Philosophy 4311G:
Topics in Philosophy of Science: Physics and Reality

Winter 2022	**Instructor: Robert DiSalle**
W 11:30-2:30	**Office: Stevenson Hall 4141**
UC 3225	**Office Hours: M 10:00-11:30 AM**
	(And by appointment)
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DESCRIPTION

Theoretical physics today pursues a task begun by Galileo, Huygens, and Newton in the 17th century: to understand the physical actions of matter through mathematical laws. The philosophical questions that they raised in this pursuit continue to influence physical inquiry. This course will study some metaphysical issues regarding the character of theoretical physics as a representation of the physical world: the nature of theories and theoretical entities, the application of mathematics to the world, the role of conventions and, generally, the progress (if any) of science from Newton to the present in method and in grasp of "the nature of things". No special background in physics or math is presupposed, but some central ideas will be introduced in an intuitive way. Texts to be studied include works by Newton, Huygens, Maxwell, Poincaré, Einstein, Weyl, and Bohr, as well as contemporary literature

TEXTS
All readings (articles or excerpts from books) will be posted under "Resources" on the course OWL site.

OBJECTIVES
1. To grasp some of the most important philosophical problems that have played a role in the history of physics
2. To understand how philosophical inquiry has influenced the development and the interpretation of science

Department of Philosophy website at http://uwo.ca/philosophy/undergraduate/policies.html
It is your responsibility to understand the policies set out by the Senate and the Department of Philosophy, and thus ignorance of these policies cannot be used as grounds of appeal.

ACCOMMODATION
Students seeking academic accommodation on medical grounds for any missed tests, exams, participation components and/or assignments worth 10% or more of their final grade must apply to the Academic Counselling office of their home Faculty and provide documentation. Academic accommodation cannot be granted by the instructor or department. Documentation shall be submitted, as soon as possible, to the Office of the Dean of the student's Faculty of registration, together with a request for relief specifying the nature of the accommodation being requested. The UWO Policy on Accommodation for Medical Illness and further information regarding this policy can be found at
http://uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

SELF- REPORTED ABSENCE FORM
Students who experience an unexpected illness or injury or an extenuating circumstance (48 hours or less) that is sufficiently severe to temporarily render them unable to meet academic requirements (e.g., attending lectures or labs, writing tests or midterm exams, completing and submitting assignments, participating in presentations) should self-declare using the online Self-Reported Absence portal.   This option should be used in situations where the student expects to resume academic responsibilities within 48 hours or less.
The following conditions are in place for self-reporting of medical or extenuating circumstances:
http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#SubHeading_322

EVALUATION OF ACADEMIC PERFORMANCE
At least three days prior to the deadline for withdrawal from a course without academic penalty, students will receive assessment of work accounting for at least 15% of their final grade. For 3000- or 4000-level courses in which such a graded assessment is impracticable, the instructor(s) must obtain an exemption from this policy from the Dean and this exemption must be noted on the corresponding course syllabus. In rare instances and at the Dean's discretion, other courses could receive a similar exemption, which also must be noted in the course syllabus.

COURSE ASSIGNMENT
The last day of scheduled classes in any course will be the last day on which course assignments will be accepted for credit in a course. Instructors will be required to return assignments to students as promptly as possible with reasonable explanations of the instructor's assessment of the assignment.

ACADEMIC OFFENCES
Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Website:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

PLAGIARISM CHECKING
All required papers may be subject to submission for textual similarity review to the commercial

plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement currently between The University of Western Ontario and Turnitin.com http://www.turnitin.com.

SUPPORT SERVICES
Registrarial Services http://www.registrar.uwo.ca
Student Support Services https://student.uwo.ca/psp/heprdweb/?cmd=login
Services provided by the USC http://westernusc.ca/services/
Student Development Centre http://www.sdc.uwo.ca/

Students who are in emotional/mental distress should refer to Mental Health@Western http://www.uwo.ca/uwocom/mentalhealth/ for a complete list of options about how to obtain help. Immediate help in the event of a crisis can be had by phoning 519.661.3030 (during class hours) or 519.433.2023 after class hours and on weekends.