Stockbridge School of Agriculture
UMass Amherst

Stockbridge

A.S. Degree

2015 - 2016 Handbook

stockbridge.cns.umass.edu

STOCKBRIDGE SCHOOL OF AGRICULTURE
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TABLE OF CONTENTS

TWO-YEAR PROGRAMS OF STUDY

Arboriculture and Community Forest Management

Arboriculture and Community Forest Management is the sustainable care of trees and shrubs in residential and community settings. Students will learn the technical, business, and field skills needed for successful careers as commercial, utility and municipal arborists, as well as park managers.

Equine Management

Students learn the scientific and practical approaches of the management, care, and breeding of horses. Emphasis is placed on developing and understanding the business and financial aspects of the industry. Students will also take courses in equitation, instructor certification, and training of young horses.

Landscape Contracting

Students learn the fundamentals of design and the process to execute the construction of landscapes on private, commercial and public properties. A strong horticultural foundation is used to support the construction and design portions of the curriculum while an overlying theme of sustainability ties them together. Students learn in a rigorous lecture and laboratory environment to prepare them for this most rapidly growing area of the green industry.

Sustainable Food and Farming

Students learn the complexities of farming and pursue careers in farming, education, and/or advocacy. During the educational experience, they acquire a basic knowledge of both plant and soil sciences while gaining specialized training in techniques of plant and animal production and management. This major also offers a degree of flexibility in designing a personal program of study.

Sustainable Horticulture

Students are prepared for careers in greenhouse crop production, nursery crop production, and horticulture opportunities at parks, recreational areas, tourist attractions, and historic sites. Sustainable and environmentally sound methods of selecting, producing and utilizing landscape plants are emphasized. Students choose elective courses to design their own course of study, including vegetable and herb production, sustainable agriculture, and pest management as well as horticulture courses. In this way, students learn a wide variety of skills for application in the diverse horticulture industry.

Turfgrass Management

Through such courses as turfgrass physiology and management, weed management, insect management, plant pathology and disease management, soil science, irrigation, and business management, students are provided with the technical training necessary for professional careers in the dynamic turf care industry. The skills acquired can be applied to the management of athletic fields, golf courses, parks, and home lawns.

ADMISSIONS INFORMATION

Applications to the Stockbridge School of Agriculture are processed in the Undergraduate Admissions Office. To be considered for admission, apply online through the Common Application, pay the $75 application fee, and submit all other required materials (see below).

Application Instructions

Apply online at http://www.umass.edu/admissions/apply/application-procedures/

Application Deadlines

Fall Semester	Early Action	November 1
	Regular Decision	March 15 (encouraged to apply earlier)
Spring Semester	Spring Semester applications are generally not accepted due to prerequisites required for spring semester courses.	

Application Guidelines

High school students

In addition to the Common Application and fee, your application should include:

- personal statement (500 words or less) describing career interests, personal circumstances or academic experiences
- resume or list of extracurricular activities and work experience
- high school transcript or Common Application School Report transmitted by your school
- SAT or ACT scores sent electronically by the testing agency
- letter(s) of recommendation (at least one) from guidance counselors, teachers, or employers

High school graduates who never attended college

- follow procedure for high school applicants except
- SAT or ACT scores are not required if you have been out of high school five years or more

Applicants with a GED

- follow procedure for high school applicants, but also include your GED test scores
- SAT or ACT scores are not required if your high school class graduated more than five years prior to applying

Applicants who have attended college

- and have attempted 12 more more college credits, submit the Common Application for Transfer students

In addition to the Common Application and fee, your application should include:

- Transfer College Report from the Common Application
- personal statement (500 words or less) describing what you have done since leaving school
- resume or list of extracurricular activities and work experience
- official transcripts from all colleges attended

- high school transcript or GED scores, if you have earned fewer than 24 college credits
- SAT or ACT scores if you have been out of high school five years or less
- letter(s) of recommendation (at least one)

Applicants with a college degree

- submit the Common Application for Transfer students

In addition to the Common Application and fee, your application should include:

- personal statement (500 words or less) describing what you have done since leaving school
- gap explanation (can be a resume or list of extracurricular activities and work experience
- official transcripts from all colleges attended
- letter(s) of recommendation (at least one)

Applicants with Learning Disabilities

In accordance with Chapter 766 of the Massachusetts Acts of 1972, you may claim an SAT exemption if:

- you are a learning-disabled Massachusetts resident
- you submit appropriate documentation of your disability

Learn more about support for students with learning disabilities at: http://www.umass.edu/disability/, the website for Disability Services.

International Applicants

- you may only apply for fall admission

Applicants who are not native speakers of English are required to demonstrate their English language proficiency. Transfer applicants must also submit the bank statement and sponsor statement to be considered for admission.

More information for applying as an international student may be found at: http://www.umass.edu/admissions/international

Part-Time Students

You may apply as a part-time student if you are interested in taking fewer than 12 credits per semester. Admittance to any course is on a space available basis.

Part-time students may elect to take classes through the Division of Continuing Education; 413-545-2414; www.umassulearn.net. However, in order to qualify for an associate of science degree through the Stockbridge School of Agriculture, a student may not take more than nine (9) total credits through Continuing Education and no more than six (6) credits during any one semester.

Veterans

Veterans are considered under regular admissions policies. All veterans must submit a copy of their DD214 or 2586 to verify potential credits earned for military experience. Do not submit the original, as this document will be needed at a later date to establish eligibility for GI Bill benefits. If still on active duty, submit the copy when you are released.

If you are a current or former member of the United States Military, you should contact the UMass Amherst Veteran Services Office as soon as you start the application process. The staff in this office helps Veterans, Guardsmen, and Reservists to access the benefits available to them through the Montgomery GI Bill (MGIB) and other programs. They also help students make the transition from active military duty to college, and from college to active military duty.

For further information, please contact:

Education Benefits and Enrollment Verification Questions
Judy Gagnon
215 Whitmore Administration Building
University of Massachusetts Amherst
Amherst, MA, 01003
413-545-5792
vetbenefits@umass.edu

Student Veterans Resource Center
19 Dickinson Hall
University of Massachusetts Amherst
Amherst, MA, 01003
413-545-0939
veteranservices@sacl.umass.edu
http://www.umass.edu/veterans/

GENERAL INFORMATION

Financial Aid
The University's Financial Aid Services provides financial aid planning information to students and their families. Financial Aid Services is located in 255 Whitmore Administration Building; 413-545-0801; www.umass.edu/umfa/.

To apply for financial aid, you need to complete one form, the Free Application for Federal Student Aid (FAFSA). Students may file the standard FAFSA form on line at: http://www.fafsa.gov/. The FAFSA should be filed as soon after January 1 as possible and before the priority filing date of March 1 for maximum consideration. The school code for UMass Amherst is 002221. The FAFSA may be filed prior to filing your federal income tax return; if necessary, the FAFSA can be amended later.

Housing
All first-year students are required to live on campus. Exceptions to this policy are married students, veterans of the U.S. Armed Services, members of fraternities and sororities who have been authorized to reside in their respective houses, and students who live in and commute from the home of their parent(s) or guardian(s) within a 40-mile radius of the campus. The Residential Life Office is located in 235 Whitmore Administration Building; 413-545-2100; www.housing.umass.edu.

Meal Plans
There are four all-you-care-to-eat dining commons conveniently located across campus. Guest meals and Dining Dollars OR Meal Exchanges are included in the Residential Meal Plans.

Students may choose from the following meal plans:
Unlimited Access to all four campus dining commons (open to both on-campus and off-campus students)
Value (open to both on-campus and off-campus students)
YCMP ***Gold** or **Platinum** (Residential or Commuter Plan)

***Residential students who leave campus in March for their internship training receive the YCMP Gold meal plan during the spring semester of their freshman year.

For an overview of the Residential Meal Plan, go to:
http://www.umassdining.com/sites/default/files/residential-mealplan-infographic.pdf

New England Regional Student Program (NERSP)
The New England Regional Student Program (NERSP) gives a tuition break to New England residents enrolled in certain programs not offered by their home state's public colleges and universities. Students from Connecticut, Maine, New Hampshire, Rhode Island, and Vermont will pay a reduced tuition rate, rather than the out-of-state tuition rate, if they choose a major not offered in their home state.

Stockbridge Major:	**Offered to Students from:**
Arboriculture and Community Forest Management	CT, ME, NH, RI, VT
Equine Management	ME, RI, VT
Landscape Contracting	CT, RI
Sustainable Food and Farming	ME, NH, RI, VT
Sustainable Horticulture	ME, RI
Turfgrass Management	ME, NH, RI, VT

For more information, contact the Admissions Office or the New England Board of Higher Education, 45 Temple Place, Boston, MA 02111; phone 617-357-9620; http://www.nebhe.org/.

