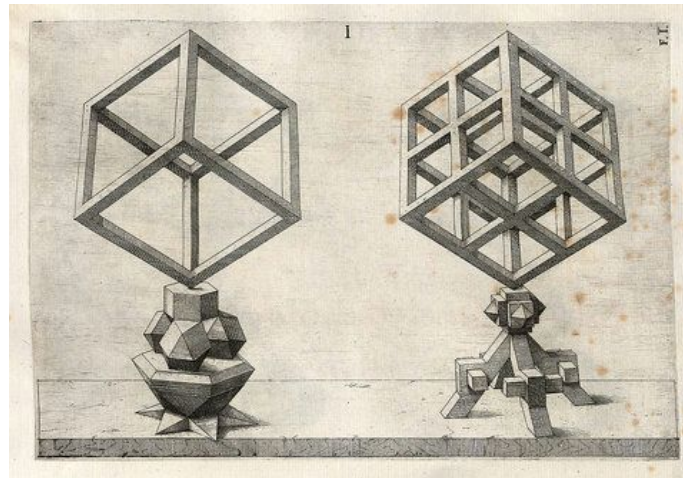

PHIL 4230:
Seminar in Metaphysics, Epistemology, or Philosophy of Science

The Ontology of Mathematics



Fall 2015
Course Outline

I. Admin

Instructor: Gabriele Contessa

Office: PA 3A43

Office Hours: Wednesday, 3:05pm-3:55pm or by appointment

E-mail: gabriele.contessa@carleton.ca

Course Schedule: <https://goo.gl/b7SqXA>

II. Description

Mathematical sentences appear to refer to and quantify over (putative) mathematical entities, such as numbers, sets, and points. But are there really mathematical entities? If so, what are they? If not, how are we to understand mathematical discourse and how are we to explain the extraordinary effectiveness of mathematics? In this seminar, we will explore some of these questions (and related ones) by reading two contemporary classics in the philosophy of mathematics.

III. Prerequisites

Eligibility for fourth-year standing in a Philosophy Honours Program or permission of the department.

IV. Readings

- 1) John P. Burgess and Gideon Rosen, *A Subject With No Object: Strategies for Nominalistic Interpretation of Mathematics*, Oxford University Press, 1999.
- 2) Mark Colyvan, *The Indispensability of Mathematics*, Oxford University Press, 2001.

Both books can be purchased through the Carleton Bookstore or accessed through the Carleton E-Library.

V. Assignments and Grading (Please see the [Course Schedule](#) for assignment deadlines and presentation dates)

- a. Class Attendance and Participation (worth 10% of the final grade).
- b. Three Assignments (the best of which worth 40% of the final grade, the worst one 10% and the other one 20%)
- c. Presentations (jointly worth 10% of your final grade)
- d. Weekly Summaries (jointly worth 10% of your final grade).

VI. Policies

Attendance. Attendance is mandatory. If you are absent, you are responsible for finding out what has been covered in class and for any course-related announcements. If unforeseen circumstances are preventing you from attending class regularly, it is your responsibility to inform me as soon as possible.

Readings. You are responsible for consulting the [Course Schedule](#) online before each class to find out the readings for that class and for reading each of them carefully. Please be aware that, if you don't do the readings, you are very unlikely to do well in this course.

Communications. You are responsible for checking regularly your Carleton e-mail account for course-related messages and announcements. You are also responsible for checking regularly the [Course Schedule](#) online for any changes or updates.

Assignments. Instructions for each assignment will be sent to your Carleton e-mail account about two weeks before the assignment is due. *Please follow those instructions very carefully, as failure to do so may result in penalties.* If you have not received the instructions for an assignment two weeks prior to the deadline for that assignment, it is your responsibility to contact me to let me know.

The deadline for each assignment is at 11:59pm of the day the assignment is due (see Schedule below). Unless I have granted you an extension in writing (see below), 5 points will be subtracted from your grade for every day the assignment is late. Late assignments will be marked but not commented upon in writing. If you wish to receive detailed feedback on a late assignment, you will have to make an appointment with me to discuss it. *Failing to submit an assignment will result in a 0% on that assignment.*

Each assignment must be exclusively the work of the individual student submitting it. Please be aware that plagiarism and unauthorized collaboration are very serious academic offences (see below) and that I am bound to report any suspected academic offence directly to the Office of the Dean.

Summaries. Summaries are to be submitted each week before the beginning of class (with the exception of the first week). In each summary, you have to outline in your own words and as clearly, informatively, accurately, and concisely as possible the key theses and/or arguments of each of the week's readings. Summaries must be between 150 and 200 word long. Longer summaries will be penalized. Please submit each summary by sending it in the body of an e-mail with subject line 'PHIL 4230 Week X Summary - Author's Name, Chapter Number' (e.g. 'PHIL 4230 Week 2 Summary - Colyvan, Ch. 1'). Each summary must include a word count. *Failing to submit a summary on time will result in a 0% on that summary.*

Drafts. While I am happy to answer any general questions about you might have about your assignments, please be advised that I am not able to provide any feedback on draft assignments.

