

Status: PENDING

PROGRAM REQUEST
Horticulture and Crop Science

Last Updated: Myers, Dena Elizabeth
01/19/2011

Fiscal Unit/Academic Org	Horticulture & Crop Science - D1127
Administering College/Academic Group	Food, Agric & Environ Science
Co-administering College/Academic Group	
Semester Conversion Designation	Converted with minimal changes to program goals and/or curricular requirements (e.g., sub-plan/specialization name changes, changes in electives and/or prerequisites, minimal changes in overall structure of program, minimal or no changes in program goals or content)
Current Program/Plan Name	Horticulture and Crop Science
Proposed Program/Plan Name	Horticulture and Crop Science
Program/Plan Code Abbreviation	HCS-MS
Current Degree Title	Master of Science

Credit Hour Explanation

Program credit hour requirements		A) Number of credit hours in current program (Quarter credit hours)	B) Calculated result for 2/3rds of current (Semester credit hours)	C) Number of credit hours required for proposed program (Semester credit hours)	D) Change in credit hours
Total minimum credit hours required for completion of program		45	30.0	30	0.0
Required credit hours offered by the unit	Minimum	25	16.7	17	0.3
	Maximum	45	30.0	30	0.0
Required credit hours offered outside of the unit	Minimum	0	0.0	0	0.0
	Maximum	0	0.0	0	0.0
Required prerequisite credit hours not included above	Minimum				
	Maximum				

Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

- Program Learning Goals**
- Be able to demonstrate scientific competency, i.e. the understanding of scientific methods (reductionist and system approaches), core physical and biological sciences, specialized science knowledge, statistical knowledge and usage.
 - Understand the importance of international awareness and connections: i.e. understand global issues and have the ability to network with international peers.
 - Be able use all forms of communication effectively at a professional level.
 - Be able to manage projects, personnel, and time effectively.
 - Be able to participate in interdisciplinary/holistic projects, grants, etc.

Assessment

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

Is this a degree program (undergraduate, graduate, or professional) or major proposal? Yes

Does the degree program or major have an assessment plan on file with the university Office of Academic Affairs? No

DIRECT MEASURES (means of assessment that measure performance directly, are authentic and minimize mitigating or intervening factors)

Classroom assignments

- Embedded testing (i.e. specific questions in homework or exams that allow faculty to assess students' attainments of a specific learning goal)
- Other classroom assessment methods (e.g., writing assignments, oral presentations, oral exams)

Evaluation of a body of work produced by the student

- Practicum, internship or research evaluation of student work

Direct assessment methods specifically applicable to graduate programs

- Candidacy exams
- Research proposals written and grants awarded
- Thesis/dissertation oral defense and/or other oral presentation
- Thesis/dissertation (written document)
- Publications
- Other: Presentations at professional meetings.

INDIRECT MEASURES (means of assessment that are related to direct measures but are steps removed from those measures)

Surveys and Interviews

- Student survey
- Alumni survey
- Employer feedback or survey
- Student evaluation of instruction
- Student interviews or focus groups

Additional types of indirect evidence

- Job or post-baccalaureate education placement
- Student or alumni honors/recognition achieved
- Peer review of program
- External program review
- Curriculum or syllabus review
- Grade review
- Outreach participation
- Comparison or benchmarking

USE OF DATA (how the program uses or will use the evaluation data to make evidence-based improvements to the program periodically)

- Meet with students directly to discuss their performance
- Analyze and discuss trends with the unit's faculty
- Analyze and report to college/school
- Analyze and report to accrediting organization
- Make improvements in curricular requirements (e.g., add, subtract courses)
- Make improvements in course content
- Make improvements in course delivery and learning activities within courses
- Make improvements in learning facilities, laboratories, and/or equipment
- Periodically confirm that current curriculum and courses are facilitating student attainment of program goals

Status: PENDING

PROGRAM REQUEST
Horticulture and Crop Science

Last Updated: Myers,Dena Elizabeth
01/19/2011

- Benchmark against best programs in the field

Program Specializations/Sub-Plans

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

Pre-Major

Does this Program have a Pre-Major? No

Attachments

- Justification HCS Graduate Program Semesters.docx
(Program Rationale Statement. Owner: McMahan,Margaret Jane)
- H&CSTransition Policy.docx
(Transition Policy. Owner: McMahan,Margaret Jane)
- DeptHCSSupportLetter.jpg
(Letter from Program-offering Unit. Owner: McMahan,Margaret Jane)
- HCS-MS-SemesterProgram Revised12-20-10.docx
(List of Semester Courses. Owner: McMahan,Margaret Jane)

