

CARLETON UNIVERSITY
HISTORY 4101, HUMANITIES 4902
THE GALILEO AFFAIR
FALL TERM, 2017

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Office Hours Wednesdays 10-12

In 1633, the Roman Inquisition found Galileo Galilei guilty of “vehement suspicion of heresy” for holding the Copernican view that the earth moved and the sun stood still, contrary to the authoritative interpretation of the Bible and in violation of the 1616 decree against Copernicanism. Galileo’s condemnation had – and continues to have – profound effects on the relations between science and religion. In this seminar, we shall examine the events leading up to the decree of 1616 and to the condemnation of Galileo through the original letters, depositions, and diplomatic correspondence, and follow the course of the trial through the inquisitorial records. Some of the documents we shall read have only recently been made available from the archives of the Inquisition. We shall also read statements by Popes John Paul II and Benedict XVI concerning Galileo’s recent so-called rehabilitation.

Seminars are Thursdays, 8:35-11:25. Consult Carleton’s online class schedule for the location.

The **required text** is available at All Books (327 Rideau Street, next to the Bytown Cinema, tel. 789-9544):

Finocchiaro, Maurice. *The Galileo Affair: A Documentary History*. Berkeley/Los Angeles/London: University of California Press, 1989.

Additional required readings are on reserve in the MacOdrum Library (see the attached list).

Grades for the course will be based on

- 1) Leading solo a 45-minute discussion of one of the documents or groups of documents assigned in a seminar between September 21st and October 19th (10%)
- 2) A written analysis of that document or group of documents, about eight pages long, due on November 2nd (20%);
- 3) Leading solo a 45-minute discussion of one of the documents or groups of documents assigned in a seminar between November 2nd and November 23rd (10%);
- 4) A written historiographical assessment of a document, presented orally on November 30th and submitted as a 12-page essay on December 7th (40%); and
- 5) Active participation in all other seminars (20%).

Grades will be based solely on individual, academic merit judged against absolute standards. Grades will not be adjusted to achieve a supposedly normal distribution or manipulated in any other way.

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SEMINARS AND READINGS

- 1 Sept 7 Introduction; assignment of seminar topics (please be ready with preferences)
- 2 14 **The Documents of the Galileo Affair**
Finocchiaro, 1-43; Beretta, “The Documents of Galileo’s Trial,” in McMullin, ed., *The Church and Galileo*, 191-211.
- 3 21 **Copernicanism and the Bible**
 - a) The Council of Trent, Zuñiga on Job, and Bellarmine (in Blackwell, *Galileo, Bellarmine, and the Bible*, 181-193)
 - b) Castelli and Galileo (Finocchiaro, 47-54); Galileo and Dini (Finocchiaro, 55-67)
 - c) Foscarini’s Letter (in Blackwell, 217-251); Bellarmine to Foscarini (Finocchiaro, 67-69)
- 4 28 **Complaints and Depositions**
 - a) Lorini’s Complaint and the Consultant’s Report on the Letter to Castelli (Finocchiaro, 134-136); Laird-Finocchiaro emails, 19-20 November 2008; Caccini’s Deposition (Finocchiaro, 136-141)
 - b) Ximenes’s and Attavanti’s Depositions (Finocchiaro, 141-146).
- 5 Oct 5 **Galileo’s Defence of Copernicanism**
 - a) Galileo, *On the Copernican Opinion* (Finocchiaro, 70-86).
 - b) Galileo, *Discourse on the Tides* (Finocchiaro, 119-133).
- 6 12 **Galileo, Science, and the Bible**
 - a) Galileo, *Letter to the Grand Duchess Christina*, 1-3 (Finocchiaro, 87-104)
 - b) Galileo, *Letter to the Grand Duchess Christina*, 4-6 (Finocchiaro, 104-118)
- 7 19 **The Condemnation of Copernicanism**
 - a) Consultants’ Report on Copernicanism, Inquisition Minutes (25 February and 3 March 1616) (Finocchiaro, 146-148)
 - b) Special Injunction, Decree of the Index (Finocchiaro, 146-150)
 - c) Galileo to the Tuscan Secretary of State (6 and 12 March 1616) (Finocchiaro, 150-153); Bellarmine’s Certificate (Finocchiaro, p. 153).
- Oct 23-27 Fall break, no classes*
- 8 Nov 2 **Troubles with the Licence Document analysis due in class**
 - a) Correspondence between Galileo, Niccolini, and Riccardi (Finocchiaro, 204-214); Preface and Conclusion of the *Dialogue* (Finocchiaro, 214-218)
 - b) The First Report of the Special Commission (Finocchiaro, 214-222); Barbarini to the Florentine Nuncio; Galileo to Diodati (Finocchiaro, 222-226).
- 9 9 **The Call to Rome and the Trial**
 - a) Diplomatic Correspondence, 1632 (Finocchiaro, 227-241); Diplomatic Correspondence, 1633 (Finocchiaro, 241-250)
 - b) Galileo’s First Deposition (Finocchiaro, 256-262); Niccolini’s report to the Grand Duke (Finocchiaro, 250-251)
 - c) The Second Reports of the Consultants (Finocchiaro, 262-276).