Extensions. Extensions will be granted only in *extraordinary* circumstances (e.g. serious illness or family emergency) *and* only if the extension is requested *in writing before* the assignment deadline. If you think you may need an extension, please contact me as soon as possible by e-mail.

Academic Integrity. You are responsible for ensuring that you understand the nature of academic offences (such as plagiarism and unauthorized collaboration), as defined in the Undergraduate Calendar (see [here](#)), and to avoid both committing them and aiding or abetting academic offences

perpetrated by other students. Please be aware that I am bound to report any suspected academic offence directly to the Office of the Dean.

Final Grades. All final grades are subject to the approval of the Dean.

VII. Schedule

The [Course Schedule](https://goo.gl/b7SqXA) can be found online at <https://goo.gl/b7SqXA>. On it, you can find out what the readings for each class are and how to access them, as well as other important course information, such as presentations and assignment deadlines. Please check the Course Schedule regularly for any updates and changes.

Assignments:

Unless specifically told otherwise by their instructors, students:

- must not use a plastic or cardboard cover or paper clips
- must staple the paper (there is a stapler on the essay box)
- must include the following:
 - student name
 - student number
 - course number and section
 - instructor's name
- No assignments will be accepted after the last day for handing in term work – see dates in next column.
- Assignments handed in through the essay box (just inside the glass doors, Paterson Hall, Floor 3A) must be dropped into the box by **4:15** on a regular business day in order to be date-stamped with that day's date. Assignments handed in after 4:15 or on a non-business day will be stamped as having been handed in on the next business day.
- Students are required to keep copies of their assignments. If your paper is lost at any point, you will be considered not to have submitted it if you cannot produce a copy immediately on request.

Deferrals for Term Work:

If you miss a final examination and/or fail to submit a final assignment by the due date because of circumstances beyond your control, you may apply for a deferral of examination/assignment. For deferred examinations, you must apply within 5 working days after the scheduled date of your exam. To apply for deferral of a final assignment, you must apply within 5 working days of the last scheduled day of classes. Visit the Registrar's Office for more information.

Plagiarism:

It is the responsibility of each student to understand the meaning of 'plagiarism' as defined in the Undergraduate or Graduate Calendars, and to avoid both committing plagiarism and aiding or abetting plagiarism by other students. (Undergraduate Calendar Academic Regulations, section 14.3, or <http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/acadregsuniv14/>)

Academic Accommodation:

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to your professor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: <http://www2.carleton.ca/equity/>

Religious obligation: write to your professor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: <http://www2.carleton.ca/equity/>

Academic Accommodations for Students with Disabilities: The **Paul Menton Centre** for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send your **Letter of Accommodation** at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (*if applicable*). After requesting accommodation from PMC, meet with your professor to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (*if applicable*) at <http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/>

You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at <http://www2.carleton.ca/equity/>

Important Dates:

Sept. 2 Classes start.

Sept. 4 Classes follow a Monday schedule.

Sept. 7 Labour Day - University closed.

Sept. 18 Last day for registration and course changes in Fall and Fall/Winter courses.

Sept. 30 Last day for entire fee adjustment when withdrawing from Fall term or two-term courses.

Oct. 12 Thanksgiving Day – University closed.

Oct. 26-30 Fall Break – no classes.

Nov. 24 Last day for tests or examinations in courses below 4000-level before the Final Examination period.

Dec. 7 Last day of classes, Fall term. Last day for handing in term work and the last day that can be specified by a course instructor as a due date for Fall term courses.

Dec. 7 Last day to withdraw from Fall term courses (academic purposes only).

Dec. 8 No classes or examinations take place. Review classes may be held, but no new material may be introduced.

Dec. 9-21 Final examinations for Fall courses, mid-terms for Fall/Winter courses. Exams are normally held all seven days of the week.

Dec. 21 Take-home exams are due.

Jan. 6 Winter term classes begin.

Jan. 19 Last day for registration and course changes in Winter term classes.

Jan. 31 Last day for entire fee adjustment when withdrawing from winter courses or winter portion of two-term courses.

Feb. 15-19 Winter Break, no classes.

Mar. 24 Last day for tests or examinations in courses below 4000-level before the Final Examination period.

Mar. 25 Good Friday – University closed.

- Apr. 8 Last day of Fall/Winter and Winter term classes. Last day for handing in term work and the last day that can be specified by a course instructor as a due date for term work for Fall/Winter and Winter term courses.
- Apr. 8 Last day to withdraw from Fall/Winter and Winter term courses (academic purposes only).
- Apr. 9-10 No classes or examinations take place. Review classes may be held, but no new material may be introduced.
- Apr. 11-23 Final Examinations. Exams are normally held all seven days of the week.
- Apr. 23 Take-home exams are due.

Addresses:

Department of Philosophy: 3A35 Paterson Hall

www.carleton.ca/philosophy

520-2110

Registrar's Office: 300 Tory

www.carleton.ca/registrar

520-3500

Student Academic Success Centre: 302 Tory

www.carleton.ca/sasc

520-7850

Writing Tutorial Service: 4th Floor, Library

<http://www1.carleton.ca/sasc/writing-tutorial-service/>

520-6632

MacOdrum Library

<http://www.library.carleton.ca/>

520-2735