



April 30, 2015

Jeffrey J. Walline, OD, PhD
Assoc. Professor, Vision Sciences
College of Optometry

VISION SCIENCE

Jeff,

The Graduate School Curriculum Committee (GSCC) met on April 7th and, among its agenda items, considered the curricular changes proposed for the Vision Science MS and PhD graduate programs. The proposal suggests reducing the content, duration, and credit hours of four of its core courses and shifting the removed content into advanced electives. In doing so, students may pursue a more individualized curriculum. This additionally places your program's curriculum in better alignment with your national peers.

Each of the four core courses would be reduced from a four credit—one semester course to a two credit—seven week course. With the addition of the new electives, the numbering system of all elective courses will be realigned. These changes do not affect the total credit hours required for either the Master's or the PhD degree.

The GSCC requested only one small clarification prior to moving the proposal forward in the approval process:

- For greater clarity, the proposal should explicitly state that the total number of credit hours for the degrees remain unchanged.

Once I receive the revised proposal, I will forward it to the Graduate Council for their review. Subsequently, the proposal will be sent to the Committee on Academic Affairs for final review. As always, I am available for any questions or clarifications.

Many thanks,

Scott Herness
Associate Dean
The Graduate School

From: Walline, Jeffrey
Sent: Tuesday, March 24, 2015 6:06 PM
To: Herness, M S. (Scott)
Subject: RE: new courses or change in course

Scott-

I would like to implement the changes this autumn, and that affects what we will teach this summer, so I would like to try to get this through as soon as possible.

All Vision Science graduate faculty were given the opportunity to vote to approve or reject the new curriculum proposal. The vote was as follows:

- 24 approved
- 2 rejected
- 1 abstained
- 8 failed to vote

Here is a synopsis of the changes:

We currently require PhD students to take 4 4-credit core courses (optics, ocular motility and binocular vision, visual sensory processes, anatomy and physiology of the eye), each one lasting a full semester. We want to change this to 4 2-credit ½ semester core courses (same topics). All but one of the six other Vision Science graduate programs in the United States and Canada have two semester core courses, so we would like to bring our program in line with the others in terms of course requirements. It will also allow PhD students to complete the necessary requirements and desired electives in a reasonable time before taking the candidacy examination.

We currently require Master's students to take one 4-credit core course plus one other 8000-level course, which can be one of the core courses (and usually is). We want to change this to 2 of the 4 2-credit ½ semester core courses (same classes as offered to PhD students), but both of them would have to be from the four core courses.

The four core courses listed above will now be taught in less depth, but we will offer advanced elective courses for students wishing to learn more about any one of those four particular areas (High Res Imaging of the Eye using Adaptive Optics, Advanced Binocular Vision and Visual Plasticity, Advanced Ocular Motility, Circadian Rhythms and the Eye, and Pathophysiology of the Eye).

We currently offer all of our elective courses in Vision Science through a single course number, which does not allow the courses to be listed on a university course schedule for other graduate students to consider, and it does not maintain a recurring list of graduate courses that students know are likely to be available to them within one to two years. Therefore, we created a proposed schedule of elective courses to be taught and instructors, and this will be published for graduate students to see, if approved.

The change in curriculum will not affect the time required to graduate. It reduced the Vision Science credits required for a PhD student from approximately 41 credits (depends on how long the student takes to graduate) to approximately 33 credits, but we will offer more electives, which allows the student to actually take more Vision Science credits. It reduced the Vision Science credits required for a Master's student from approximately 21 credits to approximately 17 credits.

I attached a document that highlights the proposed changes to the curriculum. Is this sufficient for processing? Do you think we can get this approved for implementation in autumn?