Comments

- Horticulture and Crop Faculty approved the program by a 19-0 vote on 12/14/2010. *(by McMahan,Margaret Jane on 12/20/2010 11:56 AM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	McMahan,Margaret Jane	12/20/2010 11:56 AM	Submitted for Approval
Approved	McMahan,Margaret Jane	12/29/2010 11:17 AM	Unit Approval
Approved	Stokoe,Laurie Anne	01/14/2011 04:11 PM	College Approval
Approved	Myers,Dena Elizabeth	01/19/2011 10:16 AM	GradSchool Approval
Pending Approval	Soave,Melissa A	01/19/2011 10:16 AM	CAA Approval



November 16, 2010

Phone (614) 292-2001
Fax (614) 292-7162 Ext. (Kottman)
Fax (614) 292-3505
(Howlett)
hcs.osu.edu

The Department of Horticulture and Crop Science is submitting and supports the following semester programs:

Revised major:

Professional Golf Management

New major (replaces the current Crop Science, Landscape Horticulture, and Turfgrass Science majors):

Sustainable Plant Systems with 4 specializations: Agronomy, Horticulture, Landscape Design and Management, and Turfgrass Science.

Revised graduate programs:

Horticulture and Crop Science MS

Horticulture and Crop Science PH

Revised minors:

Agronomy (formerly Crop Science)

Horticulture

Landscape Design and Management (formerly Landscape Horticulture)

Turfgrass Science

The programs are the result of an extensive review of our current curriculum that began in early 2009. The review included input from our industry stakeholders and partners, graduate and undergraduate students, all departmental faculty and staff, other OSU departments, as well as with faculty at benchmark programs at other institutions. The results of the collected data were discussed at a day-long faculty and staff retreat in December 2009.

As a result of that retreat and subsequent weekly meetings of faculty, staff, and students from January through early September 2010, the following has occurred. A set of learning outcomes were developed for both the graduate and undergraduate programs. Courses were created, revised, or dropped as the curriculum was developed to meet those goals at the appropriate level. Currently a plan is being developed to make sure that the outcomes, courses, and curriculum continue to provide the best education possible for our students.

The faculty voted unanimously to approve the undergraduate majors and minors (25 for, 0 against). The faculty vote for approval of the graduate programs will be taken at the December faculty meeting.

Respectfully,

A handwritten signature in black ink, appearing to read 'William Randle'.

William Randle

Professor and Chair

Department of Horticulture and Crop Science

(New abbreviations requested for: Landscape Design and Management Minor = LNDESMG-MN
Agronomy Minor = AGRON-MN)

The Department of Horticulture and Crop Science Graduate offers three graduate degree programs:

- Master of Science (M.S.) degree in Horticulture and Crop Science with thesis
- Master of Science degree in Horticulture and Crop Science non-thesis option (permitted only by petition to the HCS Graduate Studies Committee)
- Doctor of Philosophy (Ph.D.) degree in Horticulture and Crop Science

The faculty in Horticulture and Crop Science conducted a thorough review of the Master of Science and Doctor of Philosophy programs in 2008. As a result of that review a new curriculum for M.S. and Ph.D students was developed and approved. That curriculum is viewed as being successful. As a result, the conversion to semesters has required little change from the quarter program except for adjustments in course credit hours and required minimum number of hours for graduation.

The program sheets for the M.S. and Ph.D. programs that are included in the program approval packet show the comparison between quarter and semester versions of the respective programs.

Brief program description:

Graduate programs in Horticulture and Crop Science include required courses that are considered essential for all M.S. and Ph.D. graduate students. The student, in conjunction with their SAC, will select additional courses that are important for the particular discipline area, support the student's research program, and address specific needs or interests. Good communication and professional skills also are essential, and required courses address those needs as well.

