

## Program Strand: Animal Biotechnology

Students who choose a career in Animal Biotechnology investigate and utilize basic scientific skills and principles in animal science to give animals new traits that benefit agricultural production, the environment, and human nutrition and health.

### Secondary Career Academy Development Timetable (academy classes are listed in bold type)

Pre-Academy Grades 6 – 8	Grade 9	Grade 10	Grade 11	Grade 12
6 <sup>th</sup> grade—Middle Moves 7 <sup>th</sup> grade—Career Preparation Requirement 8 <sup>th</sup> grade—Transition Tools  Introduction to Agriscience 810012002 Orientation to Agriscience 810011011 Exploration of Agriscience 810021002	English I	English II	English III	English IV
	Algebra or higher	Geometry or higher	Algebra II or higher	Pre-calculus or Other Mathematics Course
	Earth & Space Science or Biology	Biology or Chemistry	Chemistry or Physics or Physical Science	Science Elective or Other Elective
	World History	Elective	American History	American Government / Economics
	9 <sup>th</sup> Grade Transition	Foreign Language or Other Elective	Foreign Language or Other Elective	Foreign Language or Other Elective
	<b><i>Agriscience Foundations 1 8106810</i></b>	<b><i>Agricultural Biotechnology 2 8106850</i></b>	<b><i>Animal Biotechnology 3 8106120</i></b>	<b><i>Advanced Concepts of Agriscience 8100330</i></b>
	Elective	Elective	Elective	Elective
Elective	Elective	Elective	Elective	

**Suggested Electives:**

- Students may in their Junior or Senior year opt to participate in the Career Experience Opportunity (CEO) internship program using the following course numbers: Workplace Essentials – 83003101A (Honors .5) and CEO internship – 0500330CE (Honors .5).
- Students may complete more than one program within the Academy of Veterinary Science providing courses are offered at the school site.
- In addition, students can choose to enroll in Advanced Concepts of Agriscience, Agricultural Education Directed Study, Agricultural Education Directed Study, A.P. Environmental Science classes to enhance their marketability.

**To find a Miami-Dade County Public High School with this Program Strand, please link to [http://ssr.dadeschools.net/acad\\_tally\\_schls.pdf](http://ssr.dadeschools.net/acad_tally_schls.pdf).**

Internship Opportunities	Student Organizations / Clubs	Earn Upon Completion
<ul style="list-style-type: none"> <li>• Scientific Research Internship (U of F Tropical Research Education Center; USDA Chapman Field Research Facility)</li> <li>• FIU Environmental &amp; Computer Sciences – AgroEcology Dept.</li> </ul>	<ul style="list-style-type: none"> <li>• School-Based Enterprise</li> <li>• Service Learning</li> <li>• Dual Enrollment (MDC, FIU)</li> <li>• Cooperative Education</li> <li>• Job Shadowing</li> <li>• <a href="#">Portal to CEO</a></li> </ul>	<ul style="list-style-type: none"> <li>• The National FFA Organization</li> <li>• Miami-Dade County Fair &amp; Exposition Agriculture Ambassadors Program</li> <li>• United States Department of Agriculture – Ambassador Program</li> <li>• 4-H Club</li> </ul>
<ul style="list-style-type: none"> <li>• Industry Title &amp; FLDOE OCP's correlated to the individual areas.</li> <li>• For more information on the Florida Department of Education Bright Futures Scholarship Programs: Florida Academic Scholars Award (FAS), Florida Medallion Scholars Award (FMS), and Florida Gold Seal Vocational Scholars Award (GSV) please contact a guidance counselor or visit: <a href="http://www.floridastudentfinancialaid.org/ssfad/factsheets/BF.htm">http://www.floridastudentfinancialaid.org/ssfad/factsheets/BF.htm</a>.</li> <li>• For more information on advanced standing at local public and private post secondary institutions as established per articulation agreements please contact a guidance counselor.</li> </ul>		

### POSTSECONDARY OPTIONS

Certification Programs	Community College (A.A./A.S.) or Proprietary Programs	Four-Year College and University Programs	Other
<ul style="list-style-type: none"> <li>• <a href="#">American Biofuels Council</a></li> </ul>	<ul style="list-style-type: none"> <li>• Horticultural Science</li> <li>• Biochemical Development Engineering</li> <li>• Laboratory Assisting</li> <li>• Assay Analyst</li> <li>• Instrumentation/Calibration Technology</li> <li>• Manufacturing Technology</li> <li>• Agricultural &amp; Biological Sciences</li> <li>• Microbiology</li> <li>• <a href="#">Santa Fe Community College Biotechnology Program</a></li> <li>• <a href="#">Lake City Community College Agricultural Programs</a></li> <li>• <a href="#">Miami Dade College Agricultural Programs</a></li> </ul>	<ul style="list-style-type: none"> <li>• Agricultural Engineer</li> <li>• Plant Biotechnology</li> <li>• Animal Biotechnology</li> <li>• Molecular Biology</li> <li>• Plant and Environmental Biotechnology</li> <li>• Environmental and Microbial Biotechnology</li> <li>• Insect and Pathogen Biotechnology</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">University of Florida College of Agricultural and Life Sciences</a></li> <li>• <a href="#">Florida Agricultural and Mechanical University Agricultural Programs</a></li> <li>• <a href="#">University of Central Florida Biotechnology</a></li> </ul>

### CAREER OPTIONS

Entry Level	After Post-Secondary Education
<ul style="list-style-type: none"> <li>• Plant Propagator</li> <li>• Greenhouse Assistant</li> <li>• Lab Technician</li> <li>• Plant Tissue Culture Lab Asst.</li> </ul>	<ul style="list-style-type: none"> <li>• Independent Business Owner</li> <li>• Food Processing Technician</li> <li>• Quality Assurance Specialist</li> <li>• Waste Management Specialist</li> </ul>
	<ul style="list-style-type: none"> <li>• Molecular Geneticist</li> <li>• Plant Biotechnology Manager</li> <li>• Environmental Monitoring</li> <li>• Biological Scientist</li> <li>• Microbial Ecologist</li> </ul>
	<ul style="list-style-type: none"> <li>• Biotechnology Specialist</li> <li>• Pharmacology</li> <li>• Molecular Geneticist</li> <li>• Bacteriologist</li> <li>• Research Scientist</li> </ul>