5A. Cognate Sciences Core (31-33 hours)
Chemistry Placement Test: CHM2040, CHM2041, or CHM2045

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>CHM 2045C (or CHM 2040__2041__)</td>
<td>4/3</td>
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<tr>
<td>CHM 2046</td>
<td>3</td>
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<tr>
<td>CHM 2040L</td>
<td>1</td>
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<tr>
<td>CHM 2210</td>
<td>3/5</td>
</tr>
<tr>
<td>CHM 2211 or CHM 3120</td>
<td>3/3</td>
</tr>
<tr>
<td>CHM 2211L</td>
<td>2/1</td>
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<tr>
<td>PHYS 2053C or PHYS 2048C</td>
<td>4</td>
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<tr>
<td>PHYS 2054C</td>
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</tbody>
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Math Placement Test: MAT033C, MAC1105C, MAC1114C, MAC 1140 |

MAC 2311 or MAC 2233 or MAC 2253 | 4 |
STA 2023 | 3 |

5B. Lab requirement- Two labs
At least one of these labs must come from section A - Core.

A - Core:

- 9 hours of summer enrollment (total) in academic career. ____ of 9
- At least 2.0 needed: __UCF GPA ______ Major GPA
- 48 hours 3xxx-4xxx level – 35 Biology requires = 13 hours left (to be satisfied with free electives or minor) ___ of 13

B - Non-Core: designated with ↑

6. 22 hours of restricted electives are required, with following stipulations:

- 22 hours of 22 hours __ RE GPA
- Courses must be selected from those listed below.
- Include one course exclusively on animals (marked a) ___ and one exclusively on plants (marked p) ___.
- At least 10 of the 22 hours must be courses offered by the Department of Biology (designated with an *) ___ of 10.
- Independent Study/Directed Research: May include a maximum of 4hrs towards restricted electives-(Completed with Biology Faculty)
- 5000 level courses may be taken by seniors with prior permission of course instructor. You will be charged graduate level tuition.

Required Electives (choose one of the following) (3-4 hours)

- a PCB 4723 | Animal Physiology | 4 |
- a ZOO 4513 | Animal Behavior | 3 |

Restricted Electives (choose from the following) (11-12hrs)

- PCB 4402* | Zoology 2 | 3 |
- PCB 4575* | Wildlife Genetics | 3 |
- PCB 4576* | Ecology of Animal Behavior | 3 |
- a PCB 4723 | Animal Physiology | 4 |
- a ZOO 4513 | Animal Behavior | 3 |
- a ZOO 4535C | Primatology | 3 |
- a EV 4004C* | General Entomology | 3 |
- a PAZ 4234* | Zoological Aquarium Mgt | 3 |
- a ZOO 3454* | Ichthyology | 3 |
- a ZOO 3713C* | Comp Vert Anat | 5 |
- a ZOO 4232* | Ornithology | 3 |
- a ZOO 4205C* | Bio and Eco Meta Inv | 3 |
- a ZOO 4310C | Vertebrate Zoology | 3 |
- a ZOO 4405C* | Sea Turtle Internship | 3 |
- a ZOO 446C* | Herpetology | 3 |
- a ZOO 4480 | Mammalogy | 4 |
- a ZOO 4480L | Mammalogy Lab | 1 |
- a ZOO 4605C* | Embryology/Develop | 5 |
- a ZOO 4753C* | Comp Vert Histology | 4 |
- a ZOO 4910L* | Res Exp in Zoo Env | 3 |

Additional Biology Electives (6-8 hours)

