



**ROCHESTER INSTITUTE OF TECHNOLOGY  
COURSE OUTLINE FORM**

**COLLEGE OF SCIENCE**

**Imaging Science**

**NEW COURSE** (COS-IMGS-789: Graduate Special Topics: Vision Science Seminar)

**1.0 Course Designations and Approvals**

<b>Required course approvals:</b>	<b>Approval request date:</b>	<b>Approval granted date:</b>
Academic Unit Curriculum Committee	11/12/14	11/19/14
College Curriculum Committee	11/20/2014	12/1/2014

<b>Optional designations:</b>	<b>Is designation desired?</b>	<b>*Approval request date:</b>	<b>**Approval granted date:</b>
General Education:	No		
Writing Intensive:	No		
Honors	No		

**2.0 Course information:**

<b>Course title:</b>	COS-IMGS-789: Special Topics: Vision Science Seminar
<b>Credit hours:</b>	1
<b>Prerequisite(s):</b>	Graduate standing in Imaging Science or permission of the instructor.
<b>Co-requisite(s):</b>	None
<b>Course proposed by:</b>	James Ferwerda
<b>Effective date:</b>	January 2015

	<b>Contact hours</b>	<b>Maximum students/section</b>
Classroom	1	30
Lab		
Studio		
Other (specify)		

**2.a Course Conversion Designation\*\*\* (Please check which applies to this course).**

\*For more information on Course Conversion Designations please see page four.

	Semester Equivalent (SE) Please indicate which quarter course it is equivalent to:
	Semester Replacement (SR) Please indicate the quarter course(s) this course is replacing:
X	New

**2.b Semester(s) offered (check)**

Fall X	Spring X	Summer	Other
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All courses must be offered at least once every 2 years. If course will be offered on a bi-annual basis, please indicate here:

**2.c Student Requirements**

**Students required to take this course:** (by program and year, as appropriate)

None.

**Students who might elect to take the course:** Graduate students or advanced undergraduates in Imaging Science, Color Science, Computer Science, Psychology or related fields.

*In the sections that follow, please use sub-numbering as appropriate (eg. 3.1, 3.2, etc.)*

**3.0 Goals of the course** (including rationale for the course, when appropriate):

To familiarize students with fundamental and advanced concepts in the field of Vision Science through readings and discussion of classic texts and contemporary research papers.

**4.0 Course description** (as it will appear in the RIT Catalog, including pre- and co-requisites, and quarters offered).

**COS-IMGS-789: Graduate Special Topics: Vision Science Seminar**  
This seminar course provides a forum in which students, faculty, and researchers with an interest in the interdisciplinary field of Vision Science can interact through reading, presentation, and discussion of classic texts and contemporary research papers in the field. Students will read and summarize weekly readings in writing and will periodically prepare presentations and lead discussions. (Graduate standing in Imaging Science or permission of the instructor.)  
**Class 1, Credit 1 (Fall, Spring)**

**5.0 Possible resources (texts, references, computer packages, etc.)**

5.1 Reprints provided selected by the participants or provided by the instructor.

**6.0 Topics (outline):**

Topics will vary from semester to semester and may include topics such as:

- 6.1 Philosophical foundations of vision science
- 6.2 Experimental methods in vision science
- 6.3 Physiology of the visual system
- 6.4 Computational approaches to understanding vision
- 6.5 Contemporary theories of visual perception
- 6.6 Applications of vision science

**7.0 Intended course learning outcomes and associated assessment methods of those outcomes** (please include as many Course Learning Outcomes as appropriate, one outcome and assessment method per row).

Course Learning Outcome	Assessment Method
7.1 Demonstrate familiarity with important historical thinking and contemporary research in the field of Vision Science.	Written précis of weekly readings.
7.2 Articulate and discuss the strengths and weaknesses of diverse investigations and perspectives on visual perception.	Student-led presentations and discussions.

**8.0 Program outcomes and/or goals supported by this course**

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**9.0**

	General Education Learning Outcome Supported by the Course, if appropriate	Assessment Method
<b><i>Communication</i></b>		
	Express themselves effectively in common college-level written forms using standard American English	
	Revise and improve written and visual content	
	Express themselves effectively in presentations, either in spoken standard American English or sign language (American Sign Language or English-based Signing)	
	Comprehend information accessed through reading and discussion	
<b><i>Intellectual Inquiry</i></b>		
	Review, assess, and draw conclusions about hypotheses and theories	
	Analyze arguments, in relation to their premises, assumptions, contexts, and conclusions	
	Construct logical and reasonable arguments that include anticipation of counterarguments	
	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information	
<b><i>Ethical, Social and Global Awareness</i></b>		
	Analyze similarities and differences in human experiences and consequent perspectives	
	Examine connections among the world's populations	
	Identify contemporary ethical questions and relevant stakeholder positions	
<b><i>Scientific, Mathematical and Technological Literacy</i></b>		
	Explain basic principles and concepts of one of the natural sciences	
	Apply methods of scientific inquiry and problem solving to contemporary issues	

	Comprehend and evaluate mathematical and statistical information	
	Perform college-level mathematical operations on quantitative data	
	Describe the potential and the limitations of technology	
	Use appropriate technology to achieve desired outcomes	
<b><i>Creativity, Innovation and Artistic Literacy</i></b>		
	Demonstrate creative/innovative approaches to course-based assignments or projects	
	Interpret and evaluate artistic expression considering the cultural context in which it was created	

**10.0 Other relevant information** (such as special classroom, studio, or lab needs, special scheduling, media requirements, etc.)

Repeatable for credit.
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