Research Papers & Projects Assistance
Two librarians are available to Stockbridge School students to provide assistance with finding reliable information for research papers and other projects. Students may contact them for an individual consultation by phone, email, skype, or in person. Please feel free to contact:
Naka Ishii, Integrated Sciences & Engineering; 413-545-1656; nishii@library.umass.edu
Madeleine Charney, Du Bois Library; 413-577-0784; mcharney@library.umass.edu

Scholarships
Over 50 scholarships are available to Stockbridge School students. Applications and contact information are available on the Stockbridge School website: stockbridge.cns.umass.edu/current-students/scholarships

Transcripts
There are two types of transcripts: official transcripts and unofficial transcripts. For all transcript requests, go to www.umass.edu/registrar/students/transcripts.

EXPENSES

Estimated Annual Expenses for the 2014-2015 Academic Year

In-State

Tuition		$ 1,714.00
Fees (required)		$ 12,457.00
Room & Board (average)		$ 11,251.00
Books & Supplies (average)		$ 850.00
Personal & Transportation		$ 1,000.00
	Total	$ 27,272.00

New England Regional Program (NERSP)

Tuition		$ 3,000.00
Fees (required)		$ 20,567.00
Room & Board (average)		$ 11,251.00
Books & Supplies (average)		$ 850.00
Personal & Transportation		$ 1,000.00
	Total	$ 36,668.00

Out-of-State

Tuition		$ 9,937.00
Fees (required)		$ 20,567.00
Room & Board (average)		$ 11,251.00
Books & Supplies (average)		$ 850.00
Personal & Transportation		$ 1,000.00
	Total	$ 43,605.00

Other Fees

Freshman Counseling Fee	$ 300.00	first semester only
Late Fee	$ 50.00	
Residential Telecommunication Fee	$ 126.00	per semester
Returned Check Fee	$ 25.00	
Senior Fee	$ 110.00	first semester of senior year only
Stockbridge Entering Fee	$ 77.00	first semester only
Transcript Fee	$ 2.50	per transcript
Undergraduate Entering Fee	$ 185.00	first semester only

Waivable Fees

Child Care	$ 1.00	per semester
MassPIRG	$ 11.00	per semester
Student Health Insurance	$ 1,055.00	per semester

The Bursar's Office (www.umass.edu/bursar) has more detailed information about tuition and fees.

Refunds

Students who properly withdraw from the Stockbridge School for any reason, except for disciplinary reasons, before a semester is completed will be granted a pro rata refund of tuition and fees. Students who are suspended or expelled for disciplinary reasons forfeit all rights to a refund.

Refund Schedule

• Registration day and first day of classes	100%
• Day 2 of classes through the first two weeks of the semester	80%
• during the third week	60%
• during the fourth week	40%
• during the fifth week	20%
• after the fifth week	0%

ACADEMIC INFORMATION

Grading System

A letter grading system is used as a means of measuring as fairly as possible both the quality and overall performance of a student's work. At the end of each semester, students may view their grades on SPIRE. Letter grade, interpretation, and assigned points are as follows:

A = 4.000	B- = 2.700	D+ = 1.300	IF = 0.000 (Incomplete Failure)
A- = 3.700	C+ = 2.300	D = 1.000	INC = 0.000 (Incomplete)
B+ = 3.300	C = 2.000	F = 0.000	___ = 0.000 (Blank Grade)
B = 3.000	C- = 1.700		

Other grade symbols not included in quality point calculations are:

AUD	Audit
CR	Credit
DR	Dropped
IP	In Progress
NR	No grade roster received
P	Pass (added to graduation credits)
SAT	Satisfactory
W	Withdrawn
WF	Withdrew Failing
WP	Withdrew Passing
Y	Year-long Course

Academic Status

The cumulative averages on which academic policy is based are as follows:

Semester	Good Standing Min. Cum. Ave.	Probation Cum Ave. Range	Suspension Cum Ave. Range
First	2.00	1.35-1.99	1.34 or less
Second	2.00	1.65-1.99	1.64 or less
Third	2.00	1.85-1.99	1.84 or less
Fourth	2.00	____	1.99 or less

Good Standing

Students are in good academic standing when their cumulative grade point average (GPA) is 2.00 or above.

Academic Probation
Students are placed on academic probation when their cumulative GPA at the end of any semester falls within the probation range indicated above. They are eligible to return to school the following semester. Students on probationary status are required to:

- improve their academic performance so that their cumulative GPA falls within the range required to prevent a suspension
- have an academic hold placed on their record
- meet with the Stockbridge director in order to have the academic hold removed

Academic Suspension
An academic suspension is enforced when the student's cumulative GPA falls within the range listed for suspension. Suspension is a one-semester separation from the Stockbridge School and UMass, including the Division of Continuing Education.

Suspended students:

- may not return to the Stockbridge School for the subsequent semester
- must take a minimum of six (6) credits at another college or university
- must seek approval from the Stockbridge director for courses taken at another college or university prior to enrollment
- must successfully complete the courses with a minimum grade of "C"

After one semester's absence and the successful completion of six (6) credits at another college or university, a student may file a Readmission Application with the Stockbridge School Office. Readmission applications may be downloaded from the Stockbridge website: http://stockbridge.cns.umass.edu/current-students/readmission-application

Deadline dates for readmission are:

- Fall semester — April 1, to qualify for on-campus housing
  August 15
- Spring semester — October 15

Academic Dismissal
A student's second academic suspension will be recorded as a dismissal, and will result in the student's permanent separation from the School, unless an appeal is granted (see Right of Appeal).

Immediate Reinstatement
Students who are placed on Academic Suspension or Dismissal may be granted Immediate Reinstatement if the Stockbridge director determines that extenuating circumstances exist. Although these students will have been formally suspended or dismissed (the Suspension or Dismissal will be noted on the academic record), they may enroll for the succeeding semester. If these students fall below good standing in any subsequent semester, they will be subject to Academic Dismissal.

Right of Appeal
Students have the right to appeal their academic status. They are urged to consult with the Stockbridge director regarding the procedure for petitions and appeals. All such appeals must be initiated in writing. Authority for determining students' academic status resides with the Stockbridge director or the Committee on Admissions and Records (CAR).

Honors

Cum Laude
Cum Laude is awarded to all students graduating with a minimum cumulative GPA of 3.20 who have completed a minimum of 33 graded credits in residence.

Dean's List
Students are awarded Dean's List Honors for any given semester in which they complete a minimum of 12 graded credits with a GPA of 3.50 or higher. Pass/Fail credits are NOT counted when calculating qualifying credits.

LEAR
Students who earn a minimum 3.75 cumulative quality point average for three and/or four semesters are elected to membership in the LEAR honorary scholastic society. LEAR (Celtic word for learning) was established in 1935 to encourage high scholarship.

GRADUATION REQUIREMENTS

Students are responsible for their progress towards graduation and the fulfillment of requirements. Contact with program coordinators is strongly advised of all students. Candidates must successfully complete the following minimum requirements to qualify for the associate of science degree:

- complete all course requirements of the curriculum;
- achieve a minimum cumulative GPA of 2.00;
- complete a minimum of 60 credits;
- satisfy all financial obligations to the School and University.

ARBORICULTURE AND COMMUNITY FOREST MANAGEMENT

This major prepares graduates for careers in commercial, municipal and utility arboriculture, as well as park management and administration. Students will learn how to plant, prune, fertilize, cable and remove trees; pest management and plant health care; and how to quantify the benefits that trees provide, as well as the risk they present. The curriculum prepares students for an arborist certification exam.

Courses in **bold** require a minimum grade of C.

First Semester		*Credits*
NRC 102	Arboricultural Field Techniques I	2
NRC 232	**Principles of Arboriculture**	3
STOCKSCH 105	Soils	4
STOCKSCH 108	Introductory Botany	4
STOCKSCH 192F	First Year Seminar	1
SUSTCOMM 335	**Plants in Landscape**	4
	Total	18
Second Semester (seven weeks)		
NRC 191A	Seminar in Arboriculture and Community Forestry	2
NRC 198Y	**Arboriculture Internship (April-August)**	4
NRC 210	Arboricultural Field Techniques II	2
NRC 333	Principles of Arboriculture II	2
STOCKSCH 101	Insects & Related Forms	2
STOCKSCH 111	**Horticultural Plant Pathology**	2
	Total	14
Third Semester		
MATH 100/101/104	Based on Math Placement Exam Score	2-3
NRC 100	**Environment and Society**	4
OR	**OR**	**OR**
NRC 305	**Commercial Arboriculture**	3
STOCKSCH 109	**Insects of Ornamentals**	3
STOCKSCH 113	Horticulture Pathology Lab	2
STOCKSCH 230	Introductory Turfgrass Management	4
ELECTIVE	Optional	2-3
	Total	14-19
Fourth Semester		
ENGLWRIT 111/112	Based on Writing Program Placement Test Score	3
NRC 310	**Community Forestry**	3
ELECTIVES	Advisor Approved	8-13
NRC 213	Arboricultural Field Techniques III	2
NRC 225	Forests and People	3
NRC 261	Wildlife Conservation	3
NRC 390G	Plant Health Care Diagnostics	3
NRC 590A	Advanced Arboriculture	3
STOCKSCH 235	Pruning Fruit Crops	2
GEN ED course		4
	Total	14-19
	Grand Total	60-70

EQUINE MANAGEMENT

Students in this program learn the essentials of managing a successful horse business founded on evidence-based scientific knowledge, equine technical skills, and industry business practices.

