

Major Map: Biological Sciences (Genetics, Cell & Developmental Biology) – Bachelor of Science (B.S.) College of Liberal Arts and Sciences, Tempe Campus Catalog Year: 2007-2008

□Yes □ No Completed AGEC: Yes \Box No Completed ATP: Course Subject and Title Minimum Grade if Upper Transfer Hrs Additional Critical Requirement Notes (courses in hold/shading are critical) Divisio Course/Grad Required **TERM ONE: 0-15 CREDIT HOURS** An SAT, ACT, Accuplacer, or TOEFL score BIO 187: General Biology I OR BIO 188: General Biology II OR determines placement into first-year composition Grade of C in BIO Social & Behavioral Science (SB) and Cultural Diversity in the US courses 4 or (C), Global Awareness (G) or Historical Awareness (H) 3 187 or 188 ASU Math Placement Exam score determines placement in Mathematics course 4 CHM 113: General Chemistry I Grade of C All critical courses must be completed by the end ENG 101 and 102: First-Year Composition OR of semester 4 ENG 107 and 108: English for Foreign Students OR Maintain 2.0 GPA in all critical courses, major ENG 105: Advanced First-Year Composition 3 П Grade of C courses, and related fields BIO 187 and 188 to be completed within first three semesters MAT 251 or equivalent to be completed by end of term 2 Consult an academic advisor for Learning Community, Academic Success Clusters and MAT 251: Calculus for Life Sciences (MA) 3 Grade of C First Year Seminar options **TERM TWO: 16-30 CREDIT HOURS** BIO 187: General Biology I OR All critical courses must be completed by the end **BIO 188: General Biology II** 4 Grade of C of semester 4 Maintain 2.0 GPA in all critical courses, major 4 CHM 116: General Chemistry II Grade of C courses, and related fields ENG 101 and 102: First-Year Composition OR BIO 187 and 188 to be completed within first ENG 107 and 108: English for Foreign Students OR three semesters Grade of C ENG 105: Advanced First-Year Composition 3 • MAT 251 or equivalent to be completed by end Humanities, Fine Arts & Design (HU) and Cultural Diversity in the US of term 2 3 (C), Global Awareness (G) or Historical Awareness (H Social & Behavioral Science (SB) and Cultural Diversity in the US 3 (C), Global Awareness (G) or Historical Awareness (H) **TERM THREE: 31-45 CREDIT HOURS** BIO 187: General Biology I OR All critical courses must be completed by the end BIO 188: General Biology II OR, if BIO 187 & 188 completed take of semester 4 Social & Behavioral Science (SB) and Cultural Diversity in the US 4 or BIO 187 and must be completed (C), Global Awareness (G) or Historical Awareness (H) Grade of C 3 • First year composition must be completed . Maintain 2.0 GPA in all critical courses, major CHM 231 Elem Organic Chemistry & CHM 235 Laboratory OR CHM 233 Gen Organic Chemistry I & CHM 237 Laboratory 3/1 Grade of C courses, and related fields CLAS Science and Society 3 Grade of C Elective 3 П **TERM FOUR: 46-60 CREDIT HOURS** BIO 353: Cell Biology 3 \boxtimes All critical courses must be completed by the Grade of C . end of semester 4 STP 226: Elements of Statistics (CS) OR Maintain 2.0 GPA in all critical courses, major Grade of C STP 231: Statistics for Life Science (CS) 3 courses, and related fields CHM 234 Gen Organic Chemistry II & CHM 238 Laboratory OR if Grade of C in CHM 4 or \boxtimes CHM 231/235 completed, take Elective 3 234 & 238 3 Humanities, Fine Arts & Design (HU) 3 Literacy and Critical Inquiry (L) **TERM FIVE: 61-75 CREDIT HOURS** BIO 351: Developmental Anatomy 3 \boxtimes Grade of C Complete one course from: BIO 340: General Genetics (4 hrs) OR 3 or BIO 345: Organic Evolution (3 hrs) \boxtimes Grade of C 4 PHY 101: Introduction to Physics OR 4 or PHY 111: General Physics & PHY 113: Laboratory Grade of C 3/13 \boxtimes Grade of C Upper division CLAS Science and Society 3 Upper division elective \boxtimes TERM SIX: 76-90 CREDIT HOURS Complete one additional course from: BIO 340: General Genetics (4 hrs) OR 3 or BIO 345: Organic Evolution (3 hrs) \boxtimes Grade of C 4 Complete one course from: BIO 446: Principles of Human Genetics (3) (L) MBB/PLB 350: Applied Genetics (4) 3 or \boxtimes MBB 343: Genetic Engineering & Society (4) Grade of C 4 PHY 112: General Physics/Laboratory & PHY 114: Laboratory OR, if Grade of C in PHY 4 orPHY 101 completed, take Elective 3 112 & 114 Upper division Humanities, Fine Arts & Design (HU) or 3 \boxtimes Social & Behavioral Science (SB) Elective 3



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Course Subject and Title (courses in bold/shading are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM SEVEN: 91-105 CREDIT HOURS					
Complete one course from: BIO 456: Bioinformatics & Molecular Evolution					
BIO 456: Bioinformatics & Molecular Evolution BIO 455: Intro to Comparative Genomics	3	\boxtimes		Grade of C	
Upper division Major elective	3	\boxtimes		Grade of C	
Upper division elective	3	\boxtimes			
Upper division Literacy and Critical Inquiry (L)	3	\boxtimes			
Elective	3				
TERM EIGHT: 106-120 CREDIT HOURS					
BIO 495: Undergraduate Thesis	3	\boxtimes		Grade of C	
Upper division Major Elective	3	\boxtimes		Grade of C	
Upper division Major Elective	2	\boxtimes		Grade of C	
Upper division elective	3	\boxtimes			
Upper division elective	3	\boxtimes			

Graduation Requirements Summary:

Total Hours (120 minimum)	Total Hrs at ASU (30 minimum)	Hrs Resident Credit for Academic Recognition (56 minimum)	Major GPA (2.000 Min.)	Total UD Hrs (45 minimum)	Total Comm. College Hrs. (64 maximum)

General University Requirements: Legend

- General Studies Core Requirements:
 - Literacy and Critical Inquiry (L)
 - Mathematical Studies (MA)
 - Computer/Statistics/Quantitative applications (CS)
 - Humanities, Fine Arts, and Design (HU)
 - Social and Behavioral Sciences (SB)
 - Natural Science-Quantitative (SQ)
 - Natural Science-General (SG)
 - General Studies Awareness Requirements
 - Cultural Diversity in the US (C)
 - Global Awareness (G)
 - o Historical Awareness (H)
- First Year Composition

Additional Notes:

· Humanities, Literacy and Critical Inquiry, Social Behavioral Sciences, and Science and Society courses are interchangeable in sequencing