**BIO CHECKLIST | Effective Spring 2016**

### GENERAL EDUCATION

<table>
<thead>
<tr>
<th>AREA A: Essential Skills</th>
<th>HRS</th>
<th>GR</th>
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<tbody>
<tr>
<td>ENGL 1101 Composition I (3 hrs)</td>
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<tr>
<td>ENGL 1102 Composition II (3 hrs)</td>
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<tr>
<td>MATH 1112 College Trig or MATH 1113 PreCalculus (3 hrs) or MATH 1190a Calculus I (4 hrs)</td>
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### AREA B: Institutional Options

**Select 1 two hour Contemporary Social Issues course:**
- ANTH, CRJU, GEOG, PSYC, SOCI, or STS 2105

**Select 1 three hour course:**
- AADS, AMST, ASIA, GWST, LALS, PAX, or RELS 1102; COM 1100; *FL 1002 (FL denotes any Foreign Language); PHIL 2200; or POLS 2401

### AREA C: Humanities/Fine Arts

- ENGL 2110, 2111, 2112, 2120, 2121, 2122, 2130, 2131, 2132, or 2300

**Select 1 three hour course:**
- ART 1107 or MUSI 1107 or TPS 1107 or DANC 1107

### AREA D: Science, Math, and Technology

**Select 1 two hour Contemporary Social Issues course:**
- BIOL 3300/L Genetics (3/1 hours)

**Select 1 three hour course:**
- BIOL 3410 Cell Biology (3 hours)

**Select 1 three hour course:**
- BIOL 3399 Seminar (Can only be used once towards degree)

### AREA E: Science, Math, and Technology

**Select 1 two hour Contemporary Social Issues course:**
- BIOL 3390K Developmental Biology (4 hrs)

**Select 1 two hour Contemporary Social Issues course:**
- MATH 1190a Calculus I (4 hours)
- CHEM 3500 Biochemistry or CHEM 3501 Biochemistry (3 hours)
- CHEM 3500L Biochem Lab or CHEM 3501L Biochem Lab (1 hour)
- MATH 2202 Calculus II (4 hours)
- CHEM 1211/L General Chemistry I (3/1 hours)
- CHEM 1212/L General Chemistry II (3/1 hours)

### AREA F: LOWER DIVISION REQUIREMENTS

<table>
<thead>
<tr>
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<th>HRS</th>
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<tbody>
<tr>
<td>BIOL 1107/L Biological Principles I (3/1 hours)</td>
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<td>BIOL 1108/L Biological Principles II (3/1 hours)</td>
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<tr>
<td>PHYS 1111/L or 2211/L (3/1 hours)</td>
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<tr>
<td>PHYS 1112/L or 2212/L (3/1 hours)</td>
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### UPPER DIVISION MAJOR REQUIREMENTS

**REQUIRED COURSES**
- BIOL 3300/L Genetics (3/1 hours)
- BIOL 3370/L Ecology (3/1 hours)
- BIOL 3410 Cell Biology (3 hours)
- BIOL 4399 Seminar (Can only be used once towards degree)
- CHEM 3361/L Modern Organic Chemistry I (3/1 hours)
- CHEM 3362/L Modern Organic Chemistry II (3/1 hours)
- STAT 3125 Biostatistics (3 hours)

**TRACK REQUIREMENTS (25 hrs)**

### CMDB REQUIRED COURSES (11 Hours)

**Select 1 two hour Contemporary Social Issues course:**
- BIOL 3390K Developmental Biology (4 hrs)
- CHEM 3500 Biochemistry or CHEM 3501 Biochemistry (3 hours)
- CHEM 3500L Biochem Lab or CHEM 3501L Biochem Lab (1 hour)
- MATH 2202 Calculus II (4 hours)
- CHEM 1211/L General Chemistry I (3/1 hours)
- CHEM 1212/L General Chemistry II (3/1 hours)

**CMDB ELECTIVE COURSES (14 Hours required)**

Options listed on back of page

### INSTITUTIONAL REQUIREMENT

- WELL 1000 (formally HPS 1000 Fitness for Living)(3 hrs)

### FREE ELECTIVES (12 hrs)

- KSU First Year Seminar (3 hrs) or Learning Community

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*Area B1 and E4 in General Education have made some changes. Please consult DegreeWorks and your advisor if you have questions. **This track is designed to prepare students for graduate school in a number of sub-disciplines that focus on cellular and sub-cellular processes or use a range of molecular techniques.*

**A maximum of 8 hours of BIOL 3110, 4400, 4402, and/or BIOL 4450 can be used in the Biology electives. Credit for BIOL 3317 and 3396 can be applied to Free electives only.**
Pre-requisite courses, as well as all courses required in the BIO major, all require a grade of C or higher.

**GEN ED & LOWER DIVISION REQUIREMENTS-PREREQs**

- MATH 1190 and MATH 2202
- CHEM 1211/1211L
- CHEM 1212/1212L
- BIOL 1107/1107L
- BIOL 1108/1108L
- PHYS 1111/L or 2211/L
- PHYS 1112/L or 2212/L

**UPPER DIVISION MAJOR REQUIREMENTS-PREREQs**

- CHEM 3361/L or 3362/L
- STAT 3125
- BIOL 3300/L Genetics
- BIOL 3370/L Ecology
- BIOL 3410 Cell Biology
- BIOL 4399 Seminar

**CMDB BIOLOGY REQUIRED OPTIONS**

- BIOL 3390K Developmental Biology (4 hrs)
- CHEM 3500 Biochemistry or CHEM 3501 Biochemistry [CHEM 3362/L or CHEM 2800/L]
- CHEM 3500L Biochem Lab or CHEM 3501L Biochem Lab [co-req of CHEM 3500 OR 3501]
- BIOL 4100K Molecular Genetics

**CMDB BIOLOGY ELECTIVE OPTIONS**

- BIOL 3301K Intro to Biotechnology
- BIOL 3338K Histology (4 hrs)
- BIOL 3340/L Microbiology (3/1 hrs)
- BIOL 4465 Immunology
- BIOL 3110 Directed Methods (1-3 hrs)
- BIOL 3327K Medical Genetics (4 hrs)
- BIOL 3398 Practical Internship
- BIOL 4100K Molecular Genetics
- BIOL 4400 Directed Study (1-4 hrs)
- BIOL 4402 Research Internship
- BIOL 4411K Stem Cell Technology
- BIOL 4475 Virology (3 hrs)
- BIOL 4486 Bioethics (3 hrs)
- BIOL 4490 Special Topics (1-4 hrs)
- BIOL 4630 Advanced Topics (1-4 hrs)
- CHEM 4500 Methods in Nucleic Acid & Protein
- CHEM 3400 Drugs and Biologics
- BIOL 4412K Cell and Tissue Culture
- CHEM 3502 Biochemistry II
- CHEM 3540/L Advanced Biochem Lab

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*a New students are required to take the online Math Advisement Placement Test (MAPT) available at http://placement.kennesaw.edu. If MATH 1190 is first MATH class at KSU, it will be used in Area A only and the Area D MATH must be MATH 2202. Otherwise, MATH 1190 must be the Area D MATH.

See [catalog.kennesaw.edu](http://catalog.kennesaw.edu) for graduation requirements, general education details, additional pre-requisite options, course descriptions, and degree comments. If you have questions about the Biology major, please contact your advisor. Also note that students are initially advised in the College of Science & Mathematics Advising Center, located in Science 204.

"DegreeWorks" on OwlExpress is a wonderful tool to track where you are in your degree. Please check it constantly. However, it isn't always accurate for every situation, so please see your advisor regularly.