



# **Biotechnology (Greenhouse Production)**

DMACC Degree Awarded: Associate in Applied Sciences Grand View Degree Awarded: Bachelor of Arts

This completion plan is designed for students pursuing an AAS in Biotechnology – Greenhouse Production at DMACC and planning to transfer to Grand View to earn a BA in Biotechnology. GV Core Seminars, Composition, and Quantitative Reasoning requirements are included on this plan, but students must fill in the remaining Core Curriculum requirements, any additional major and/or minor requirements, and electives and upper division courses.

All GV students must complete the GV Core, earn 124 credits, with 30 upper division credits and the last 30 credits at Grand View in order to graduate. Major courses taken at GV will be counted in computing the 2.2 major GPA required for this major.

#### Semester 1 at DMACC

| Class                           | Designation | Credits | GV Equivalent | Notes |  |
|---------------------------------|-------------|---------|---------------|-------|--|
| The College Experience          | SDV 108     | 1       | GNEL ELE      |       |  |
| Composition I                   | ENG 105     | 3       | ENGL 100      |       |  |
| General Biology I               | BIO 112     | 4       | BIOL 101      |       |  |
| Soil Science for Horticulture   | AGH 146     | 3       | VOCA 100      |       |  |
| Soil Fertility for Horticulture | AGH 147     | 1       | VOCA 100      |       |  |
| Introduction to Horticulture or | AGH 106 or  | 3 or    | VOCA 100 or   |       |  |
| Principles of Horticulture or   | AGH 221 or  | 3 or    | VOCA 100 or   |       |  |
| Introduction to Botany          | BIO 135     | 4       | BIOL 225      |       |  |
|                                 | TOTAL       | 15-16   |               |       |  |

#### Semester 2 at DMACC

| Class                                | Designation | Credits | GV Equivalent | Notes        |
|--------------------------------------|-------------|---------|---------------|--------------|
| General Biology II                   | BIO 113     | 4       | BIOL 102      |              |
| Introduction to Greenhouse           | AGH 132     | 3       | VOCA 100      |              |
| Plant Propagation I                  | AGH 233     | 3       | VOCA 100      |              |
| Introduction to General Chemistry or | CHM 122 or  | 4       | CHEM 103 or   | Take CHM 165 |
| General/Inorganic Chemistry I        | CHM 165     |         | CHEM 111      |              |
|                                      | TOTAL       | 14      |               |              |

## Semester 3 at DMACC

| Class                | Designation | Credits | GV Equivalent | Notes |
|----------------------|-------------|---------|---------------|-------|
| Statistics           | MAT 157     | 4       | STAT 241      |       |
| Microbiology         | BIO 186     | 4       | BIOL 256      |       |
| Insects and Diseases | AGH 253     | 3       | VOCA 100      |       |
|                      | TOTAL       | 11      |               |       |

# Semester 4 at DMACC

| Class                            | Designation | Credits | GV Equivalent | Notes        |
|----------------------------------|-------------|---------|---------------|--------------|
| Composition II                   | ENG 106     | 3       | ENGL 101      |              |
| Genetics                         | BIO 146     | 3       | BIOL NWN      |              |
| Greenhouse Production I          | AGH 133     | 3       | VOCA 100      |              |
| Pesticide Application Cert.      | AGH 283     | 2       | VOCA 100      |              |
| Intro to Organic/Biochemistry or | CHM 132 or  | 4       | CHEM 107 or   | Take CHM 175 |
| General/Inorganic Chemistry II   | CHM 175     |         | CHEM 112      |              |
|                                  | TOTAL       | 15      |               |              |

This information must be used in conjunction with the 2019-2020 Grand View University Catalog and does not reflect a student's official record of progress. Students are expected to use the Progress tool found on myView > GV Self Service when monitoring and planning coursework. Other available resources include: Course Planning Documents (found on myView under Academics) and the faculty and staff who work with academic requirements.

# **Semester 5 at DMACC**

| Class                                | Designation | Credits | GV Equivalent | Notes                     |
|--------------------------------------|-------------|---------|---------------|---------------------------|
| Biotechnology Internship             | BIO 249     | 2-3     | BIOL 399      | Lower division credit     |
| Cell and Molecular Bio-Nucleic Acids | BIO 250     | 5       | BIOL 401 and  | Lewer division and dit    |
| Cell and Molecular Bio-Proteins      | BIO 251     | 5       | BIOL 415      | Lower division credit     |
| AAS Core Social and Behavioral       |             | 3       |               | See DMACC/GV Core Options |
| Science/Humanities course            |             |         |               |                           |
|                                      | TOTAL       | 15-16   |               |                           |

#### **Semester 1 at Grand View**

| Class           | Designation | Credits | Outcome Iterations | Notes |
|-----------------|-------------|---------|--------------------|-------|
| College Algebra | MATH 121    | 3       | CI, Q              |       |
| Journal Club    | BIOL 250    | 1       |                    |       |
| Biotechnology   | BIOL 285    | 3       | CI, GA             |       |
| Plant Biology   | BIOL 225    | 4       |                    |       |
| Core course     |             | 3       |                    |       |
|                 | TOTAL       | 14      |                    |       |

## **Semester 2 at Grand View**

| Class            | Designation | Credits | Outcome Iterations | Notes                        |
|------------------|-------------|---------|--------------------|------------------------------|
| Plant Physiology | BIOL 325    | 4       |                    | Or take BIOL 335 Semester 3* |
| Cell Biology     | BIOL 380    | 4       | Q                  |                              |
| Core Seminar II  | LIBA 300    | 3       | CI, IL, Q, GA      |                              |
| Core or Elective |             | 3       |                    |                              |
|                  |             |         |                    |                              |
|                  | TOTAL       | 14      |                    |                              |

## **Semester 3 at Grand View**

| Class               | Designation | Credits | Outcome Iterations | Notes                        |
|---------------------|-------------|---------|--------------------|------------------------------|
| Genetics            | BIOL 360    | 4       | Q, GA              |                              |
| Physiology          | BIOL 335    | 4       |                    | Or take BIOL 325 Semester 2* |
| Organic Chemistry I | CHEM 321    | 5       |                    |                              |
| Core or Elective    |             | 2       |                    |                              |
|                     |             |         |                    |                              |
|                     | TOTAL       | 15      |                    |                              |

#### Semester 4 at Grand View

| Class            | Designation | Credits | Outcome Iterations | Notes |
|------------------|-------------|---------|--------------------|-------|
| Senior Seminar   | BIOL 450    | 2       | CI, IL, W, O, V    |       |
| Core Seminar III | LIBA 450    | 3       | CI, O, V           |       |
| Core or Elective |             | 10      |                    |       |
|                  |             |         |                    |       |
|                  | TOTAL       | 15      |                    |       |

\*Students will only need to take one of these courses.

#### **Core Outcome Iterations**

CI = Critical Inquiry; IL = Information Literacy; W = Written Communication; O = Oral Communication Q = Quantitative Communication; GA = Global Awareness; V = Vocation

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