Shortly after the first meeting with the student's SAC, a complete *Graduate Course Program* must be prepared by the student and his or her advisor. The proposed *Graduate Course Program* must meet the minimum requirements of the Department and be approved by the SAC no later than the end of the second semester (M.S.) or third semester (Ph.D.). Any deviation from the approved requirements must be approved by the SAC and the Departmental Graduate Studies Committee. Student progress will be monitored continually, with annual progress reports generated and put in the student's file maintained in the department office.

**The Proposed Semester M.S. Graduate Program
Department of Horticulture and Crop Science 11/2/10 rev. 05/23/11**

The Department of Horticulture and Crop Science Graduate offers two graduate Master of Science degree programs:

- Master of Science (M.S.) degree in Horticulture and Crop Science with thesis
- Master of Science degree in Horticulture and Crop Science non-thesis option

The non-thesis M.S. degree is permitted only by petition to the Graduate Studies Committee.

A. Requirements.

The M.S. program in Horticulture and Crop Science requires 18 cr. hr. in classes considered essential for all M.S. graduate students. Many graduate courses in HCS require a solid background in basic sciences (biological, chemical, and physical sciences) and mathematics. Good communication and professional skills also are essential, and required courses address those needs as well. The student, in conjunction with their Student Advisory Committee (SAC) and approved by the department Graduate Studies Committee (GSC), will select additional courses that are important for the particular discipline area, support the student's research program, and address specific needs or interests.

Shortly after the first meeting with the student's SAC, a complete *Graduate Course Program* must be prepared by the student and his or her advisor. The proposed *Graduate Course Program* must meet the minimum requirements of the Department and be approved by the SAC no later than the end of the second semester. Any deviation from the minimum requirements must be approved by the SAC and the Departmental Graduate Studies Committee.

Course requirements for the M.S. degree in Horticulture & Crop Science:

All students must complete four disciplinary courses that encompass plant physiology, agricultural ecology, plant breeding and genetics, and statistical analysis. All students must also complete the professional development course (1st semester of enrollment), the departmental seminar and colloquium course (twice) as well as one section of the research methods and current topics courses. Credit for research (HCS 8999) will vary according to the student's program as approved by the SAC.

In summary, required courses are as follow (relationship to quarter courses):

HCS 5602 Ecology of Agriculture (revised 602)	3 cr. hr.
HCS 5621 Crop Physiology or HCS 7821 or Environmntl Physiol. of Managed Plant Systems (Revised 621 and 821, respectively)	3 cr. hr.
HCS 7625 Plant Breeding and Biotechnology (revised 625) or HCS 8825 Advanced Plant Breeding (revised 825)	3 cr. hr.
HCS 8887 Techniques of Experimental Design (revised 887)	4 cr. hr.
HCS 7001 Professional Development (new course)	1 cr. hr.
HCS 7890 Seminar and Colloquium (revised 804)	1 cr. hr. (2x)
HCS 7806 Methods in HCS (revised 806)	1 cr. hr.
HCS 8830 Current Topics (revised 830)	1 cr. hr.
Total	18 cr. hr.

Additional credit requirements

Masters students are required by the graduate school to have a minimum of 30 semester credit hours for graduation. The necessary hours, in addition to those courses already above listed as requirements, will be filled with courses that can be chosen from any HCS course 5000 or greater not used to fill a requirement listed above, any non-HCS 4000 or greater and can include HCS 8999, HCS 8830 (to repeatable limit), or HCS 8806 (to repeatable limit).

Total minimum semester hours from required courses:	18
Total minimum elective semester hours:	12
Total minimum credit hours required for graduation:	30

**For comparison purposes to Quarter Requirements
Quarter Requirements Are:**

HCS 621 Crop Physiology or HCS 821 Adv. Crop Physiol.	5 cr
HCS 625 Crop Breeding or HCS 825 Adv. Plant Breeding	4 or 5 cr
HCS 602 Field Crop Ecology	3 cr
HCS 804 Seminar and colloquium	1 cr hr (2x)
HCS 806 Research Methods	2 cr hr
HCS 830 Current Topics	2 cr hr (2x)
HCS 887 Techniques of Experimental Design	5 cr hr
HCS 999 Research	varies
Total hours from all classes listed above except 999	25-26
Minimum quarter hours required by the graduate school:	45

Students select in consultation with the student’s SAC the additional courses needed to meet the minimum number of credits needed to graduate.