Courses in **bold** require a minimum grade of C.

First Semester		*Credits*
ENGLWRIT 111/112	Based on Writing Program Placement Test Score	3
STOCKSCH 121	**Equine Anatomy & Physiology**	4
STOCKSCH 131	**Fundamental Stable Management I**	4
STOCKSCH 150-155	Equitation*	1
STOCKSCH 161	**Equine Care Techniques**	3
STOCKSCH 192F	First Year Seminar	1
	Total	16
Second Semester		
MATH 100/101/104	Based on Math Placement Exam Score	2-3
STOCKSCH 150-155	Equitation*	1
STOCKSCH 198Y	**Equine Internship (June-August)**	2-3
STOCKSCH 201	Equipment Operations	2
STOCKSCH 203	**Fundamental Stable Management II**	4
STOCKSCH 247	**Horse Breeds, Types, & Selection**	3
STOCKSCH 344	Theory & Methods of Equitation Instruction	3
	Total	17-19
Third Semester		
STOCKSCH 150-155	Equitation*	1
STOCKSCH 211	Pasture Management	3
STOCKSCH 231	**Equine Nutrition**	3
STOCKSCH 237	**Equine Business**	3
STOCKSCH 241	Breaking & Training the Horse	3
STOCKSCH 252	**Equine Facility Management I**	4
	Total	17
Fourth Semester		
ANIMLSCI 445A	**Equine Reproduction Lab**	1
STOCKSCH 150-155	Equitation*	1
STOCKSCH 213	Equine Lecture Series	2
STOCKSCH 257	Management of the Equine Athlete	3
STOCKSCH 302	**Equine Facility Management II**	4
STOCKSCH 445	**Equine Stud Farm Management**	3
STOCKSCH 497	**Equine Diseases & Health Management**	3
	Total	17
	Grand Total	67-69

*All Equitation courses have a riding fee of $800 payable only by money order. Fee helps defray the cost of operations for the farm and equestrian training.

LANDSCAPE CONTRACTING

This program prepares students with the horticultural, design and construction background to organize and execute the installation of landscape projects on private, commercial and public properties.

Courses in **bold** require a minimum grade of C.

First Semester		*Credits*
LANDCONT 112	**Introduction to Landscape Design**	4
STOCKSCH 105	Soils	4
STOCKSCH 108	Introductory Botany	4
STOCKSCH 192F	First Year Seminar	1
SUSTCOMM 335	**Plants in Landscape**	4
	Total	17
Second Semester (seven weeks)		
LANDCONT 104	**Planting Design**	3
LANDCONT 105	Landscape Drafting	2
LANDCONT 198Y	**Landscape Contracting Internship (April-August)**	4
STOCKSCH 101	Insects & Related Forms	2
STOCKSCH 111	Horticultural Plant Pathology	2
	Total	13
Third Semester		
LANDCONT 107	**Land Form**	4
MATH 100/101/104	Based on Math Placement Exam Score	2-3
NRC 232	Principles of Arboriculture	3
OR	**OR**	**OR**
STOCKSCH 230	Introductory Turfgrass Management	4
STOCKSCH 109	Insects of Ornamentals	3
STOCKSCH 113	Horticulture Pathology Lab	2
	Total	14-16
Fourth Semester		
ENGLWRIT 111/112	Based on Writing Program Placement Test Score	3
LANDARCH 294A	**Construction Materials**	3
LANDARCH 294B	Construction Materials Practicum	1
LANDARCH 297M	**Business Concepts of Landscape Contracting**	3
LANDCONT 213	**Small Property Design**	4
STOCKSCH 255	Herbaceous Plants	3
	Total	17
	Grand Total	61-63

SUSTAINABLE FOOD AND FARMING

Students in this major learn the complexities of farming and pursue careers in farming, education, and/or advocacy.

Courses in **bold** require a minimum grade of C.

First Semester		*Credits*
STOCKSCH 105	Soils	4
STOCKSCH 108	Introductory Botany	4
STOCKSCH 192F	First Year Seminar	1
STOCKSCH 305	**Small Fruit Production**	3
STOCKSCH 315	Greenhouse Management	4
	Total	16
Second Semester		
STOCKSCH 101	**Insects & Related Forms**	2
STOCKSCH 104	Plant Nutrients	2
STOCKSCH 111	**Horticultural Plant Pathology**	2
STOCKSCH 198F	**Sustainable Food & Farming Internship (3-5 months)**	3-4
SUSFD ELECTIVES	Advisor Approved	6
	Total	15-16
Third Semester		
MATH 100/101/104	Based on Math Placement Exam Score	2-3
STOCKSCH 113	**Horticulture Pathology Lab**	2
STOCKSCH 300	**Deciduous Orchards Science**	3
SUSFD ELECTIVES	Advisor Approved	8
	Total	15-16
Fourth Semester		
ENGLWRIT 111/112	Based on Writing Program Placement Test Score	3
STOCKSCH 325	**Vegetable Production**	4
SUSFD ELECTIVES	Advisor Approved	8
	Total	15
	Grand Total	61-63

Approved Sustainable Food and Farming Electives

- minimum of 22 credits
- other courses may be substituted with advisor approval
- each course can be utilized to satisfy the requirements of only one category

Plant & Animal Systems (minimum of two classes)

ANIMLSCI 103	Introductory Animal Management	4 credits	spring sem
ANIMLSCI 260	Farm Animal Care & Welfare	4 credits	fall sem
STOCKSCH 265	Sustainable Agriculture	3 credits	fall sem
STOCKSCH 350	Sustainable Soil and Crop Management	3 credits	fall sem

Production Systems (minimum of one class)

ANIMLSCI 103	Introductory Animal Management	4 credits	spring sem
ANIMLSCI 332	Basic Animal Nutrition & Feeding	4 credits	both sem
STOCKSCH 120	Organic Farming and Gardening	4 credits	both sem
STOCKSCH 211	Pasture Management	3 credits	fall sem
STOCKSCH 235	Pruning Fruit Crops	2 credits	spring sem
STOCKSCH 280	Herbs, Spices & Medicinal Plants	4 credits	spring sem
STOCKSCH 370	Tropical Agriculture	3 credits	spring sem
STOCKSCH 397VP	Viticultural Practices	3 credits	spring sem (first 7 wks)

Pests & Pest Management (minimum of one class)

STOCKSCH 182	Principles of Pesticide Management	2 credits	spring sem
STOCKSCH 290W	Organic Weed Control	3 credits	spring sem
STOCKSCH 310	Principles of Weed Management	3 credits	fall sem
STOCKSCH 326	Insect Biology	3 credits	fall sem

Practica & Related Experiences (minimum of one class)

ANIMLSCI 297D	Dairy Calf Management	2 credits	spring sem
ANIMLSCI 297E	Dorset Sheep Management II	2 credits	spring sem
ANIMLSCI 297L	Livestock Classic	1 credit	spring sem
ANIMLSCI 297M	Belted Galloway Management II	2 credits	spring sem
ANIMLSCI 297S	Boer Goat Management II	2 credits	spring sem
ANIMLSCI 298	Practicum	1+ credits	both sem
STOCKSCH 170	Pesticide Certification	1 credit	both sem
STOCKSCH 196	Independent Study	1+ credit	both sem
STOCKSCH 298	Practicum	1+ credit	both sem
STOCKSCH 298G	Gardenshare Practicum	1 credit	both sem
STOCKSCH 398G	Greenhouse Practicum	1 credit	both sem

Economic & Social Systems (minimum of one class)

ANIMLSCI 260	Farm Animal Care & Welfare	4 credits	fall sem
EDUC 377	Introduction to Multicultural Education	4 credits	both sem
NRC 225	Forests and People	3 credits	spring sem
RES-ECON 262	Environmental Economics	4 credits	spring sem
RES-ECON 263	Natural Resource Economics	4 credits	fall sem
STOCKSCH 342	Pesticides, Public Policy & the Environment	3 credits	fall sem

SUSTAINABLE HORTICULTURE

Students interested in gaining knowledge in a range of sustainable horticulture topics enroll in this major. Students specifically interested in greenhouse crop production or management of woody plants can follow a list of suggested courses. Alternatively, students may design their own focus of study (e.g., vegetable crops and greenhouse crops) by choosing from a list of approved electives.