Jeff Walline



Jeffrey J. Walline, OD PhD

Associate Professor

Chair, Research and Graduate Studies

338 West Tenth Avenue

Columbus, OH 43210-1240

Office: 614-247-6840

Mobile: 614-882-1001

Email: walline.1@osu.edu

Skype: jeffrey.walline

"It's a magical world, Hobbes, ol' buddy...Let's go exploring!" - Calvin

Current	Proposed
VS 8010 Optics of the eye and specification of the visual stimulus <ul style="list-style-type: none"> • 4 credits • Ocular image-forming mechanisms of the eye and optics of ophthalmic instrumentation, specification of light, calibration and control of intensity and spectral composition of light. 	VS 8010 Optics of the eye and specification of the visual stimulus <ul style="list-style-type: none"> • 2 credits, ½ semester • Ocular image-forming mechanisms of the eye and optics of ophthalmic instrumentation, specification of light, calibration and control of intensity and spectral composition of light.
VS 8020 Ocular Motility and Binocular Vision <ul style="list-style-type: none"> • 4 credits • Advanced topics on eye movements, ocular motility, and sensorimotor aspects of visual perception and binocular vision. 	VS 8020 Ocular Motility and Binocular Vision <ul style="list-style-type: none"> • 2 credits, ½ semester • Advanced topics on eye movements, ocular motility, and sensorimotor aspects of visual perception and binocular vision.
VS 8030 Visual Sensory Processes <ul style="list-style-type: none"> • 4 credits • Neurophysiology of the retina, the ascending visual pathway, and the brain, and their functional significance. 	VS 8030 Visual Sensory Processes <ul style="list-style-type: none"> • 2 credits, ½ semester • Neurophysiology of the retina, the ascending visual pathway, and the brain, and their functional significance.
VS 8040 Anatomy and Physiology of the Eye <ul style="list-style-type: none"> • 4 credits • Advanced gross anatomy and vegetative physiology and molecular biology of the eye. 	VS 8040 Anatomy and Physiology of the Eye <ul style="list-style-type: none"> • 2 credits, ½ semester • Advanced gross anatomy and vegetative physiology and molecular biology of the eye.
VS 7950 Seminar in Vision Science <ul style="list-style-type: none"> • 1 credit • Series of seminars dealing with new developments in the various areas of vision science. 	VS 7950 Seminar in Vision Science <ul style="list-style-type: none"> • 1 credit • Series of seminars dealing with new developments in the various areas of vision science.
VS 7960 Ethics in Biomedical Research <ul style="list-style-type: none"> • 2 credits • Provides a general understanding of the issues surrounding the ethical conduct of science including issues related to research involving human subjects, scientific misconduct, and authorship of scientific papers. Real-life case studies will be used. 	VS 7960 Ethics in Biomedical Research <ul style="list-style-type: none"> • 2 credits • Provides a general understanding of the issues surrounding the ethical conduct of science including issues related to research involving human subjects, scientific misconduct, and authorship of scientific papers. Real-life case studies will be used.
VS 7970 Grantsmanship <ul style="list-style-type: none"> • 2 credits • The structure of the National Institutes of Health, the principles of good grantsmanship, and description of the grant review process. Emphasis focused on Mentored Clinical Scientist Development Award (K23) and Research Project Grant (R01). 	VS 7970 Grantsmanship <ul style="list-style-type: none"> • 2 credits • The structure of the National Institutes of Health, the principles of good grantsmanship, and description of the grant review process. Emphasis focused on Mentored Clinical Scientist Development Award (K23) and Research Project Grant (R01).
VS 7980 Statistics for Clinical Research <ul style="list-style-type: none"> • 2 credits • Introduction to the basic concepts and methods of statistical analysis of clinical research data. Statistical software packages will be demonstrated along with interpretation of output. 	VS 7980 Statistics for Clinical Research <ul style="list-style-type: none"> • 2 credits • Introduction to the basic concepts and methods of statistical analysis of clinical research data. Statistical software packages will be demonstrated along with interpretation of output.
VS 7940 Oral Presentation of Scientific Research <ul style="list-style-type: none"> • 1 credit • The student gives a talk based on research or scholarship to improve speaking skills. 	VS 7940 Oral Presentation of Scientific Research <ul style="list-style-type: none"> • 1 credit • The student gives a talk based on research or scholarship to improve speaking skills.

* Changes are highlighted in gray

* The total number of credit hours for the degrees remains unchanged

Electives (note: the proposed electives only have titles right now, credits listed in parentheses)

Current	Proposed
VIS SCI 7990 Assessing the Literature <ul style="list-style-type: none"> • 1 credit • Provides a framework to develop skills to critically evaluate the literature, improve data presentation skills, summarize information efficiently, and improve statistical knowledge by critically reviewing published literature. 	VIS SCI 7990 Assessing the Literature <ul style="list-style-type: none"> • 1 credit • Provides a framework to develop skills to critically evaluate the literature, improve data presentation skills, summarize information efficiently, and improve statistical knowledge by critically reviewing published literature.
VIS SCI 8999 Credit for Thesis or Dissertation Research <ul style="list-style-type: none"> • 1 to 5 credits • Student receives course credit for conducting research related to a thesis or dissertation. • Cannot be concurrently taken with VIS SCI 5998. 	VIS SCI 8999 Credit for Thesis or Dissertation Research <ul style="list-style-type: none"> • 1 to 5 credits • Student receives course credit for conducting research related to a thesis or dissertation. • Cannot be concurrently taken with VIS SCI 5998.
VIS SCI 8100 Advanced Seminars in Vision Science <ul style="list-style-type: none"> • 1 to 3 credits • Advanced studies on special problems in vision science. 	
VIS SCI 8110 Advanced Laboratory Studies in Vision Science <ul style="list-style-type: none"> • 1 to 3 credits • Laboratory techniques in vision science, for example, behavioral measurement of psychophysical responses, cell culture, imaging, immunocytochemistry, electrophysiological recordings. Course must not be used when 8999 is more appropriate. 	
	Designing Clinical Studies (1)
	Scientific Writing and Presentation (2)
	Circadian Rhythms and the Eye (2)
	High Res Imaging of the Eye using Adaptive Optics (2)
	Advanced Ocular Motility (1)
	Basics of Graduate Work (1)
	Basic Science Experimental Design (2)
	Introduction to Matlab (2)
	Pathophysiology of the Eye (2)
	Psychophysics (2)
	Advanced Contact Lens Topics (2)
	Advanced Topics in Low Vision (1)
	Refractive Error Development (2)
	Advanced Binocular Vision and Visual Plasticity (1)
	Amblyopia and IXT (0.5)

* Changes are highlighted in gray

* The total number of credit hours for the degrees remains unchanged