

	ROCHESTER INSTITUTE OF TECHNOLOGY COURSE PROPOSAL FORM
	<b>COLLEGE OF SCIENCE</b>

**Chester F. Carlson Center for Imaging Science**

**REVISED COURSE:** COS-IMGS-502 Imaging Science Senior Project I

**1.0 Course Designations and Approvals**

Required course approvals:	Approval request date:	Approval granted date:
Academic Unit Curriculum Committee		
College Curriculum Committee		

Optional designations:	Is designation desired?	*Approval request date:	**Approval granted date:
General Education:	No		
Writing Intensive:	Yes		
Honors	No		

**2.0 Course information:**

<b>Course title:</b>	Imaging Science Senior Project I
<b>Credit hours:</b>	3
<b>Prerequisite(s):</b>	Permission of instructor
<b>Co-requisite(s):</b>	
<b>Course proposed by:</b>	Anthony Vodacek
<b>Effective date:</b>	August 2015

	Contact hours	Maximum students/section
Classroom		
Lab		
Studio		
Other (specify)	3 (capstone research)	none

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

Fall	X	Spring	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.b Student Requirements**

**Students required to take this course:** (by program and year, as appropriate)  
Part of a capstone experience required for imaging science students.

**Students who might elect to take the course:**  
None

*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):

- 3.1. To write a scientific research proposal for a capstone research experience under the guidance of the instructor and the faculty research adviser. The role of the instructor is to provide a uniform level of guidance and feedback on scientific writing for all students.
- 3.2. To perform research in the field of imaging science and/or its applications under the guidance of a faculty adviser.

**4.0 Course description** (as it will appear in the RIT Catalog, including pre- and co-requisites, and semesters offered). Please use the following format:

**Course number:** \_\_\_\_\_ **Name of Course** \_\_\_\_\_  
Description as you want it to appear in the catalog. (Pre or co-requisites)  
**Class X, Lab X, Credit X (Semester offered)**

<b>COS-IMGS-502</b>	<b>Imaging Science Senior Project I</b>
Students write a research proposal for an independent research project on a relevant topic in imaging science. Upon approval of the proposal by the instructor and the research adviser, the student will commence the research project under the guidance of the research adviser. The research effort is expected to require 9-12 hours per week. (Permission of instructor) <b>Research 3, Credit 3 (F)</b>	

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

- 5.1. Readings on a specific research topic.

**6.0 Topics (outline):**

- 6.1. Independent research project.

**7.0 Intended course learning outcomes and associated assessment methods of those outcomes.**

Course Learning Outcome	Assessment Method
7.3. Prepare a written research proposal in an accepted scientific writing format.	Critical assessment of the proposal by the adviser and the instructor
7.1. Conduct independent research project.	Regular meetings of the faculty adviser and the student to provide guidance and feedback from the adviser.

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

Imaging science graduates will effectively perform research, design and conduct experiments, analyze and interpret data, and communicate the significance of results in both written and oral formats.
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**9.0**

	General Education Learning Outcome Supported by the Course, if appropriate	Assessment Method
<b>Communication</b>		
	Express oneself effectively in common college-level written forms using standard American English	
	Revise and improve written products	
	Express oneself 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>Intellectual Inquiry</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>Ethical, Social and Global Awareness</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>		
	Demonstrate knowledge of 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 or apply statistical techniques	
	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.)

Needs vary according to research topic.
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**\*Optional course designation; approval request date:** This is the date that the college curriculum committee forwards this course to the appropriate optional course designation curriculum committee for review. The chair of the college curriculum committee is responsible to fill in this date.

**\*\*Optional course designation; approval granted date:** This is the date the optional course designation curriculum committee approves a course for the requested optional course designation. The chair of the appropriate optional course designation curriculum committee is responsible to fill in this date.