Courses in **bold** require a minimum grade of C.

First Semester		*Credits*
MATH 100/101/104	Based on Math Placement Exam Score	2-3
STOCKSCH 105	Soils	4
STOCKSCH 108	Introductory Botany	4
STOCKSCH 192F	First Year Seminar	1
STOCKSCH 315	**Greenhouse Management**	4
		Total 15-16
Second Semester	*1st SEVEN WEEKS*	
STOCKSCH 101	Insects & Related Forms	2
STOCKSCH 111	Horticultural Plant Pathology	2
	2nd SEVEN WEEKS	
STOCKSCH 260	Growing Plants Indoors	2
	FULL SEMESTER	
STOCKSCH 198G	**Sustainable Horticulture Internship (June-August)**	3
STOCKSCH 255	Herbaceous Plants	3
SUSHORT ELECTIVES	Advisor Approved	6-7
		Total 18-19
Third Semester		
ENGLWRIT 111/112	Based on Writing Program Placement Test Score	3
STOCKSCH 113	Horticulture Pathology Lab	2
STOCKSCH 200	**Plant Propagation**	3
SUSHORT ELECTIVES	Advisor Approved	8
		Total 16
Fourth Semester	*1st SEVEN WEEKS*	
STOCKSCH 104	Plant Nutrients	2
	FULL SEMESTER	
STOCKSCH 182	Principles of Pesticide Management	2
SUSHORT ELECTIVES	Advisor Approved	9-10
		Total 13-14
		Grand Total 62-65

Approved Sustainable Horticulture Electives

Select this course if interested in greenhouse crop production:

STOCKSCH 335	Environmental Physiology and Biology of Spring Greenhouse Crops	4 credits	spring sem

Choose from these courses if interested in management of woody plants:

NRC 232	Principles of Arboriculture	3 credits	fall sem
NRC 310	Community Forestry	3 credits	spring sem
STOCKSCH 235	Pruning Fruit Crops	2 credits	spring sem
SUSTCOMM 335	Plants in Landscape	4 credits	fall sem

Choose from these courses if interested in designing your own course of study:

LANDARCH 294A	Construction Materials	3 credits	spring sem
LANDARCH 294B	Construction Materials Practicum	1 credit	spring sem
LANDCONT 105	Landscape Drafting	2 credits	spring sem (first 7 wks)
NRC 100	Environment and Society	4 credits	fall sem
NRC 210	Arboricultural Field Techniques II	2 credits	spring sem (first 7 wks)
NRC 232	Principles of Arboriculture	3 credits	fall sem
NRC 310	Community Forestry	3 credits	spring sem
STOCKSCH 109	Insects of Ornamentals	3 credits	fall sem
STOCKSCH 120	Organic Farming and Gardening	4 credits	spring sem
STOCKSCH 230	Introductory Turfgrass Management	4 credits	fall sem
STOCKSCH 234	Irrigation & Drainage	2 credits	spring sem
STOCKSCH 235	Pruning Fruit Crops	2 credits	spring sem
STOCKSCH 265	Sustainable Agriculture	3 credits	fall sem
STOCKSCH 275	Turfgrass Physiology & Ecology	3 credits	spring sem
STOCKSCH 280	Herbs, Spices & Medicinal Plants	4 credits	spring sem
STOCKSCH 300	Deciduous Orchards Science	3 credits	fall sem, odd yrs
STOCKSCH 305	Small Fruit Production	3 credits	fall sem, even yrs
STOCKSCH 310	Principles of Weed Management	3 credits	fall sem
STOCKSCH 325	Vegetable Production	4 credits	spring sem
STOCKSCH 335	Environmental Physiology and Biology of Spring Greenhouse Crops	4 credits	spring sem
STOCKSCH 340	Advanced Turfgrass Management	3 credits	spring sem
STOCKSCH 350	Sustainable Soil and Crop Management	3 credits	fall sem
SUSTCOMM 335	Plants in Landscape	4 credits	fall sem

TURFGRASS MANAGEMENT

This major prepares students for employment in the rapidly growing green industry with emphasis on developing grass areas for fine turf, including golf, sports, and lawns.

Courses in **bold** require a minimum grade of C.

First Semester		*Credits*
ENGLWRIT 111/112	Based on Writing Program Placement Test Score	3
STOCKSCH 105	Soils	4
STOCKSCH 108	Introductory Botany	4
STOCKSCH 192F	First Year Seminar	1
STOCKSCH 230	**Introductory Turfgrass Management**	4
	Total	16
Second Semester	*1st SEVEN WEEKS*	
STOCKSCH 101	Insects & Related Forms	2
STOCKSCH 104	Plant Nutrients	2
STOCKSCH 111	Horticultural Plant Pathology	2
	2nd SEVEN WEEKS	
STOCKSCH 112	**Turfgrass Pathology Lab**	2
STOCKSCH 232	Turf Machinery	1
	FULL SEMESTER	
STOCKSCH 107	**Turfgrass Insects**	2
STOCKSCH 198T	**Turfgrass Internship (June-August)**	3
STOCKSCH 240	**Applied Calculations in Turf Management**	2
STOCKSCH 275	**Turfgrass Physiology & Ecology**	3
	Total	19
Third Semester		
MATH 100/101/104	Based on Math Placement Exam Score	2-3
NRC 232	Principles of Arboriculture	3
STOCKSCH 310	Principles of Weed Management	3
SUSTCOMM 335	Plants in Landscape	4
	Total	12-13
Fourth Semester		
STOCKSCH 182	Principles of Pesticide Management	2
STOCKSCH 234	Irrigation & Drainage	2
STOCKSCH 340	**Advanced Turfgrass Management**	3
ELECTIVES	Advisor Approved	6-7
COMM 250	Interpersonal Communication	3
SPANISH course		3
if transferring to bachelor program:		
MATH 104	Algebra, Analytic Geometry, and Trigonometry	3
RES-ECON 102	Introduction to Resource Economics	4
GEN ED course		4
	Total	13-14
	Grand Total	60-62

COURSE DESCRIPTIONS

ANIMAL SCIENCE

Introductory Animal Management

ANIMLSCI 103. With lab. In-depth presentation of animal agriculture and its economic implications. Concepts of nutrition, reproduction, husbandry, and marketing presented for beef and dairy cattle, sheep, swine, poultry, and horses, as well as nontraditional species.
Prerequisite: ANIMLSCI 101
4 credits/spring sem

Farm Animal Care & Welfare

ANIMLSCI 260. With discussion. The moral and ethical theories of animal rights and welfare as they pertain to farm animals. Exploration of the history of farm animal welfare and the assessment of the animal rights and welfare movement today. Special attention given to the economic, ethical, and welfare aspects of current animal husbandry practices.
4 credits/fall sem

Dairy Calf Management

ANIMLSCI 297D. Animal-intensive learning experience with a local dairy farm under the direct supervision of the instructor. Some dairy experience and transportation or access to transportation are required. Students must complete EH&S training within two weeks of the start of class.
Prerequisites: consent of instructor and program coordinator
2 credits/spring sem

Dorset Sheep Management II

ANIMLSCI 297E. Students perform management activities that are required for the care of the UMass flock, learn skills and make decisions and administer treatments. The class is directly supervised by the shepherd with involvement from the staff veterinarian.
Prerequisites: consent of instructor and program coordinator
2 credits/spring sem

Livestock Classic

ANIMLSCI 297L. Grooming and showing cattle, swine, sheep, goats, llamas, alpacas, and horses are taught by hands-on experience and presentation of the animals in a show organized by the students each spring. The show is open to the public. No previous experience needed.
1 credit/spring sem

Belted Galloway Management II

ANIMLSCI 297M. Students learn beef cattle management techniques and participate in all aspects of herd management, with the option of fitting and showing the cattle at various beef shows.
Prerequisites: consent of instructor and program coordinator
2 credits/spring sem

Boer Goat Management II

ANIMLSCI 297S. Student-run learning project overseen by faculty which incorporates all aspects of managing a small Boer goat herd with the goal of merchandizing purebred breeding stock.
Prerequisites: consent of instructor and program coordinator
2 credits/spring sem

Practicum

ANIMLSCI 298. Pre-professional work experience in the field of animal science under the guidance of a faculty member.
Prerequisites: consent of instructor and program coordinator
1-4 credits/both sem

Basic Animal Nutrition & Feeding

ANIMLSCI 332. With lab. Detailed study of macro and micro nutrients, their digestion, absorption, and metabolism by various domesticated animal species for maintenance and production. Introduction to feeding programs.
Prerequisite: ANIMLSCI 103 or ANIMLSCI 220 or consent of instructor
4 credits/both sem

