

**Associate in Arts Degree (AA) - 60 credits**

If you are planning to continue your education immediately after completing your Associate's degree, the AA degree is for you. Students choose between 3 tracks: Biotechnology, Chemical Technology, or Bioinformatics. This program provides the first two years of a four-year curriculum for students planning to major in Biotechnology, Biology, Chemistry, Bioinformatics or other Science related areas. Graduates are prepared for positions as Lab Technicians, Lab Assistants, Research Assistants, Media Prep and Manufacturing. Salary depends on the level of education and experience.

| Course  | Course Title                           | Credits | Pre-requisites        | Co-requisites        |
|---|--|---------|-----------------------|----------------------|
| <b>GENERAL EDUCATION REQUIREMENTS (36 credits hours)</b>  |  |         |                       |                      |
| ENC-1101  | English Composition 1                  | 3       | None                  | None                 |
| ENC-1102  | English Composition 2                  | 3       | ENC-1101              | None                 |
| <b>Oral Communications (3 credits)</b>  |  |         |                       |                      |
|   | 3 credits selection from approved list | 3       |                       |                      |
| <b>Humanities (6 credits)</b>   |  |         |                       |                      |
|   | 3 credits from group A                 | 3       |                       |                      |
|   | 3 credits from group B                 | 3       |                       |                      |
| <b>Behavioral Science/Social Environment (6 credits)</b>  |  |         |                       |                      |
|   | 3 credits from group A                 | 3       |                       |                      |
|   | 3 credits from group B                 | 3       |                       |                      |
| <b>Natural Sciences</b>   |  |         |                       |                      |
| BSC-2010  | Principles of Biology 1                | 3       | None                  | CHM-1045             |
| CHM-1045  | General Chemistry                      | 3       | None                  | MAC-1105             |
| <b>Mathematics</b>  |  |         |                       |                      |
| MAC-1105  | Algebra                                | 3       |                       | None                 |
| STA-2023  | Statistical Methods                    | 3       | MAC 1105              | None                 |
| <b>Elective</b>   |  |         |                       |                      |
| CHM-1046  | General Chem/Qualitative Analysis      | 3       | CHM-1045              | CHM-1046L            |
| <b>CORE COURSES (16 credits hours)</b>  |  |         |                       |                      |
| BSC-2010L   | Principles of Biology Lab 1            | 2       | None                  | BSC-2010             |
| CHM-1045L   | General Chemistry Lab                  | 2       | None                  | CHM-1045<br>MAC-1105 |
| CHM-1046L   | General Chem/Qualitative Analysis Lab  | 2       | CHM-1045L             | CHM-1046             |
| CHM-2210  | Organic Chemistry 1                    | 3       | CHM-1046              | CHM-2210L            |
| CHM-2210L   | Organic Chemistry 1 Lab                | 2       | CHM-1046<br>CHM-1046L | CHM-2210             |
| CHM-2211  | Organic Chemistry 2                    | 3       | CHM-1046<br>CHM-1046L | CHM-2210             |
| CHM-2211L   | Organic Chemistry 2 Lab                | 2       | CHM-2210              | CHM-2211L            |
| <b>* For completion of the AA-Interdisciplinary Science-Biotechnology degree, students must choose coursework from <u>only one</u> of the following tracks:</b> |  |         |                       |                      |
| <b>TRACK 1 Biotechnology (8 credits hours chosen from the following)</b>  |  |         |                       |                      |
| BSC-2011  | Principles of Biology 2                | 3       | BSC-2010<br>BSC-2010L | BSC-2011L            |
| BSC-2011L   | Principles of Biology Lab 2            | 2       | BSC-2010L             | BSC-2011             |
| BSC-2426  | Biotech: Methods/Applications I        | 3       | None                  | BSC-2426L            |
| BSC-2426L   | Biotech: Methods/Applications I Lab    | 2       | None                  | BSC-2426             |
| BSC-2427  | Biotech: Methods/Applications II       | 3       | BSC-2426<br>BSC-2426L | BSC-2427L            |
| BSC-2427L   | Biotech: Methods/Applications II Lab   | 2       | BSC-2426<br>BSC-2426L | BSC-2427             |
| PCB-2061  | Genetics                               | 3       | BSC-2010<br>BSC-2010L | None                 |
| <b>OR</b>   |  |         |                       |                      |

| <b>TRACK 2 Bioinformatics (8 credits hours chosen from the following)</b> |  |   |  |         |
|---|--|---|--|---------|
| CIS-2321  | Systems Analysis and Design              | 4 | CGS-1060   | None    |
| COP-2700  | Databases Application Programming        | 4 | None   | None    |
| CGS-1021  | Scientific Computing                     | 4 |  | STA2023 |
| <b>OR</b>   |  |   |  |         |
| <b>TRACK 3 Chemical Technology (8 credits hours)</b>                      |  |   |  |         |
| CHM-2110C   | Survey of Quantitative Analysis          | 4 | CHM-1046<br>CHM-1046L  | None    |
| CHS-2311C   | Introduction to Chemical Instrumentation | 4 | CHM-2200<br>CHM2200L<br>OR<br>CHM-2211<br>CHM-2211L;<br>AND CHM2110C | None    |

**GENERAL EDUCATION REQUIREMENTS (36 credits).** For additional advising information, students should refer to the MDC General Education advising information or their advisor.

- **CGS 1060** - Introduction to Microcomputer Usage (4 credits). By the 16th college level credit (excluding ESL, ENS, EAP, and college preparatory courses), a student must take and pass the Computer Competency Test or by the 31st college level credit (excluding ESL, ENS, EAP, and college preparatory courses), a student must pass CGS1060, an equivalent continuing education or vocational credit course or retest with a passing score on the Computer Competency Test.
- **CHM 1045** – General Chemistry (3 credits). While there is no pre-requisite for General Chemistry, students who have not earned a grade of “C” or higher in high school chemistry may be required to complete CHM 1025 prior to enrolling in CHM 1045.
- **MAC 1105** - College Algebra (3 credits). While there is no pre-requisite for College Algebra, students not demonstrating proficiency on the College Placement Test may be required to enroll in MAT 1033 prior to enrolling in MAC 1105.

**For more information about the Associate of Arts degree in Biotechnology, please contact:**

**MDC - North Campus**  
**Biology, Health, Wellness & Funeral Sciences Department**  
 11380 N.W. 27th Avenue  
 Science Complex – 3<sup>rd</sup> Floor  
 Miami, Florida 33167  
 Telephone: (305) 237-1101

**MDC Wolfson Campus**  
**Natural Science, Health & Wellness Department**  
 300 NE 2nd Avenue, Room 1540  
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