In summary:

Total minimum qtr hours from required courses:	25-26
Total minimum qtr hours from elective courses:	19-20
Total minimum qtr hours needed for graduation:	45

Quarter-to-Semester Credit Hour Requirement Conversion:

Quarter to semester hr. conv. (required courses):	25 x 0.667 = 17*
Qtr to sem. hr. conversion (total for graduation):	45 x 0.667 = 30*

* *Matches with the required course and total hours listed in the semester programs above.*

The university Pledge to Undergraduate Students (see end of this document) will be followed by the faculty advisors in Horticulture and Crop Science. Advisors will encourage their advisees to be proactive in getting help with scheduling courses before and after the conversion to make sure progress toward graduation is not impeded as long as the students follow a course of action that promotes progress. That course of action includes but is not limited to: a timely declaration of major and minor, taking courses in proper sequence, taking and successfully completing a sufficient number of hours each term, maintaining GPA's in the major, minor, and overall above 2.00, etc.

Beginning in summer, 2010, transition students (those who start under quarters and will finish under semesters) will be receiving information regarding the semester conversion via bulletin boards in Howlett and Kottman Halls, the department website (hcs.osu.edu), and other communication methods. This is intended to keep them informed of the process, the progress being made in graduate and undergraduate programs and course approval, as well as what they should be doing to make the transition as seamless as possible.

Undergraduate students will have the option to remain in their current majors but with the required number of credit hours for graduation reduced from 183 to 121 and credits for courses taken under quarters adjusted accordingly. Courses that are a one for one switch from quarter to semester versions should be relatively easy to incorporate into a student's program. For quarter courses that are dropped or significantly altered, or semester versions that will not be available before the student's projected graduation date, suitable semester alternatives will be substituted. The substitutions will be based on course content and meeting the needs of the student's career path and time to graduation.

The other option for undergraduates is to switch to the semester majors and have quarter courses and credits evaluated for "transfer" into the new curriculum. The process will be similar to that for students remaining in the old majors.

It is assumed that undergraduates who start before Au 2011 would likely remain in the old majors but students who start Au 2011 through Sp 2012 might prefer to switch to the new majors.

In general, transition students will be encouraged to complete the quarter system GEC categories that have no or few options (e.g. most sciences, social science) before the conversion. They are also being encouraged to take required courses in the major for the same reason. We feel that the categories with the most options (some semester GE categories and electives in the major) will provide the most flexibility in course choice and scheduling under semesters. Students who are thinking of switching to the new Sustainable Plant Systems major will be advised to take Biology 113 or its semester equivalent because that is the biological science required for the SPS major.

Graduate students will be advised in a similar manner regarding progress toward degree completion.

Faculty and others who advise students will be kept up-to-date with advising policies, resources, and tips via the H&CS Q2S Carmen website and other communication formats.

University Pledge to Undergraduate Students:

In planning and implementing its conversion from quarters to semesters for summer 2012, The Ohio State University is committed to protecting the academic progress of students. Students should find that the shift from quarters to semesters does not disrupt progress toward their degrees if they

1. decide on their major and degree within a time compatible with four-year graduation;
2. meet the standards for progress defined by their academic unit and continue to complete appropriate course loads successfully; and
3. actively develop and follow academic plans in consultation with their academic advisors.

Students completing a quarter-plus-semester degree program will receive approximately the same amount of instruction, and the changes to the calendar and to courses should only improve the quality of programs. Full-time tuition (general and instructional fees) for an academic year under semesters will not cost more than what tuition would have cost for that same year under quarters, and the change should not adversely affect students' financial aid.

To ensure that the conversion will not harm students' progress, academic units will continue to provide intentional, purposeful advising. Academic advisors will understand how the changes in courses and curricula may affect students' degree programs, will know where and how programs can be flexible, and will be prepared to assist students in planning their remaining semesters to graduation. Good planning around a student's major will be particularly important, and the university will provide that support to students who begin their academic career under quarters and complete it under semesters.

Students will vary considerably in their academic progress, and each student's plan for completing degree requirements will need to be determined individually. Every student will be responsible for getting and using the advice essential to assure progress toward his or her degree. Advising is a joint endeavor, and we are confident that students and their advisors, working together, can develop effective plans leading to timely graduation as the university converts to semesters