Equine Reproduction

ANIMLSCI 445A. Horse breeding will provide understanding and hands-on opportunity in equine reproduction. Semen collection, evaluation and processing practice; discussion in mare breeding management and use of hormones; preparation of the mare for breeding; introduction to embryo transfer. Students will be able to participate in teasing and decision-making on breeding management and assisting in foaling. Client based cases may also be introduced during lab sessions.
Prerequisite: ANIMLSCI 220
1 credit/spring sem

COMMUNICATION

Interpersonal Communication

COMM 250. This course introduces non-majors to a variety of competing theories of interpersonal behavior and everyday social interaction and provides them with new ways of thinking about the social situations in which they participate and interact (and observe others doing so). Theoretical frameworks may include Cultural Discourse theory, models of Relational Communication, Coordinated Management of Meaning, Identity Management, and the Ethnography of Speaking.
3 credits/both sem

EDUCATION

Introduction to Multicultural Education

EDUC 377. Introduction to the sociohistorical, philosophical, and pedagogical foundations of cultural pluralism and multicultural education. Topics include experiences of racial minorities, white ethnic groups and women; intergroup relations in American society, sociocultural influences and biases in schools; and philosophies of cultural pluralism.
4 credits/both sem

ENGLISH WRITING PROGRAM

Basic Writing

ENGLWRIT 111. College-level intensive reading and writing course designed to prepare students for ENGLWRIT 112. Students produce essays incorporating course readings as well as their personal experience and knowledge.
3 credits/both sem

College Writing

ENGLWRIT 112. A first-year college-level writing course designed to help students expand their ability to write essays for academic, civic, and personal purposes and to develop their rhetorical awareness to write effectively in new social contexts. Emphasis upon the writing process: prewriting, peer review, revision, and editing. Five essays required.
Prerequisite: satisfactory performance on the Writing Placement Exam or ENGLWRIT 111
3 credits/both sem

LANDSCAPE ARCHITECTURE

Construction Materials

LANDARCH 294A. Introduction to materials used in landscape construction, their design potential and limitations. Design details and construction methods discussed.
3 credits/spring sem

Construction Materials Practicum

LANDARCH 294B. Uses of brick, stone, concrete, wood, and other landscape media are examined.
Prerequisite: Stockbridge School students only
1 credit/spring sem

Business Concepts of Landscape Contracting

LANDARCH 297M. The varied aspects of running a small landscape contracting business.
Prerequisite: Landscape Contracting majors only or consent of instructor
3 credits/spring sem

LANDSCAPE CONTRACTING

Planting Design

LANDCONT 104. With lab. In preparation for internship training, the programming for such horticultural practices as pruning, planting, winter protection, and pest control in gardens and nurseries. (Seven-week course; first 7 weeks of the semester.)
Prerequisites: LANDCONT 112 and SUSTCOMM 335
3 credits/spring sem

Landscape Drafting

LANDCONT 105. Drafting techniques necessary in landscape work, including lettering, line work, freehand sketching, scale drawings, plans, elevations, sections, profiles, composition, and rendering. (Seven-week course; first 7 weeks of the semester.)
2 credits/spring sem

Land Form

LANDCONT 107. With lab. Practice in use of simple surveying instruments such as tapes, compasses, and levels for measurement of land surfaces. Methods of grading and graphic representations of land form (contours and profiles) explored.
Prerequisite: Landscape Contracting seniors only or consent of instructor
4 credits/fall sem

Introduction to Landscape Design

LANDCONT 112. The landscape media of plants, land forms, structures, and water. Graphic techniques, including modeling, drafting, and plan and cross-section drawings initiated. Examination of built landscape designs in the field and on paper.
Prerequisite: Landscape Contracting majors only or consent of instructor
4 credits/fall sem

Landscape Contracting Internship

LANDCONT 198Y. Required of all Landscape Contracting majors. Five-month (April-August) internship in the specific field of study. Submission of reports and collections required.
4 credits/spring sem

Small Property Design

LANDCONT 213. Using models, students employ the landscape media of land, plants, structures, and water to create landscape space. Real situations with local clients are designed. Techniques of interviewing, photographing, site analysis, and design are explored.
Prerequisite: LANDCONT 104
4 credits/spring sem

MATHEMATICS

Basic Mathematics Skills for the Modern World

MATH 100. Topics in mathematics that every educated person needs to know to process, evaluate, and understand the numerical and graphical information in our society. Applications of mathematics in problem solving, finance, probability, statistics, geometry, population growth.
3 credits/both sem

Precalculus Algebra with Functions and Graphs

MATH 101. First semester of the two-semester sequence MATH 101-102. Detailed, in-depth review of manipulative algebra; introduction to functions and graphs, including linear, quadratic, and rational functions.
Prerequisite: MATH 011 or MATH 012 or Placement Exam Part A score above 10
2 credits/both sem

Analytic Geometry and Trigonometry

MATH 102. Second semester of the two-semester sequence MATH 101-102. Detailed treatment of analytic geometry, including conic sections and exponential and logarithmic functions. Same trigonometry as in MATH 104.
Prerequisite: MATH 101
2 credits/both sem

Algebra, Analytic Geometry, and Trigonometry

MATH 104. One-semester review of manipulative algebra, introduction to functions, some topics in analytic geometry, and that portion of trigonometry needed for calculus.
Prerequisite: MATH 011 or MATH 012 or Placement Exam Part A score above 15
3 credits/both sem

NATURAL RESOURCES CONSERVATION

Environment and Society

NRC 100. The exploration of inherently interdisciplinary environmental challenges facing society. Students will investigate the impacts of human activities on forests, water, fish and wildlife populations, urban areas, and climate change.
4 credits/fall sem

Arboricultural Field Techniques I

NRC 102. Principles of rigging, advanced rope techniques, and chainsaw applications for tree pruning and removal.
Prerequisites: NRC 232 (may be taken concurrently); Arboriculture and Community Forest Management majors only
2 credits/fall sem

Seminar in Arboriculture & Community Forestry

NRC 191A. Review of various professional aspects of arboriculture and urban forestry. (Seven-week course; first 7 weeks of the semester.)
Prerequisite: Arboriculture and Community Forest Management majors only
2 credits/spring sem

Arboriculture Internship

NRC 198Y. Required of all students majoring in Arboriculture and Community Forest Management. Five-month (April-August) internship for work experience in the field. Submission of reports and collections required.
Prerequisites: NRC 232; Arboriculture and Community Forest Management majors only
4 credits/spring sem

Arboricultural Field Techniques II

NRC 210. Basic chain saw use and safety, including directional felling, bucking, and limbing trees; notch and back cuts; using wedges; cutting branches and trunks under tension. (Seven-week course; first 7 weeks of the semester.)
Prerequisites: NRC 232; Arboriculture and Community Forest Management majors only
2 credits/spring sem

Arboricultural Field Techniques III

NRC 213. Focus on arboricultural field techniques not taught in NRC 102 and NRC 210, such as advanced climbing, rigging, and cabling. Specific topics include split-tail climbing systems and alternative friction hitches, SRT, steel and synthetic rope cabling systems, natural union rigging, rigging with blocks and friction devices.
Prerequisite: NRC 232
2 credits/spring sem

Forests and People

NRC 225. Students explore the unique values that forests have in our culture; key characteristics of forests in the Northeast and how and why they have changed through time; historical and contemporary leaders in forest conservation; sustainable forest management principles and practices; current forest use patterns and trends and the challenges and opportunities they present in the 21st century.
3 credits/spring sem

Principles of Arboriculture

NRC 232. The use and maintenance of trees in the urban environment from both a private and government perspective.
3 credits/fall sem

Wildlife Conservation

NRC 261. Fundamental ecology and principles of wildlife management. Emphasis on wildlife habitat and population characteristics and responses.
Prerequisite: one semester of general biology or consent of instructor
3 credits/spring sem

Commercial Arboriculture

NRC 305. Fundamentals of owning/operating a tree care business. Basic cost accounting and estimating for pruning, fertilization, and support system installation. Importance of a company safety policy will be reviewed.
Prerequisite: NRC 232; Arboriculture and Community Forest Management seniors only
3 credits/fall sem

Community Forestry

NRC 310. Management principles of municipal and utility tree care, land use problems, tree laws and ordinances.
Prerequisite: NRC 232; Arboriculture and Community Forest Management majors only
3 credits/spring sem

Principles of Arboriculture II

NRC 333. Development of skills in communicating with design professionals through practical applications. The ability to understand the language of design, and to use communication tools utilized in professional architectural, design and engineering practice through hands-on exercises and assignments. Students will enhance their skills at communicating design and engineering concepts to various audiences.
2 credits/spring sem