- a ANT 3550C | Primate | 3 |
- a BCH 4024 | Medical Biochemistry | 4 |
- a BOT 3015* | Principles of Plant Science | 3 |
- a BOT 3015C* | Principles of Plant Science | 3 |
- a BOT 3080 | Ornithology | 3 |
- a BOT 2423C* | Plant Anatomy | 4 |
- a BOT 4303C* | Plant Anatomy | 4 |
- a BOT 4282L* | Plant Microtechniques | 2 |
- a BOT 4922* | Plant Science Capstone | 2 |
- a BOT 4503C* | Plant Pharmacology | 4 |
- a BOT 4530C* | Plant Gentic and Biochem | 4 |
- a BOT 4653C* | Plant Biology | 4 |
- a BOT 4713C* | Plant Taxonomy | 5 |
- a BOT 4970H | Honors Undergrad Thesis | 3 |
- a BSC 3082* | Conservation Biol | 3 |
- a BSC 4445C* | Genomics Lab | 4 |
- a BSC 4821* | Biogeography | 4 |
- a BOT 4850* | Medical Botany | 3 |
- a BSC 3312* | Prac Marine Biol | 3 |
- a BSC 3453* | Bio Res. Meth & Exp Design | 4 |
- a BSC 4312C* | Adv Marine Biol | 2 |
- a BSC 4330* | Invasion Biology | 3 |
- a BSC 4456C* | Programming for Bio | 4 |
- a BSC 4061L | Urban Ecology | 3 |
- a BSC 4910* | Biology Education Research | 3 |
- a BSC 4927* | Scientific Engagement | 3 |
- a BSC 4932* | Scientific Driving | 3 |
- a BSC 5258L* | Trop Bio Research | 3 |
- a BSC 5316* | Marine Conservation | 4 |
- a ENY 3517* | Honey Bee Bkch Breckeping | 3 |
- a ENY 4004C* | General Entomology | 4 |
- a MCB 3020C | Gen Microbiology | 5 |
- a OCE 3008* | Oceanography | 3 |
- a PAZ 4234* | Zoological Aquarium Mgt | 3 |
- a PCB 3044L* | Ecology Lab | 4 |
- a PCB 3063L* | Genetics Lab | 3 |
- a PCB 3233 | Immunology | 3 |
- a PCB 3343L | Prac Forestry Ecology | 3 |
- a PCB 3354* | Tropic Ecology & Cons. | 3 |
- a PCB 3355L* | Tropical Marine Bio | 2 |
- a PCB 4424* | Aquatic Ecology | 3 |
- a PCB 3703C | Human Physiology | 4 |
- a PCB 4301C* | Wetland Eco & Biochem | 4 |
- a PCB 4316C* | Marine Ecology of Florida | 3 |
- a PCB 4333* | FL ECO, Nat Hist & Cons. | 3 |
- a PCB 4353L* | FL Natural History Lab | 1 |
- a PCB 4402* | Disease Eco & Immunology | 3 |
- a PCB 4415* | Sensory Ecology | 3 |
- a PCB 4541* | Genetics II | 3 |
- a PCB 3525 | Molc Bio 1 | 3 |
- a PCB 4524 | Molc Bio 2 | 3 |
- a PCB 4575* | Wildlife Genetics | 3 |
- a PCB 4863L* | Evol. Biol. Lab | 1 |
- a PCB 4878* | Evolution in Medicine | 3 |
- a PCB 4864* | Population Genetics | 3 |
- a PCB 4723* | Animal Physiology | 3 |
- a PCB 4932* | GIS for Biologists | 3 |
- a PCB 5326C* | Marine Ecosystems of FL | 5 |
- a PCB 5345C* | Marine Ecology of FL | 4 |
- a PCB 5485* | Models in Ecology | 3 |
- a ZOO 3713C* | Comp Vert Anat | 5 |
- a ZOO 3733C | Human Anatomy | 5 |
- a ZOO 4205C* | Bio and Eco Meta Inv | 3 |
- a ZOO 4310C | Vertebrate Zoology | 4 |
- a ZOO 4405C* | Sea Turtle Internship | 3 |
- a ZOO 446C | Herpetology | 3 |
- a ZOO 4480 | Mammalogy | 4 |
- a ZOO 4480L | Mammalogy Lab | 1 |
- a ZOO 4605C* | Embryology/Develop | 5 |
- a ZOO 4753C | Comparative Vertebrate Hist | 4 |
- a ZOO 4910L* | Res Exp in Zoo Env | 3 |

Note: If all requirements are satisfied on the road map, your major is satisfied. Please consult with COSAS for a final graduation check on all university requirements.