

**Department of Animal Science
Iowa State University**

Concurrent BS/MS Degree Program

The Department of Animal Science offers a combined BS/MS degree program that allows selected students to obtain both the BS and MS degrees in five years. This program is intended for highly qualified, research-oriented students who wish to obtain concurrently a BS degree in animal science and an MS degree with a major in animal breeding and genetics, animal physiology, animal science, or meat science. Applicants should rank in the upper quartile of undergraduate students. In the application process, they must select a major for their MS degree program and indicate a preference for a specific research group in the department. Students normally apply for, and enter, this program in the second semester of the third year of their BS course of study. Applicants usually will have completed some undergraduate research (e.g., an honors project) or will have been employed in a research laboratory.

To apply for the program, students should submit the following materials to the Department of Animal Science, Attn: Graduate Coordinator, 1221 Kildee Hall:

- 1) The Department of Animal Science's "Application for Concurrent BS/MS Degree Program" (see form below).
- 2) The Graduate College's "Application for an ISU Undergraduate Student Wishing to Pursue a Concurrent Graduate Certificate or Graduate Degree" form <http://www.grad-college.iastate.edu/forms/files/ConcurrentEnrollmentUG-G.pdf>.
- 3) A current undergraduate transcript.
- 4) Three letters of recommendation to the Director of Graduate Education for the department, one from the major professor who will advise the applicant (indicating a commitment to accept him/her as a graduate student) and two from other references.
- 5) GRE exam scores (sent by the testing service to the Admissions Office).

After admission to the Graduate College, the student is expected to begin an MS thesis research project during the summer semester after the junior year. The student is eligible for a one-quarter time research assistantship during the summer and the two semesters of the senior year or until he/she completes the BS degree program. After completion of the BS, students will be eligible for a one-half time assistantship. BS/MS Students with graduate research or teaching assistantships pay Iowa resident tuition rates and receive a 25% tuition credit for a 1/4 time appointment and a 50% credit for a 1/2 time appointment. If no assistantship is awarded, the student will be charged graduate tuition and fees.

Questions? Contact the Director of Graduate Admissions Dr. Joe Sebranek, telephone 515-294-1091, e-mail sebranek@iastate.edu, or Graduate Admissions Coordinator Donna Nelson, telephone 515-294-2160, e-mail dnelson@iastate.edu.

A timetable of expected progress and suggested programs of study for each major follow below.

Typical Timetable for Concurrent BS/MS Degree Program

Fall semester, junior year:

- Obtain application materials from Director of Graduate Education, Graduate Coordinator, or other faculty.
- Complete and return application to 1221 Kildee Hall.

Spring semester, junior year:

- Submit application materials.
 - The Department of Animal Science's "Application for Concurrent BS/MS Degree Program" (see form below).
 - The Graduate College's "Application for an ISU Undergraduate Student Wishing to Pursue a Concurrent Graduate Certificate or Graduate Degree" form <http://www.grad-college.iastate.edu/forms/files/ConcurrentEnrollmentUG-G.pdf>.
 - A current undergraduate transcript.
 - Three letters of recommendation, one from the major professor who will advise the applicant (indicating a commitment to accept him/her as a graduate student) and two from other references.
 - GRE exam scores (sent by the testing service to the Admissions Office).

Summer session, junior year:

Begin thesis research.

Fall semester, senior year:

- Form Program of Study Committee.
- Continue thesis research

Spring semester, senior year:

- Continue thesis research.
- Hold Committee meeting at the end of the semester to review progress.

Summer session, senior year:

Continue thesis research.

Fall semester, fifth year:

Continue thesis research.

Spring semester, fifth year:

- Complete experimental work.
- Begin writing thesis.
- Hold Committee meeting at the end of the semester to review progress.

Summer session, fifth year:

- Complete and defend thesis.
- Graduate with M.S. degree.
- Submit paper for publication.

**Concurrent B.S./M.S. Degree Program
Animal Science BS/Animal Science MS Majors
Department of Animal Science
Iowa State University**

B.S. Degree Program

Interpersonal and Public Communication Skills

ENGL 150	3
ENGL 250	3
SP CM 212, AgEds 311 or ComSt 214	3
LIBR 160	<u>0.5</u>
	9.5

Mathematical Sciences

MATH 140, 150, 165 or 181	3-4
STAT 101, 104, or 226	<u>3-4</u>
	6-8

Physical Sciences

CHEM 163, 163L or 177, 177L	5
BBMB 221 or CHEM 331	<u>3</u>
	8

Biological Sciences

BIOL 211, 211L	4
BIOL 212, 212L	4
BIOL 313 or GEN 320	3
Micro 201 and 201L or 302 and 302L	<u>3</u>
	14