Plant Health Care Diagnostics

NRC 390G. Using the understanding gained from previous coursework in pathology, entomology, dendrology, soil science and professional knowledge from work experience in the green industry, students will explore proper techniques and procedures relative to the identification of plant health-related concerns, proper sample submission to lab facilities and plant health care policy and decision-making.
Prerequisites: STOCKSCH 109, STOCKSCH 111, and SUSTCOMM 335
3 credits/spring sem

Advanced Arboriculture

NRC 590A. Aspects of arboricultural practice, including pruning, cabling, rigging, and tree risk assessment, will be covered in great depth. Students will reference arboricultural standards, best management practices, and the primary scientific literature to gain a mechanical perspective. Basic research methods related to investigating the mechanical aspects of arboricultural practice will be introduced.
Prerequisites: NRC 232 and NRC 305
3 credits/spring sem

RESOURCE ECONOMICS

Introductory Resource Economics

RES-ECON 102. Microeconomic theory for majors and nonmajors. Concepts of supply, demand, markets, natural resource management, economic policy. Applications to business and government decision making emphasized.
4 credits/both sem

Environmental Economics

RES-ECON 262. Economic analysis of environmental problems focusing on air, water, and land pollution. Emphasis on analyzing the individual incentives that lead to pollution, the valuation of environmental quality amenities, and the design and evaluation of regulations that seek to improve environmental quality. Includes the economic analysis of global climate change.
4 credits/spring sem

Natural Resource Economics

RES-ECON 263. Economic analysis of natural resource use and conservation. Includes analyses of the use of fuel, forest, marine and biodiversity resources. Focuses on evaluating natural resource use in terms of efficiency and sustainability, and designing regulations for correcting inefficient and unsustainable resource markets.
4 credits/fall sem

STOCKBRIDGE SCHOOL

Insects & Related Forms

STOCKSCH 101. With lab. Introduction to insect recognition, development, damage, and control. (Seven-week course; first 7 weeks of the semester.)
2 credits/spring sem

Plant Nutrients

STOCKSCH 104. Functions of mineral nutrients in plants, effects of mineral deficiencies, and sources of these nutrients to prevent or alleviate deficiencies in crop production. (Seven-week course; first 7 weeks of the semester.)
Prerequisite: STOCKSCH 105
2 credits/spring sem

Soils

STOCKSCH 105. With lab. Interrelationship of soils and higher plants. Physical, chemical, and biological properties of soils. Practical approach to current problems through basic soil principles.
Prerequisite: some knowledge of chemistry
4 credits/fall sem

Turfgrass Insects

STOCKSCH 107. Principles and practical methods of controlling turf insect pests.
Prerequisite: STOCKSCH 101 (may be taken concurrently)
2 credits/spring sem

Introductory Botany

STOCKSCH 108. With lab. This introductory botany course covers the unique features of plants, how they function, how they are categorized, and how they fit into the ecosystem. Topics include classification of plants, analysis of cell structure and various plant tissues and organs, and study of sexual and asexual reproduction as well as structure and function of plant systems. In addition, students will develop a basic understanding of the processes of photosynthesis and cellular respiration.
4 credits/fall sem

Insects of Ornamentals

STOCKSCH 109. With lab. The recognition, biology, and control of major insect and mite pests attacking shade trees and woody ornamentals in the northeastern U.S. Emphasis on techniques and knowledge useful to the professional in tree care.
Prerequisite: STOCKSCH 101
3 credits/fall sem

Horticultural Plant Pathology

STOCKSCH 111. Applied introduction to plant pathology in horticultural crops. Identification, description, and management of diseases in modern horticultural production. Chemical, biological, cultural, and genetic controls and their integration. (Seven-week course; first 7 weeks of the semester.)
Prerequisite: STOCKSCH 108 or 100-level biology course
2 credits/spring sem

Turfgrass Pathology Lab

STOCKSCH 112. With lab. Diagnosis and management of turfgrass diseases. Diagnosis techniques and appropriate cultural, chemical, genetic, and biological management strategies. (Seven-week course; last 7 weeks of the semester.)
Prerequisite: STOCKSCH 111; Turfgrass Management majors only
2 credits/spring sem

Horticulture Pathology Lab

STOCKSCH 113. With lab. A field laboratory on the diagnosis and management of the health problems of woody plants. Students learn to recognize the major plant diseases of trees and shrubs using plant materials on campus. Disease management options presented on an individual basis in a clinical context.
Prerequisite: STOCKSCH 111
2 credits/fall sem

Organic Farming and Gardening

STOCKSCH 120. With lab. Introduction to principles of soil fertility and crop management by organic procedures which are contrasted and evaluated against conventional chemical methods of farming.
4 credits/both sem

Equine Anatomy & Physiology

STOCKSCH 121. With lab. Integration of gross structural and organ anatomy to physiological systems, function, and regulation. Emphasis on relationship of structure to function and system control in both animals and humans.
4 credits/fall sem

Fundamental Stable Management I

STOCKSCH 131. With lab. First in a four course equine management series. Introduction to understanding the financial responsibilities and fundamental practices of a commercial and professional equine riding, training and instruction facility.
Prerequisite: Equine Management majors only
4 credits/fall sem

Beginning Equitation I

STOCKSCH 150. For those with no previous riding experience or formal instruction. Grooming, bridling, and saddling and other basic stable skills; walk, trot (sitting and rising), and canter. Basic riding theory introduced.
Prerequisite: $800 lesson fee payable by check or money order due the first day of class
1 credit/both sem

Beginning Equitation II

STOCKSCH 151. Position at the basic paces more fully developed; work without stirrups, elementary jumping. Riding theory and horsemanship discussed and developed.
Prerequisite: $800 lesson fee payable by check or money order due the first day of class
1 credit/both sem

Intermediate Equitation I

STOCKSCH 152. The balance seat positions at all basic paces with and without stirrups. Jumping skills developed over low fences and gymnastics. Basic school figures and theory as it pertains to horsemanship, dressage, and combined training.
Prerequisites: previous formal instruction; $800 lesson fee payable by check or money order due the first day of class
1 credit/both sem

Intermediate Equitation II

STOCKSCH 153. The riders secure in their position at the basic paces. School figures, work over fences including gymnastics, stadium, and cross country type fences. Development of skills and knowledge of horsemanship, specifically dressage and jumping.
Prerequisite: $800 lesson fee payable by check or money order due the first day of class
1 credit/both sem

Advanced Equitation

STOCKSCH 154. Dressage, cross country, and stadium jumping more fully developed. Emphasis on development of feel for the horse and becoming a more effective rider.
Prerequisite: $800 lesson fee payable by check or money order due the first day of class
1 credit/both sem

Special Problems in Riding

STOCKSCH 155. Introduction to riding theory and the training scale for basic and advanced training of horse and rider in various disciplines.
Prerequisites: Equine Management majors only or consent of instructor; $800 riding fee payable by money order only
1 credit/both sem

Equine Care Techniques

STOCKSCH 161. Introduction to the theory, technique and practice of skills required as an equine care technician to prepare horses for daily work, competition, and formal turnout/ presentation. Wide range of horses, including foals, yearlings, two-year olds, broodmares, stallions, and equitation horses. Emphasis on sound business management practices, including record keeping, horse sales, personal safety, and professionalism.
Prerequisite: Equine Management majors only
3 credits/fall sem

Pesticide Certification

STOCKSCH 170. Independent preparation for the state pesticide certification exam and licensure. The State Pesticide Exam Study Manual is used and available for purchase either online or at the UMass Extension Bookstore. Exams are given at various times throughout the state. Students must apply to take the exam; applications must be submitted by the deadline date (one week prior to the exam). Refer to www.mass.gov/agr/pesticides or call 617-626-1785 for dates of Massachusetts exams.
Prerequisite: consent of instructor
1 credit/both sem

Principles of Pesticide Management

STOCKSCH 182. Topics include state and federal pesticide laws and regulations, pesticides and the environment, handling and storage of pesticides, classes and formulations of pesticides, safety and application equipment, understanding the pesticide label, toxicity, proper calculation and mixing of pesticides, and history of pesticide use. Includes preparation for the Massachusetts Pesticide Core Exam.
2 credits/spring sem

First Year Seminar

STOCKSCH 192F. An overview course designed to provide students with information, opportunities, and skills to ease their transition into college and build a successful foundation necessary to reach their educational goals.
Prerequisite: Stockbridge freshmen only
1 credit/fall sem

Independent Study

STOCKSCH 196. Independent work with a faculty member related to some area of the equine, food crops, and green industries.
Prerequisites: consent of instructor and program coordinator
1-6 credits/both sem

Independent Study-EQMGT

STOCKSCH 196E. Independent work with a faculty member related to some area of equine management.
Prerequisites: Equine Management majors; consent of instructor and program coordinator
1-6 credits/both sem

Draft Horse Husbandry I

STOCKSCH 197D. Students are taught the basics of draft horse husbandry prior to learning skills in working with horses in harness, both on the road and on the farm.
3 credits/both sem

