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University Registrar

DASC: DUAL College of Agriculture & Life Sciences University Registrar page 1 of 3

Bachelor of Science
Dairy Science (DASC) Major

### **Dual Emphasis (DUAL) Option**

Date of Entry under UG Catalog 2022-2023

## Pathways to General Education and CALS Requirements [47 credits]

#### Concept 1 (9 credits)

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|--------------------------|-----------------------------------|-----|
| ENGL 1105                | First Year Writing                | [3] |
| ENGL 1106                | First Year Writing                | [3] |

#### 1a - Advanced/Applied Discourse

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|----|---|-----------------------|-----------|--|
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|    |   |                       |           |  |
|    |   |                       |           |  |

#### Concept 2 – Critical Thinking in the Humanities (6 credits)

|  | [3] |
|--|-----|
|  | [3] |

#### Concept 3 – Reasoning in the Social Sciences (6 credits)

| TO TO THE TANK | , in the estimate (estimate)           |     |
|----------------|----------------------------------------|-----|
| AAEC 1005      | Economics of the Food and Fiber System | [3] |
| or             | or                                     |     |
| ECON 2005      | Principles of Economics                |     |
| AAEC 1006      | Economics of the Food and Fiber System | [3] |
| or             | or                                     |     |
| ECON 2006      | Principles of Economics (Pre: 2005)    |     |

#### Concept 4 – Reasoning in the Natural Sciences (8 credits)

|           | <br>in the Hataran Colonicos (Colonico) |         |
|-----------|-----------------------------------------|---------|
| BIOL 1105 | Principles of Biology                   | [3] [1] |
| BIOL 1115 | Principles of Biology Lab               |         |
| Or        | or                                      |         |
| BIOL 1005 | General Biology                         |         |
| BIOL 1015 | General Biology Lab                     |         |
| BIOL 1106 | Principles of Biology                   | [3] [1] |
| BIOL 1116 | Principles of Biology Lab               |         |
| Or        | or                                      |         |
| BIOL 1006 | General Biology                         |         |
| BIOL 1016 | General Biology Lab                     |         |
|           |                                         |         |

### Concept 5 (9 credits)

#### 5f - Foundational Quantitative and Computational Thinking

| MATH 1014 | Precalculus with Transcendental Functions (3 credits)                                      | [3] |
|-----------|--------------------------------------------------------------------------------------------|-----|
| or        | or                                                                                         |     |
| MATH 1025 | Elementary Calculus (3 credits)                                                            |     |
| or        | or                                                                                         |     |
| MATH 1225 | Calculus of a Single Variable (4 credits)                                                  |     |
| STAT 2004 | Introductory Statistics Pre: MATH 1014 or MATH 1025 or MATH 1225 or MATH 1524 or MATH 1525 | [3] |

#### 5a - Advanced/Applied Quantitative and Computational Thinking

|                       | -                     |                                |     |
|-----------------------|-----------------------|--------------------------------|-----|
| ALS 3104 <sup>1</sup> | Animal Breeding and G | Genetics PRE: BIOL 1105, (STAT |     |
|                       | 2004 or STAT 3005 or  | STAT 3615), (APSC 1454 or      | [3] |
|                       | DASC 2474 or DASC 2   | 2484) (3 credits)              |     |

<sup>1 &</sup>quot;in major" GPA courses indicated

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# College of Agriculture & Life Sciences University Registrar page 2 of 3

Bachelor of Science
Dairy Science (DASC) Major

# Dairy Science (DASC) Major Dual Emphasis Option

Date of Entry under UG Catalog 2022-2023

|                    |                   | [3] |
|--------------------|-------------------|-----|
| d – Critique and P | ractice in Design |     |
|                    |                   | [3] |

| Concept 7 – Critical Ar | nalysis of Identity and Equity in the United States (3 | credits) |  |
|-------------------------|--------------------------------------------------------|----------|--|
|                         |                                                        | [3]      |  |

**Dairy Science Common Degree Core [27 credits]** Spring Fall Chemistry Requirement **CHEM 1015** Chemistry in Context [3] **CHEM 1016** Chemistry in Context [3] or General Chemistry CHEM 1035 [3] **CHEM 1036** General Chemistry [3] ALS 2304<sup>2</sup> PRE: BIOL 1106 Animal Physiology and Anatomy [4] ALS 3204<sup>2</sup> PRE: 2304, (CHEM 1036 or CHEM 1036H or CHEM 1016) Animal Nutrition and Feeding [3] ALS 33042 PRE: ALS 2304 Physiology of Reproduction [3] DASC 2474<sup>2</sup> Dairy Science and Industry [3] DASC 2664<sup>2</sup> Prof Discourse & Career [1] Development DASC 3474<sup>2</sup> (PRE: DASC 2474) **Dairy Information Systems** [3] DASC 4374<sup>2</sup> (PRE: ALS 2304) Physiology of Lactation [3] DASC 4664<sup>2</sup> (PRE: DASC 2664) Translating Dairy Science [1]