Personal Development, Human Relations, and

Global Awareness

Humanities	3
Social sciences	3
Ethics	3
International perspectives	3
U.S. Diversity	<u>3</u>
	15

Animal Science

AN S 101
AN S 110
AN S 114
AN S 211
AN S 200 option
AN S 200 option
AN S 200 option
AN S 214, 214L
AN S 311
AN S 319
AN S 320
AN S 331
AN S 352
AN S 300 option (2-3 credits)
AN S 411
AN S 400 option 1 – (3 credits)
ANS 400 option 2 – (2-3 credits)

Business

Econ 101 or 102 or Acct 284	3
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Free Electives

Several courses	26.5-30.5
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M.S. Degree Program

BBMB 404, 405 or 420	6 or 4
STAT 401	4
AN S 501	1
AN S 503	1
At least two courses from AN S 570, 518, 519, 533, 549 or 552 and 552L	
AN S 590L (2 credits)	2
AN S 695	1
AN S 699	<u>variable</u>
	<u>30</u>

The B.S. degree program may be modified according to Honors Program of Study and academic advisor's approval. To be better trained for the M.S. degree program, the student ordinarily completes training in calculus, physics, quantitative analysis, and organic chemistry. M.S. degree course requirements are established in consultation with the Program of Study Committee.

**Concurrent B.S./M.S. Degree Program
Animal Science/Animal Physiology Majors
Department of Animal Science
Iowa State University**

B.S. Degree Program

Interpersonal and Public Communication Skills

ENGL 150	3
ENGL 250	3
SP CM 212, AgEds 311 or ComSt 214	3
LIBR 160	<u>0.5</u>
	9.5

Mathematical Sciences

MATH 140, 150, 165 or 181	3-4
STAT 101, 104, or 226	<u>3-4</u>
	6-8

Physical Sciences

CHEM 163, 163L or 177, 177L	5
BBMB 221 or CHEM 331	<u>3</u>
	8

Biological Sciences

BIOL 211, 211L	4
BIOL 212, 212L	4
BIOL 313 or GEN 320	3
Micro 201 and 201L or 302 and 302L	<u>3</u>
	14

Personal Development, Human Relations, and

Global Awareness

Humanities	3
Social sciences	3
Ethics	3
International perspectives	3
U.S. Diversity	<u>3</u>
	15

Animal Science

AN S 101
AN S 110
AN S 114
AN S 211
AN S 200 option
AN S 200 option
AN S 200 option
AN S 214, 214L
AN S 311
AN S 319
AN S 320
AN S 331
AN S 352
AN S 300 option (2-3 credits)
AN S 411
AN S 400 option 1 – (3 credits)
ANS 400 option 2 – (2-3 credits)

Business

Econ 101 or 102 or Acct 284	3
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Free Electives

Several courses	26.5-30.5
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M.S. Degree Program

BBMB 404, 405	6
STAT 401	4
AN S 501	1
AN S 549	4
AN S 552	1
AN S 633 or 685	
AN S 590L (2 credits)	2
AN S 695	1
*Graduate electives	variable
AN S 699	variable
	<u>30</u>

*electives selected for area of specialization

The B.S. degree program may be modified according to Honors Program of Study and academic advisor's approval. To be better trained for the M.S. degree program, the student ordinarily completes training in calculus, physics, quantitative analysis, and organic chemistry. M.S. degree course requirements are established in consultation with the Program of Study Committee.

**Concurrent B.S./M.S. Degree Program
Animal Science/Meat Science Majors
Department of Animal Science
Iowa State University**

B.S. Degree Program

Interpersonal and Public Communication Skills

ENGL 150	3
ENGL 250	3
SP CM 212, AgEds 311 or ComSt 214	3
LIBR 160	<u>0.5</u>
	9.5

Mathematical Sciences

MATH 140, 150, 165 or 181	3-4
STAT 101, 104, or 226	<u>3-4</u>
	6-8

Physical Sciences

CHEM 163, 163L or 177, 177L	5
BBMB 221 or CHEM 331	<u>3</u>
	8

Biological Sciences

BIOL 211, 211L	4
BIOL 212, 212L	4
BIOL 313 or GEN 320	3
Micro 201 and 201L or 302 and 302L	<u>3</u>
	14

Personal Development, Human Relations, and

Global Awareness

Humanities	3
Social sciences	3
Ethics	3
International perspectives	3
U.S. Diversity	<u>3</u>
	15