Sustainable Food & Farming Internship

STOCKSCH 198F. Required of all students majoring in Sustainable Food and Farming. Three or five month internship in the specific field of study. Submission of reports required.
Prerequisite: Sustainable Food and Farming majors only
3-4 credits/spring sem

Sustainable Horticulture Internship

STOCKSCH 198G. Required of all students majoring in Sustainable Horticulture. Three-month internship in the specific field of study. Submission of reports required.
Prerequisite: Sustainable Horticulture majors only
3 credits/spring sem

Turfgrass Internship

STOCKSCH 198T. Required of all students majoring in Turfgrass Management. Three-month internship in the specific field of study. Submission of reports required.
Prerequisites: STOCKSCH 230 with minimum grade of "C;" Turfgrass Management majors only
3 credits/spring sem

Equine Internship

STOCKSCH 198Y. Required of all students majoring in Equine Management. Practical farm or related business experience in equine industries. Minimum eight-week internship as approved in advance by program director. Written report required.
Prerequisite: Equine Management majors only
2-3 credits/spring sem

Plant Propagation

STOCKSCH 200. With lab. The basic principles and techniques for propagating plants by both sexual and asexual means, including seeds, cuttings, bulbs, and tissue culture. The hormonal and physiological factors affecting rooting, seed dormancy, grafting, budding, and layering.
Prerequisite: STOCKSCH 108 or 100-level biology course
3 credits/fall sem

Equipment Operations

STOCKSCH 201. Introduction to the selection, operation, safety and maintenance of farm tractors and equipment. Lectures and hands-on experience with emphasis on farm machinery used to operate an equine facility.
Prerequisite: Equine Management majors only or consent of instructor
2 credits/spring sem

Fundamental Stable Management II

STOCKSCH 203. With lab. A continuation of STOCKSCH 131. Topics include equine health, personnel management, time management, client communication, liability, contracts, and insurance information required for successful barn operation.
Prerequisites: STOCKSCH 131 and STOCKSCH 161; Equine Management majors only
4 credits/spring sem

Pasture Management

STOCKSCH 211. With lab. Potential of pasture to provide nutritional needs of livestock and the integration of well-managed pasture systems can contribute significantly to the sustainability of the farm. Major topics include a review of major forage species selection, grazing management, establishment of new pastures, and pasture renovation.
3 credits/fall sem

Equine Lecture Series

STOCKSCH 213. Introduction to a wide range of professionals within the equine industry (e.g. horse trainers, stable owners, business/investors, researchers, feed companies, and veterinarians). Participation in scheduled lectures given by equine professionals. Lectures will be offered in the evening and will be open to the public. Weekly meetings with the instructor will be required.
2 credits/spring sem

Introductory Turfgrass Management

STOCKSCH 230. With lab. Basic principles of selecting and managing turfgrass for home lawns, parks, golf courses, and other turf areas. Topics include: climatic adaptation, grass identification, establishment practices, pest control, fertility, environmental stresses, etc.
Prerequisites: STOCKSCH 105 and STOCKSCH 108 (may be taken concurrently)
4 credits/fall sem

Equine Nutrition

STOCKSCH 231. Principles of nutrition and the development of rations. Emphasis on the nutrient requirements and nutrient content of feeds.
3 credits/fall sem

Turf Machinery

STOCKSCH 232. Principles of engines and machinery operation, maintenance, selection, and minor repair. Turf equipment emphasized. Instruction on how to train operators of equipment. Budgeting for equipment. (Seven-week course; last 7 weeks of the semester.)
1 credit/spring sem

Irrigation & Drainage

STOCKSCH 234. Principles of hydraulics and system design for turf and landscapes with an emphasis on golf courses. Irrigation systems, equipment performance, installation practices, operation procedures and troubleshooting. Drainage of sports turf also included.
2 credits/spring sem

Pruning Fruit Crops

STOCKSCH 235. With lab. Theory and practice of pruning deciduous fruit plants/trees. Emphasis on practical, hands-on experience.
2 credits/spring sem

Equine Business

STOCKSCH 237. Students will gain a working knowledge of the format, construction, use and analysis of the cash flow statement from which the balance sheet and income statements can be derived. Inputs for income and expense will deal specifically with the equine industry.
Prerequisite: Equine Management majors only or consent of instructor
3 credits/fall sem

Applied Calculations in Turf Management

STOCKSCH 240. Calculations involving area and volume measurements, fertilizer and pesticide requirements, cost analysis, seed calculations, irrigation calculations, and calculations relating to spreader and sprayer calibrations.
Prerequisite: STOCKSCH 230 with minimum grade of "C"
2 credits/spring sem

Breaking & Training the Horse

STOCKSCH 241. Basic training techniques. The methodology and psychology of training horses. Includes halter breaking, lunging, driving, breaking the horse to ride.
Prerequisites: STOCKSCH 161 and two semesters of Equitation Lessons; Equine Management majors only
3 credits/fall sem

Horse Breeds, Types & Selection

STOCKSCH 247. The history and development of the breeds and their present day type, conformation, and use. Emphasis on the importance of anatomy and conformation and the relationship of form to function. A systematic approach to selection.
Prerequisite: STOCKSCH 121
3 credits/spring sem

Equine Facility Management I

STOCKSCH 252. Management and operation of the Stockbridge Stables at the Hadley Farm. Development of cash flow statements, purchasing and ordering of supplies, delegation and supervision of labor, and appropriate client communication. Required weekly meetings and student committee assignments.
Prerequisites: STOCKSCH 203 and STOCKSCH 237; Equine Management majors only
4 credits/fall sem

Herbaceous Plants

STOCKSCH 255. Study and identification of herbaceous plants; their uses as ornamental plants for home, park, and business.
3 credits/spring sem

Management of the Equine Athlete

STOCKSCH 257. Focus will be on the care and management of the equine athlete. Conditioning and prevention of injury, common areas of breakdown within different sports, diagnosis of injury/lameness, as well as different modalities currently available for treatment and rehabilitation.
Prerequisite: STOCKSCH 121
3 credits/spring sem

Growing Plants Indoors

STOCKSCH 260. Introduction to the indoor culture of tropical plants and other species. Artificial lighting, acclimatization, moisture requirements, soils and nutrition, and diagnosing plant problems. Information applicable to professional indoor plant maintenance, retail marketing, and growing plants in the home. (Seven-week course; last 7 weeks of the semester.)
2 credits/spring sem

Sustainable Agriculture

STOCKSCH 265. With lab. Exploration of ethical, practical and scientific aspects of agricultural sustainability, including economic, social and environmental impacts of food and farming. Uses systems thinking tools to compare industrial and ecological agriculture.
Prerequisite: Sustainable Food and Farming and Sustainable Horticulture majors only or consent of instructor
3 credits/fall sem

Turfgrass Physiology & Ecology

STOCKSCH 275. First half of the semester: an introduction to basic concepts in agricultural chemistry as related to the growth and culture of turf grasses. Second half of the semester: the overall growth and development of grasses, including such areas as soil fertility and mineral nutrition.
Prerequisite: STOCKSCH 230 with minimum grade of "C"
3 credits/spring sem

Herbs, Spices, & Medicinal Plants

STOCKSCH 280. With lab. Introduction to the growth, culture, and science related to the production and use of herbs, spices, and medicinal plants. Emphasis on plants used in the home; discussion of bioactivity of plant extracts. Practice in seeding, growing, oil extraction, and utilization of these plants.
4 credits/spring sem

Organic Weed Control

STOCKSCH 290W. Sustainable Food and Farming students will learn about organic weed control by exploring various systems and approaches to weed management to reduce losses to crop yield and quality.
3 credits/spring sem

Independent Study

STOCKSCH 296. Sophomore-level educational project with a faculty member related to some area of the equine, food crops, or green industries.
Prerequisite: consent of instructor
1-6 credits/both sem

Independent Study-EQMGT

STOCKSCH 296E. Sophomore-level independent work related to some area of equine management.
Prerequisite: Equine Management majors only or consent of instructor
1-6 credits/both sem

Stockbridge School Teaching Experience

STOCKSCH 296T. Students gain experience in teaching introductory level (100-200) courses. Students will be expected to demonstrate specific competencies related to labs and assisting students; lead review sessions; gain experience in all aspects of teaching a Stockbridge School class.
Prerequisites: successful completion of the course and related prerequisites for the course in which the student plans to TA; consent of instructor
1-2 credits/both sem

Practicum

STOCKSCH 298. Pre-professional work experience related to some area of the equine, food crops, or green industries.
Prerequisite: consent of instructor
1-6 credits/both sem

Gardenshare Practicum

STOCKSCH 298G. Student-led practicum experience that utilizes a plot of land on campus to grow edible and ornamental crops. Specific garden activities depend on the season of the year. Mandatory Pass/Fail grading.
1 credit/both sem