#### TOTAL GENERAL REQUIREMENT CREDITS

74

#### **Satisfactory Progress Toward Degree**

- A. After completion of 30 Virginia Tech semester credits; 3 semester credits of DASC courses
- B. After completion of 36 semester credits<sup>1</sup>: 12 semester credits in any area of the Pathways to General Education
- C. After completion of 72 semester credits<sup>1</sup>: 24 semester credits in any area of the Pathways to General Education, 6 semester credits of DASC courses; at least 9 semester credits of in-major courses
- D. After 96 semester credits: In-major GPA of at least 2.00, Overall GPA of at least 2.00

#### 2.00 minimum overall and in-major GPAs are required for graduation.

**Prerequisite:** Some courses listed on this checksheet may have prerequisites; please consult the University Course Catalog or check with your advisor.

1 Includes credits completed at Virginia Tech, transfer credits, advanced placement & standing, credit by exam, and course withdrawal

2 "in major" GPA courses indicated

\_\_\_\_\_

Student must have completed 2 years of High School Foreign Language <u>OR</u> 6 credits of University Foreign Language. Credits do not count towards graduation requirements.

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**TOTAL CREDITS REQUIRED FOR GRADUATION 120** 

DASC: DUAL

# College of Agriculture & Life Sciences University Registrar page 3 of 3

#### Department of Dairy Science Bachelor of Science in Dairy Science

#### **Dual Emphasis Option**

Date of Entry under UG Catalog 2022-23

| Dairy electives [Choose minimum 9 credit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | s]                                                                                                                           | Fall                 | Sp               | my                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------|-----------------------------------------------------------------------|
| DACS 1464 <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Dairy Cattle Handling                                                                                                        | [1]                  |                  |                                                                       |
| DASC 1574 <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Dairy Science First Year Experience                                                                                          | [1]                  |                  |                                                                       |
| DASC 2204 <sup>1</sup> (PRE: AAEC 1005)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Entrepreneurship in Animal Agriculture                                                                                       | [3]                  |                  |                                                                       |
| DASC 2484 <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Dairy Cattle Evaluation                                                                                                      |                      | [2               | 2]                                                                    |
| DASC/APSC 3134 <sup>1,2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Animal Agriculture and the Environment                                                                                       |                      | [;               | 3]                                                                    |
| DASC 32741 (CO: ALS 3204)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Applied Dairy Cattle Nutrition                                                                                               | [3]                  |                  |                                                                       |
| DASC 4174 <sup>1</sup> (PRE: ALS 3104)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Applied Dairy Cattle Genetics                                                                                                |                      | [;               | 3]                                                                    |
| DASC 4274 <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Dairy Ration Formulation                                                                                                     | [1]                  |                  | _                                                                     |
| DASC/APSC 4304 <sup>1,2</sup> (PRE: ALS 2304)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Bovine Reproduction Practices                                                                                                | [2]                  |                  |                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Advanced Dairy Management Evaluation                                                                                         |                      | [2               | 2]                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dairy Enterprise Management                                                                                                  |                      | [;               | 31                                                                    |
| DASC 4476 <sup>1</sup> (PRE: 3474, (4475 OR AAEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Dairy Enterprise Management                                                                                                  | [3]                  |                  |                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Independent study or Undergraduate research (maximum of 3 credits)                                                           | []                   | ]                | ]                                                                     |