Animal Science

AN S 101
AN S 110
AN S 114
AN S 211
AN S 200 option
AN S 200 option
AN S 200 option
AN S 214, 214L
AN S 311
AN S 319
AN S 320
AN S 331
AN S 352
AN S 300 option (2-3 credits)
AN S 411
AN S 400 option 1 – (3 credits)
ANS 400 option 2 – (2-3 credits)

Business

Econ 101 or 102 or Acct 284	3
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Free Electives

Several courses	26.5-30.5
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M.S. Degree Program

BBMB 404 (3) or 420 (4)	3 or 4
STAT 401	4
AN S 501	1
AN S 570	3
AN S 571	3
AN S 590L (2 credits)	2
AN S 684	1
AN S 695	1
AN S 699	variable
Stat 402 and one course	30

in Microbiology are highly recommended. Courses in Food Science and Human Nutrition offered for graduate credit may be elected. AN S 699 may be taken with variable credit to complete 30 total credits.

The B.S. degree program may be modified according to Honors Program of Study and academic advisor's approval. To be better trained for the M.S. degree program, the student should consider training in calculus, physics, quantitative analysis, and organic chemistry. M.S. degree course requirements are established in consultation with the Program of Study Committee.

**Concurrent B.S./M.S. Degree Program
Animal Science/Animal Breeding and Genetics Majors
Department of Animal Science
Iowa State University**

B.S. Degree Program

Interpersonal and Public Communication Skills

ENGL 150	3
ENGL 250	3
SP CM 212, AgEds 311 or ComSt 214	3
LIBR 160	<u>0.5</u>
	9.5

Mathematical Sciences

MATH 140, 150, 165 or 181	3-4
STAT 101, 104, or 226	<u>3-4</u>
	6-8

Physical Sciences

CHEM 163, 163L or 177, 177L	5
BBMB 221 or CHEM 331	<u>3</u>
	8

Biological Sciences

BIOL 211, 211L	4
BIOL 212, 212L	4
BIOL 313 or GEN 320	3
Micro 201 and 201L or 302 and 302L	<u>3</u>
	14

Personal Development, Human Relations, and

Global Awareness

Humanities	3
Social sciences	3
Ethics	3
International perspectives	3
U.S. Diversity	<u>3</u>
	15

Animal Science

AN S 101
AN S 110
AN S 114
AN S 211
AN S 200 option
AN S 200 option
AN S 200 option
AN S 214, 214L
AN S 311
AN S 319
AN S 320
AN S 331
AN S 352
AN S 300 option (2-3 credits)
AN S 411
AN S 400 option 1 – (3 credits)
ANS 400 option 2 – (2-3 credits)

Business

Econ 101 or 102 or Acct 284	3
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Free Electives

Several courses	26.5-30.5
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M.S. Degree Program

Quantitative and Population Genetics	9
Mendelian Genetics	3
Statistics	3
AN S 501	1
AN S 658	1
AN S 590L	2
AN S 695	1
AN S 699 and electives	<u>10</u>
	<u>30</u>

The B.S. degree program may be modified according to Honors Program of Study and academic advisor's approval. To be better trained for the M.S. degree program, the student ordinarily completes training in calculus, physics, quantitative analysis, and organic chemistry. M.S. degree course requirements are established in consultation with the Program of Study Committee.

APPLICATION FOR CONCURRENT BS/MS DEGREE
Department of Animal Science
IOWA STATE UNIVERSITY

1. Name: Mr/Ms _____
(Family/Last) *(First)* *(Middle)*

2. Current Address: _____

Telephone: _____ E-mail address _____

3. Permanent Address _____
_____ Phone: _____

4. Citizenship _____ Birthplace _____
(Country) *(City)* *(State/Country)*

Birth date _____ University ID Number _____

5. Term you wish to enroll (semester/year) _____

6. a. Current educational status at Iowa State University:

Date entered _____ Major _____ College _____

Currently expected B.S. graduation date (month/year) _____ Current GPA _____

b. Other non-ISU post-high school courses and experience (institution, dates, etc.) _____

c. Research and laboratory experience _____

7. M.S. degree major _____ Proposed Major Professor _____

8. Please ask three (3) people acquainted with your qualifications to send letters of recommendation directly to the Department of Animal Science, 1221 Kildee Hall. List the names and addresses of your references below (one needs to be proposed Major Professor).

a. _____

b. _____

c. _____

9. When will you take the Graduate Record Examination (GRE)? _____ (month/year)

If you already have taken the GRE, what are your scores? Verbal _____, _____%; Quantitative _____, _____%;
written _____, _____%; Date taken _____

10. Signature _____ Date _____

11. Advisor's signature _____ Date _____