Biotechnology Major (Bachelor of Science)
81 credits for major/128 credits for degree
Requirements for students entering 2018-2019

NAME: _____ **ADVISOR: _____**

Discovery Foundation Courses				
Description	Course	Source	Credits/Grade	Notes
First Year Writing (WS)	ENGL 401			Must be taken within first 32 credits
Quantitative Reasoning (QR)				Must be taken within first 32 credits; PSYC 402 is required for the major
Inquiry Requirement (INQ)				Must be INQ 444 or INQ Attribute Must be taken within first 25 credits
Discovery Courses				
Description	Course	Source	Credits/Grade	Notes
Biological Science (BS)				BIOL 413 is required for the major
Physical Science (PS)				CHEM 403 is required for the major
Environment, Technology & Society (ETS)				
Historical Perspectives (HP)				
World Culture (WC)				
Fine & Performing Arts (FPA)				
Social Science (SS)				
Humanities (HUMA)				
Writing Intensive Requirements				
Description	Course	Source	Credits/Grade	Notes
ENGL 401: First Year Writing	ENGL 401			All undergraduates are required to complete 4 writing intensive (WI) courses, which must include ENGL 401 and three additional WI courses. All students must have a total of 4 WI courses!
WI course in major				
600/700 WI course				
Other WI course				

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Core Courses (56 credits)			
Description	Source	Credits/Grade	Notes
BIOL 413: Principles of Biology I			May be used to satisfy BS Discovery requirement
BIOL 414: Principles of Biology II			
BMS 503: General Microbiology AND BMS 504: General Microbiology Laboratory			
GEN 604: Principles of Genetics			
BSCI 501: Ethical Issues in Biology (WI)			
CHEM 403: General Chemistry I			May be used to satisfy PS Discovery requirement
CHEM 404: General Chemistry II			
CHEM 651: Organic Chemistry I AND CHEM 653: Organic Chemistry I Lab			
CHEM 652: Organic Chemistry II AND CHEM 654: Organic Chemistry II Lab			
BMCB 658: General Biochemistry AND BMCB 659: General Biochemistry Lab			
Select 1 of the following courses: PHYS 401: Introduction to Physics I PHYS 407: General Physics I			
PSYC 402: Statistics in Psychology			May be used to satisfy QR Discovery requirement
Select 1 of the following courses: MATH 424B: Calculus for Life Sciences MATH 425: Calculus I			Based on the math assessment, students may be required to take MATH 418 before enrolling in this class. May be used to satisfy QR Discovery requirement

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Advanced Biology 600/700-Level Courses (20 credits required)				
Description	Course	Source	Credits/Grade	Notes
Advanced Biology: select at least one course GEN 711W: Genomics and Bioinformatics GEN 714: Personal Genomics GEN 771: Molecular Genetics BMS 702: Endocrinology BMS 705/715: Immunology/Immunology Laboratory* BSCI 620: Global Science Exploration BSCI 670: Clinical Pathophysiology BSCI 680: Pharmacology BSCI 692: Evolutionary Medicine (WI) BSCI 695: Exploring Biology Teaching (1-4 credits) BSCI 735: Cell Biology BSCI 750: Cancer Biology: From Benchtop Research to Therapeutic Interventions **Laboratory Techniques: select at least one course** BMCB 753: Cell Culture BSCI 765: Nucleic Acid Techniques BSCI 766: Protein and Immunologic Techniques BSCI 777: Molecular Biology and Biotechnology CHE 651: (BTEC 220, GBCC) Biotech Experience/Biomanufacturing ZOOL 625/626: Principles of Animal Physiology/ Animal Physiology Laboratory (WI) **Advanced Microbiology: select at least one course** BMS 601: Bacteriology of Food BMS 602/603: Pathogenic Microbiology/Pathogenic Microbiology Laboratory BMS 706/708: Virology/Virology Laboratory BSCI 737: Microbial Genomics BSCI 740: Aquatic Microbiology (WI)	*Advanced Biology* *Laboratory Techniques* *Advanced Microbiology* *Select another 600/700-level course from the list* *Select another 600/700-level course from the list*			*BMS 705 is 3 credits and BMS 715 is 2 credits. Students can take BMS 705 without 715 but will need to make up the missing credits for the major. Students can't take BMS 715 without 705.

See capstone requirements and program notes on the following page.

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Capstone Experience (5 credits)				
Description	Selection	Source	Credits/Grade	Notes
BSCI 701: Senior Seminar I	Senior Seminar I			Can be taken during either semester of the senior year as students complete their capstone experience; 1-credit
Select one of the following: BSCI 792: Research BSCI 793: Internship BSCI 794: Clinical Microbiology Internship BSCI 795: Independent Study				

Program Notes:

- All students must have at least a 2.0 cumulative GPA in order to graduate.
- Senior Residency: students must complete their last 32 credits of the degree at UNH.
- Students may take any undergraduate courses as electives in order to earn a minimum of 128 credits.
- Transfer students must complete 24 credits in major coursework at UNH.
- Courses applied to the major must be completed with a minimum grade of C- and students must attain a minimum major GPA of 2.0.
- Depending on their specific academic and career goals, students may elect to take additional supporting science courses. Please see a faculty advisor for more information.