Deciduous Orchards Science

STOCKSCH 300. With lab. Principles and practices involved in the establishment and management of deciduous orchards.
Prerequisite: STOCKSCH 108 (may be taken concurrently) or basic botany course suggested
3 credits/fall sem/odd yrs

Equine Facility Management II

STOCKSCH 302. Continuation of STOCKSCH 252. The focus will be on improvements and efficiency of the operation, weekly evaluation of strengths and weaknesses, client feedback, and marketing of the business. Student presentations of financial statement at end of semester.
Prerequisites: STOCKSCH 252; Equine Management majors only
4 credits/spring sem

Small Fruit Production

STOCKSCH 305. With lab. Principles and practices governing the establishment and management of small fruit plantings.
Prerequisite: STOCKSCH 108 (may be taken concurrently) or basic botany course suggested
3 credits/fall sem/even yrs

Principles of Weed Management

STOCKSCH 310. With lab. History of weed control; importance of weeds and their relationship to people and the environment; ecology of weeds, competition, persistence and survival mechanisms; reproduction, seed germination, and dormancy; methods of weed control, cultural, biological, chemical, and integrated pest management strategies; classification of herbicides and their selectivity; soil factors affecting herbicide performance, persistence and degradation; application equipment and calibration of sprayers; weed management systems for various crops and non-crop areas.
Prerequisite: STOCKSCH 108 or 100-level biology course
3 credits/fall sem

Greenhouse Management

STOCKSCH 315. With lab. Introduction to the greenhouse environment and the technology used in production of greenhouse crops. Greenhouse experiments in crop production; exercises on greenhouse structures, heating and cooling, growing media, crop nutrition, photoperiod control and lighting, and crop scheduling; field trip to local greenhouses.
Prerequisite: STOCKSCH 108 (may be taken concurrently); Sustainable Food & Farming and Sustainable Horticulture majors only or consent of instructor
4 credits/fall sem

Vegetable Production

STOCKSCH 325. With lab. Principles of sustainable production of vegetable crops. Topics include specific practices used for the major vegetable crops grown in New England, water and soil fertility management, season extenders, and crop rotation. Intended for students interested in growing vegetable crops or working in the vegetable industry.
Prerequisite: STOCKSCH 108 or plant science course
4 credits/spring sem

Insect Biology

STOCKSCH 326. With optional lab and field trips. How insects solve their problems of maintenance, survival, reproduction, etc., and how entomologists apply this knowledge in managing them. Other topics include insect evolution, plant and insect interactions, biodiversity and conservation of insects, behavior, and insect pest management. Emphasis on various insect models (e.g., Drosophila) as they relate to major research in biology.
3 credits/fall sem

Environmental Physiology and Biology of Spring Greenhouse Crops

STOCKSCH 335. With lab. Greenhouse culture of spring greenhouse crops.
Prerequisites: STOCKSCH 315 and STOCKSCH 321
4 credits/spring sem

Advanced Turfgrass Management

STOCKSCH 340. Management of environmental stress in turfgrass. Special practices in managing high-quality turfgrass areas such as golf courses, athletic fields, and ornamental areas.
Prerequisite: STOCKSCH 275 with minimum grade of "C"
3 credits/spring sem

Pesticides, Public Policy & the Environment

STOCKSCH 342. Current issues associated with pesticide use; includes discussion of role of pesticides in agriculture, public health, and other related areas; fate of pesticides in the environment; and public perception of pesticides. Case studies examine benefits and risks of pesticide use; environmental cancer; and role of media and public interest groups in pesticide decisions. Alternatives to current heavy reliance on chemical technology in pest control. Current and pending federal, state, and local legislation.
3 credits/fall sem

Theory & Methods of Equitation Instruction

STOCKSCH 344. Preparation for riding instructor certification. Knowledge and skills applicable to instructing a group of riders, including theory and practice.
Prerequisites: two semesters of Equitation Lessons; Equine Management majors only
3 credits/spring sem

Sustainable Soil and Crop Management

STOCKSCH 350. With lab. Maintenance and enhancement of long-term productivity and sustainability of soil in food and feed production. Students will gain an integrated knowledge of soil and crop influences on cropping systems. Lab includes several farm visits, farmer and student presentations.
Prerequisite: STOCKSCH 105 or consent of instructor
3 credits/fall sem

Tropical Agriculture

STOCKSCH 370. Tropical regions of the world, their environment and classification; influence of climate, population, and socio-economic conditions on agriculture; major crops and cropping systems of sub-humid tropics; introduction to dry land agriculture; importance of rainfall and irrigation on productivity; green revolution; desertification; present and future research needs of region, and state of agricultural technology.
3 credits/spring sem

Independent Study

STOCKSCH 396. Upper-level project for students who have completed introductory courses in biology/botany, soils and/or entomology.
Prerequisite: consent of instructor
1-6 credits/both sem

Independent Study-EQMGT

STOCKSCH 396E. Upper-level independent work project with a faculty member related to some area of equine management.
Prerequisite: Equine Management majors only or consent of instructor
1-6 credits/both sem

Viticultural Practices

STOCKSCH 397VP. With lab. Exploration of grape origins, domestication, and fundamental principles of grape growing, both domestically and globally. Practices specific to the winter, such as pruning, will be included. (Seven-week course; first 7 weeks of the semester.)
3 credits/spring sem

Greenhouse Practicum

STOCKSCH 398G. Practicum focusing on greenhouse venting and temperature control, maintaining outdoor gardens, harvesting of floricultural crops, post-harvest handling of floricultural crops, fertilization, propagation (by seed, cuttings, division), greenhouse maintenance, operation of greenhouse equipment (fertilizer injector).
Prerequisite: consent of instructor
1 credit/both sem

Equine Stud Farm Management

STOCKSCH 445. Physiological basis and regulation of equine reproduction. Emphasis on application to horse breeding and management.
Prerequisite: ANIMLSCI 220 or STOCKSCH 121
3 credits/spring sem

Equine Diseases & Health Management

STOCKSCH 497. Emphasis on topics such as wound care, vaccination, dental care, feed programs, lameness detection, parasite control, and breeding programs.
Prerequisite: ANIMLSCI 220 or STOCKSCH 121
3 credits/spring sem

SUSTAINABLE COMMUNITY

Plants in Landscape

SUSTCOMM 335. With lab. Introduction to 200 basic ornamental plants used in landscape architectural, horticultural, arboricultural, and other design uses; their identification, uses, and cultural requirements. Two weekly campus field trips. Workbook with sketches required.
4 credits/fall sem

Stockbridge School of Agriculture
2015-2016 Academic Calendar

FALL 2015

September 8	Tuesday	First day of classes
September 21	Monday	Last day to ADD or Drop any class with no record
October 12	Monday	Holiday (Columbus Day)
October 13	Tuesday	Monday class schedule will be followed
October 22	Thursday	Mid-Semester date (Last day to Drop with 'W' and select 'P/F')
November 11	Wednesday	Holiday (Veterans' Day)
November 12	Thursday	Registration begins for Spring 2016
November 25	Wednesday	Thanksgiving recess begins after last class
November 30	Monday	Classes resume
December 11	Friday	Last day of classes
December 12	Saturday	Reading Period begins
December 13	Sunday	Reading Period ends
December 14	Monday	Final examinations begin
December 19	Saturday	Last day of final examinations
December 21	Monday	Snow day for December 19 exams; semester ends
December 28	Monday	Final grades due by Midnight

SPRING 2016

January 19	Tuesday	First day of classes
January 26	Tuesday	Last day to ADD or Drop with no record for freshmen leaving in March for internship training
February 1	Monday	Last day to ADD or Drop any class with no record
February 9	Tuesday	Last day to DROP with 'W' for freshmen leaving in March for internship training
February 15	Monday	Holiday (Presidents' Day)
February 16	Tuesday	Monday class schedule will be followed
March 3	Thursday	Mid-Semester Date (Last day to Drop with 'W' and select 'P/F')
March 11	Friday	Spring recess begins after last class
March 11	Friday	Final grades close for freshmen leaving for internship; grades submitted in May
March 14	Monday	Internships begin for freshmen in ARCF, LDCONT, SUSFD
March 21	Monday	Classes resume
April 4	Monday	Registration begins for Fall 2016
April 18	Monday	Holiday (Patriot's Day)
April 20	Wednesday	Monday class schedule will be followed
April 27	Wednesday	Last day of classes
April 28	Thursday	Reading Day
April 29	Friday	Final examinations begin
May 1	Sunday	Second Reading Day
May 2	Monday	Final examinations resume
May 5	Thursday	Last day of final examinations; semester ends
May 7	Saturday	Commencement
May 10	Tuesday	Final grades due by Midnight; grades submitted for internship students