Faculty of Science

Division of Natural Science
http://natsci.info.yorku.ca/
Course Outline

SC/NATS 1870 6.00 B: Understanding Colour
Fall-Winter (Y) 2017-18
Online Section

Course Instructor(s) and Contact Information

- Course Director: *Professor* ***Tatiana O. Paulin***
- Contact: **ns1870to@yorku.ca**
    - Any emails sent from your non-York account (such as Hotmail, Gmail, Yahoo, etc.) may be randomly filtered out as 'junk mail', resulting in lost communication. Always use **your York email** for all course communication.
    - Expected time for response to emails will be within 2 days (48 hours).
- Office: Bethune College, room 217B

Expanded Course Description

This course will take a cross-disciplinary approach in examining colour, with the aim of understanding colour and colour phenomena from the multiple viewpoints of history, physics, physiology, chemistry and art. No prior background in science or art is assumed. Mathematics will be limited. Work for the course will include regular reading and participation quizzes, 4 short assignments, 1 research project, and two exams. All work will be submitted electronically in Moodle, with the exception of the two proctored term exams, which will be held on campus.

Course Learning Outcomes

Upon successful completion of this course students should be able to:

- summarize the history of the development of colour systems and understanding of human vision, including colour perception
- explain the physical nature of light and its interaction with matter at the root of many colour phenomena observed in nature and human-made products
- describe the physiology of the human visual system
- explain how the human brain processes the physical stimulus of light absorbed by the eyes to produce an internal neural sensation of colour vision
- discuss how different types of perceived colour contrasts in art can be used to categorize distinguishable differences in all images, and affect design choices
- relate the chemical nature of physical materials to their perceived colours through interactions with light
- apply the fundamental concepts of light and colour perception in conceptual problem-solving scenarios
- design original multiple choice questions to test reading comprehension and conceptual understanding
- critically analyze scientific information as presented in popular science news sources compared to the scholarly peer-reviewed journals

Evaluation

Course Component	Due-date		Weight
Reading Quizzes	weekly		5
Participation Quizzes	weekly		5
Short Assignments (4)	Oct. 23, Nov. 26, Feb. 11, April 1		12
	Deadline:	*For student number ending in this **last** digit:*	
	November 1 March 3	0, or 1, or 2, or 3, or 4 5, or 6, or 7, or 8, or 9	
Midterm Exam	*December 6-21* *(To be scheduled by the Registrar's Office)*		30
Final Exam	*April 9-23* *(To be scheduled by the Registrar's Office)*		30
	TOTAL		100%

Reading Quizzes

Online reading quizzes, composed of multiple-choice questions, will be held throughout the course, with each lesson, based on assigned readings from the course kit. Each passed quiz will count as 0.5% toward your total 5% quiz mark; you need to pass 10 (ten) quizzes in total, out of 16 quizzes available, for the full 5/5 final quiz grade.

Participation Quizzes

Online participation quizzes, composed of multiple-choice questions, will be held throughout the course, with each lesson, based on lesson notes and videos. Each passed quiz will count as 0.5% toward your total 5% quiz mark; you need to pass 10 (ten) quizzes in total, out of 16 quizzes available, for the full 5/5 final quiz grade.
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Short Assignments

There will be a total of 4 short assignments worth 12% of the final grade (each worth 3% individually). The objective of these exercises will be to apply the theory taught in lessons by designing factual and conceptual questions.

Research Project
The main purpose of this research project is to become familiar with scientific information as presented in popular media sources versus scientific research literature, on various topics related to the science of colour phenomena.

Exams
Two on-campus, invigilated exams will be held at the end of each term, during the specified exam period. The exams will be non-cumulative (i.e. based on lessons during one term only). The format of the exam will be all multiple choice questions.

Off-campus Exams

Both term exams will be held in an invigilated environment on campus. Students who reside further than approximately 3 hours' commute from York University and cannot travel to the campus may attempt to set up an off-campus exam at an approved post-secondary institution closer to where they will be at the time of the exam. All instructions for setting up an off-campus exam are available from the eLearning website here: http://elearning.laps.yorku.ca/off-site-examinations/ . Note that the request for an off-campus exam must be submitted to the eLearning office at least 10 business days prior to the scheduled exam date, and any extra fees for this service must be paid by the student.

Course Materials

There is one required course material for purchase:

Course Kit for SC/NATS 1870, 2nd edition; available at the bookstore; approximate price: $50.

Laboratory/Tutorial

This course does not have a laboratory or tutorial component.

Course Content and Format

- For each lesson, students will have access in Moodle to:
  - Instructor's lesson notes and video lectures
  - Reading and Participation quizzes
- 4 Short Assignments to be submitted in Moodle
- Research Project to be submitted in Moodle
- Exams: two term exams to be held during the official exam periods, on campus

Math Content

No prior background in science is assumed. Mathematics will be limited. (Ontario Grade 10 Math)

Course Policies

Questions and Concerns should be directed to:

- Public type of questions (such as on the nature of projects, assignments, *'how do I…'*, etc.) should be posted in the appropriate public discussion forum in Moodle
- Private type of questions (such as individual grades, personal issues, missed course work, etc) should be sent by email to the course director (*ns1870to@yorku.ca*)
- Responses can be expected within 2 days (48 hours)

Late Submissions and Late Penalties

- Late submissions of the short assignments will be deducted at 25% per day.
- Late submissions of the research project will be deducted at 5% per day, up to 1 week from original deadline.
- Weekly online quizzes cannot be submitted late.

