

## A. PROPOSED HCS PHD CURRICULUM 2022

COURSE	TITLE	CREDIT	TOTAL
<b>TAKE ONE CLASS IN 2 OF THE 3 FOCUS AREAS:</b>			
<b>FOCUS 1 - PLANT BIOCHEMISTRY / PHYSIOLOGY / METABOLOMICS</b>			
HCS 5621	Physiology of Cultivated Plants – 3 credits	3	
HCS 5622	Plant Biochemistry – 3 credits		
HCS 7821	Environmental Physiology of Managed Plant Systems – 3 credits		
<b>FOCUS 2 - PLANT GENETICS / BIOTECHNOLOGY / BREEDING</b>			
HCS 5325*	Plant Genetics – 3 credits	2-3	
HCS 5625**	Applied Plant Biotechnology – 2 credits		
HCS 5825**	Plant Breeding – 2 credits		
HCS 8825	Advanced Plant Breeding – 3 credits		
<b>FOCUS 3 - PLANT SYSTEMS / PRODUCTION / ECOLOGY</b>			
HCS 5100	Advanced Cropping Systems – 3 credits	2-3	
HCS 5200	Advanced Horticultural Principles and Practices – 3 credits		
HCS 5306	Sustain. Veg. Prod. Pract.: Planning, Growing and Marketing – 3 credits		
HCS 5411	Grain, Oilseed, and Fiber Crops – 3 credits		
HCS 5412	Agroecology of Grasslands and Prairies – 3 credits		
HCS 5420†	Environmental impacts of Crop-Livestock Systems – 3 credits		
HCS 5422	Principles of Weed Ecology and Management – 3 credits		
HCS 5450	Vegetable Crop Production and Physiology – 3 credits		
HCS 5460	Fruit Crop Physiology and Production – 3 credits		
HCS 5602	Ecology of Agriculture – 3 credits		
HCS 5670	Golf Courses and the Environment – 2 credits		
<b>EXPERIMENTAL DESIGN</b>			
HCS 8887	Techniques of Experimental Design – 4 credits	4	
<b>PROFESSIONAL DEVELOPMENT</b>			
HCS 7001	Graduate Student Professional Development – 1 credit	1	
<b>SEMINAR (enroll twice)</b>			
HCS 7890	Colloquium presentation – 1 credit	1	
HCS 7890	2 <sup>nd</sup> enrollment (non-presenting) – 1 credit	1	
<b>CURRENT TOPICS (enroll twice)</b>			
HCS 8830	Current Topics	1	
HCS/Other	Current Topics	1	
<b>ELECTIVES (minimum of 9 credits of HCS graduate courses)</b>			
HCS/Other	Graduate Courses – NOT counting courses fulfilling above requirements	9	
	<b>Total Required Course Hours</b>		<b>22-24</b>
<b>RESEARCH HOURS</b>			
HCS 8998†	Pre-candidacy Research (1-18) – multiple terms/hrs.	Var.	
HCS 8999	Post-candidacy Research (1-18) – multiple terms/hrs.	Var.	
<b>Coursework required by SAC</b>			
HCS/other		Var.	
<b>TOTAL GRADUATE HOURS COMPLETED (REQUIRED):</b>			<b>80</b>
Publication Submission to Peer-Reviewed Journal: _____			

\*HCS5325 renumbered from HCS4325, \*\* HCS5625 & 5825 adapted from HCS7625

†new course