| Must complete formal Minor or Double Major o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | course requirements in any department (including at                                                                          | [ ]   [ ]            | credits          | ]<br>]<br>]                                                           |
| Must complete formal Minor or Double Major of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | course requirements in any department (including at                                                                          | []<br>[]<br>[]<br>[] | Credits          | ]                                                                     |
| Just complete formal Minor or Double Major of om that department) OR complete approved  Option Restricted Electives [8 credits min Any AAEC, ACIS, ALS, APSC, BCHM, BIOL,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | imum] , BSE, CHEM, COMM, CS, CSES, DASC, ECON, EN                                                                            |                      | ]<br>]<br>]<br>] | ]                                                                     |
| Just complete formal Minor or Double Major of om that department) OR complete approved  Option Restricted Electives [8 credits min Any AAEC, ACIS, ALS, APSC, BCHM, BIOL,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | imum] , BSE, CHEM, COMM, CS, CSES, DASC, ECON, EN                                                                            |                      | ]<br>]<br>]<br>] | ]                                                                     |
| Must complete formal Minor or Double Major of om that department) OR complete approved  Option Restricted Electives [8 credits min Any AAEC, ACIS, ALS, APSC, BCHM, BIOL,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | imum] , BSE, CHEM, COMM, CS, CSES, DASC, ECON, EN                                                                            |                      | ]<br>]<br>]<br>] | ]                                                                     |
| DASC 1574¹ Dairy DASC 2204¹ (PRE: AAEC 1005) Entre DASC 2484¹ Dairy DASC 3134¹.² Anim DASC 3274¹ (CO: ALS 3204) Appl DASC 4174¹ (PRE: ALS 3104) Appl DASC 4274¹ Dairy DASC 4274¹ Dairy DASC 4474¹ (PRE: 3474, ALS 2304) Bovis  DASC 4474¹ (PRE: 3474, ALS 3104, ALS 3204, ALS 3304. CO: 4475) DASC 4475¹ (PRE: DASC 2474) Dairy DASC 4476¹ (PRE: 3474, (4475 OR AAEC 3454))  DASC 4974¹ or 4994¹ Inde (max)  Option Minor Requirement [18 credits minimum]: Must complete formal Minor or Double Major course refrom that department) OR complete approved Pathway  Option Restricted Electives [8 credits minimum] Any AAEC, ACIS, ALS, APSC, BCHM, BIOL, BSE, Complete approved Pathway  Option Restricted Electives [8 credits minimum] Any AAEC, ACIS, ALS, APSC, BCHM, BIOL, BSE, Complete approved Pathway  Option Restricted Electives [8 credits minimum]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | imum] , BSE, CHEM, COMM, CS, CSES, DASC, ECON, EN                                                                            |                      | ]<br>]<br>]<br>] | ]                                                                     |
| Must complete formal Minor or Double Major of om that department) OR complete approved  Option Restricted Electives [8 credits min Any AAEC, ACIS, ALS, APSC, BCHM, BIOL,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Dairy Cattle Handling   [1]                                                                                                  |                      |                  |                                                                       |
| Must complete formal Minor or Double Major of om that department) OR complete approved  Option Restricted Electives [8 credits min Any AAEC, ACIS, ALS, APSC, BCHM, BIOL,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | imum] , BSE, CHEM, COMM, CS, CSES, DASC, ECON, EN                                                                            |                      | ]<br>]<br>]<br>] | ]                                                                     |
| Must complete formal Minor or Double Major of the complete approved from that department) OR complete approved on the compl | imum] BSE, CHEM, COMM, CS, CSES, DASC, ECON, ENSTAT, and BMVS courses (with advisor approval).  Minimum Total Option Credits |                      | ]<br>]<br>]<br>] | ]<br>]<br>]<br>]<br>]<br>ST,                                          |
| Must complete formal Minor or Double Major of the complete approved from that department) OR complete approved that department) OR complete approved the c | imum] BSE, CHEM, COMM, CS, CSES, DASC, ECON, ENSTAT, and BMVS courses (with advisor approval).  Minimum Total Option Credits |                      | FOR, FS          | ]<br>]<br>]<br>]<br>]<br>ST,                                          |
| Must complete formal Minor or Double Major or from that department) OR complete approved  Option Restricted Electives [8 credits min Any AAEC, ACIS, ALS, APSC, BCHM, BIOL,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | imum] BSE, CHEM, COMM, CS, CSES, DASC, ECON, ENSTAT, and BMVS courses (with advisor approval).  Minimum Total Option Credits |                      | FOR, FS          | <br> |
| Must complete formal Minor or Double Major or from that department) OR complete approved  Option Restricted Electives [8 credits min Any AAEC, ACIS, ALS, APSC, BCHM, BIOL, HORT, MATH, MGT, MKTG, PHYS, SPAN, S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | imum] BSE, CHEM, COMM, CS, CSES, DASC, ECON, ENSTAT, and BMVS courses (with advisor approval).  Minimum Total Option Credits |                      | FOR, FS          | <br> |

<sup>1 &</sup>quot;in major" GPA courses indicated

<sup>2</sup> Cross-listed courses (DASC/APSC 3134, DASC/APSC 4304) can be used to meet Option requirements or Option Minor requirements but not both.