
BIOLOGY 340	Comparative Anatomy of Vertebrates
BIOLOGY 345	Animal Behavior
BIOLOGY 346	Comparative Physiology
BIOLOGY 402	Advanced Microbiology
BIOLOGY 407	Molecular Biology
BIOLOGY 408	Molecular Biology Laboratory
BIOLOGY 410	Developmental Biology
BIOLOGY 411	Developmental Biology Laboratory
CHEM 300	Bio-Organic Chemistry
CHEM 301	Bio-Organic Chemistry Laboratory
CHEM 302	Organic Chemistry I
CHEM 303	Organic Chemistry II
CHEM 304	Organic Chemistry Laboratory I
CHEM 305	Organic Chemistry Laboratory II
CHEM 330	Biochemistry
CHEM 331	Biochemistry Laboratory
NUT SCI 300	Human Nutrition
NUT SCI 327	Nutritional Biochemistry
NUT SCI 350	Life Cycle Nutrition
NUT SCI 427	Nutrigenomics and Advanced Nutrient Metabolism
NUT SCI 486	Medical Nutrition Therapy II: An Integrative and Functional Approach
(Only) ONE Psychology course may be used for upper level electives.	
PSYCH 308	Physiological Psychology
PSYCH 435	Psychopathology
PSYCH 450	Health Psychology
Cytotechnology Internship	
HUM BIOL 497	Internship ³

Total Credits**84-88**

- ¹ Satisfied for students with an ACT English score of 32 or higher.
- ² Additional upper-level courses in Human Biology, Biology and Chemistry will depend upon the student's choice of clinical facility. These courses should be selected with the help of a faculty adviser.
- ³ Students complete 32 credits of internship total over a 3 semester sequence. In some situations students may choose to pursue clinical training after graduation from UW-Green Bay. In this option is selected, additional upper-level elective credits are required. Consult an adviser for these situations.