Policy for Missed Course Work and Exams

- Any consideration for alternate arrangements for major 'missed' work after-the-fact *may* be given ONLY if this work was missed due to a VALID REASON. The actual alternate arrangement itself will be decided upon by the course director, as deemed appropriate. To

qualify for any consideration of alternate arrangements for completing the missed course work, you must do BOTH of the following steps:

- 1. Immediately NOTIFY THE COURSE DIRECTOR (by email at *ns1870to@yorku.ca*) of missing the course component, due to a valid reason, within 2 days (48 hours) of this course component being due.

- 2. Provide VALID DOCUMENTATION to support your valid reason for having missed this course component. For example: attending physician statement (not just a 'doctor's note') in case of illness (form can be downloaded here: http://myacademicrecord.students.yorku.ca/pdf/attending-physicians-statement.pdf), police report (car accident), death certificate (death of family member), etc. This documentation has to be provided in a timely fashion (within 1 week of the missed deadline), by email to the course director at *ns1870to@yorku.ca*.

Reappraisal Requests
Any questions on grades assigned to course work must first be submitted by email to the course director at *ns1870to@yorku.ca*, ensuring those questions have not already been answered or commented on by the evaluating TA, in the evaluation form returned back to the student in Moodle. Reappraisal request will be completed within one week's time, after receipt.

Copyright and Intellectual Property

All course materials in the course are the intellectual property of the instructor (lesson notes created under Fair Dealings policy) and the original publishers of readings compiled in the course kit, and thus may not be posted to other websites or students not registered in this class.

University Policies

Important Sessional Dates
Includes sessional start and end dates, drop deadlines, and withdrawal dates.
See the Office of the Registrar website at http://www.registrar.yorku.ca/enrol/dates/

Academic Honesty and Integrity
Academic honesty requires that persons do not falsely claim credit for the ideas, writing or other intellectual property of others, either by presenting such works as their own or through impersonation. Similarly, academic honesty requires that persons do not cheat (attempt to gain an improper advantage in an academic evaluation), nor attempt or actually alter, suppress, falsify or fabricate any research data or results, official academic record, application or document. Finally, academic honesty requires that persons do not aid or abet others to commit an offence of academic dishonesty, including intentional acts to disrupt academic activities.

Suspected breaches of academic honesty will be investigated and charges shall be laid if reasonable and probable grounds exist.

Academic Honesty and electronic devices during assessments (*e.g.* exams)

- Internet capable and personal storage devices of all kinds must be turned off, including vibrate. These and any other unauthorized material must be placed under the student's chair and should not be accessed at any point during the exam. Failure to comply with directive may be considered a break of academic honesty.
- See http://registrar.yorku.ca/exams/tipsheet

Please familiarize yourself with the full Senate Policy on Academic Honesty, found at http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/

Please also familiarize yourself with the SPARK Academic Honesty tutorial found at https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/

Academic Accommodation for Students with Disabilities
York University shall make reasonable and appropriate accommodations and adaptations in order to

promote the ability of students with disabilities to fulfill the academic requirements of their programs.

The nature and extent of accommodations shall be consistent with and supportive of the integrity of the curriculum and of the academic standards of programs or courses.

Please familiarize yourself with the full Senate Policy on Academic Accommodations for Students with Disabilities, found at http://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-with-disabilities-policy/

Note: Students should submit accommodation letters from Counseling and Disability Services (CDS) to the course instructor within the first two weeks of the course or as soon as issued.

Counseling and Disability Services - http://cds.info.yorku.ca/

York Accessibility Hub - http://accessibilityhub.info.yorku.ca/

Note: A student registered with CDS, and choosing to write with Alternate Exams, is responsible for making the appropriate writing arrangements within the timeframes outlined by Alternate Exams.

Alternate Exams - http://altexams.students.yorku.ca/

Religious Observance Accommodation

York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents.

https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/15/wo/kmHGekTpzKLX6XYKBXYc8M/0.3.4.62.0

Note: Students who will have an academic conflict as a result of a religious observance, at any point in the term, should make the instructor aware of such at least three weeks prior to the conflict.

For conflicts occurring during an official examination period, please complete the Examination Accommodation Form available at http://www.registrar.yorku.ca/pdf/exam_accommodation.pdf and submit to your instructor at least three weeks prior to the final exam.

Student Conduct in Academic Situations

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect and to refrain from actions disruptive to such a relationship. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. A statement of the policy and procedures regarding disruptive and/or harassing behaviour by students in academic situations is available on the website of the University Secretariat (http://secretariat.info.yorku.ca/).

Division of Natural Science Resources

NATS-AID

Free peer tutoring for students enrolled in Natural Science Courses.
See http://natsci.info.yorku.ca/nats-aid/

M-AID in NATS (Math Aid)

Free math help for students enrolled in Natural Science Courses (TA tutors)
See http://natsci.info.yorku.ca/m-aid-in-nats/

Other Resources

Learning Commons
The Learning Commons brings together key supports for your learning: writing, research, learning skills and career services. http://www.library.yorku.ca/cms/learning-commons/

goSAFE
goSAFE is a complimentary service provided to the York Community. At the Keele campus, goSAFE has two routes: North Route & South Route which will safely transport community members by vehicle from one specified hub to another on campus. goSAFE operates seven days a week, all year round, including University closures (with the exception at Glendon during the Christmas holiday closure).

Call the goSAFE office at 416-736-5454 or extension 55454 during hours of operation. Please give your name, location and destination. http://www.yorku.ca/goSAFE/

Mental Health and Wellness at York University
Outlines a variety of resources available to support mental health and wellness
http://mhw.info.yorku.ca/resources/resources-at-york/students/

Good2Talk
Post-Secondary Student 24 hour Helpline
http://www.good2talk.ca/ 1-866-925-5454