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- 10 16 **The Verdict**
a) Barberini and Maculano (Finocchiaro, 276-277; and Laird, tr., *Maculano a Barberini*, 22 April 1633); Galileo's Second and Third Depositions, and his Defence (Finocchiaro, 277-281)
b) Final Report to the Pope (Finocchiaro, 281-286); Niccolini to the Grand Duke 19 June 1633 (Finocchiaro, 254-255)
c) Galileo's Fourth Deposition; Sentence and Abjuration (Finocchiaro, 286-293).
- 11 23 **Galileo Rehabilitated?**
Fantoli, *Galileo and the Catholic Church*
- 12 30 *Oral presentations of historiographical assessments*
- 13 Dec 7 **Conclusion**
Course evaluation; written historiographical assessment due in class
- Dec 8 *Last day to submit coursework – late penalties still apply.*

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ADDITIONAL REQUIRED READING (TWO-HOUR RESERVES)

- Beretta, Francesco. "The Documents of Galileo's Trial: Recent Hypotheses and Historical Criticism." In Ernan McMullin, ed. *The Church and Galileo*. Notre Dame: Univ. Notre Dame Press, 2005. 191-212.
- Blackwell, Richard. *Galileo, Bellarmine, and the Bible*. Notre Dame: Univ. Notre Dame Press, 1991. 181-186, 187-193, 217-251.
- Fantoli, Annibale. *Galileo and the Catholic Church: A Critique of the 'Closure' of the Galileo Commission's Work*. Studi galileiani, Vol. 4 No. 1. Vatican City: Vatican Observatory Publications, 2002.

ADDITIONAL READING (FOUR-HOUR RESERVES)

- Biagioli, Mario. *Galileo Courtier: The Practice of Science in the Culture of Absolutism*. Chicago: Univ. Chicago Press, 1993.
- Blackwell, Richard J. *Behind the Scenes at Galileo's Trial*. Notre Dame: Univ. Notre Dame Press, 2006.
- Blackwell, Richard. *Galileo, Bellarmine, and the Bible*. Notre Dame: Univ. Notre Dame Press, 1991.
- de Santillana, Giorgio. *The Crime of Galileo*. Chicago: Univ. Chicago Press, 1955; rpt 1976.
- Drake, Stillman. *Galileo*. Oxford: Oxford Univ. Press, 1980.
- Fantoli, Annibale. *Galileo, for Copernicanism and for the Church*. 2nd ed. Vatican City: Vatican Observatory, 1996.
- Fantoli, Annibale. *The Case of Galileo: A Closed Question?* Trans. George V. Coyne, S.J. Notre Dame: University of Notre Dame Press, 2012.
- Feldhay, Rivka. *Galileo and the Church: Political Inquisition or Critical Dialogue?* Cambridge, New York: Cambridge Univ. Press, 1995.
- Galilei, Galileo. *Dialogue Concerning the Two Chief World Systems*. Tr. Stillman Drake. Berkeley: Univ. California Press, 1953; 2nd ed. 1967.
- Galilei, Galileo. *Discoveries and Opinions of Galileo*. Tr. Stillman Drake. Garden City: Doubleday, 1957.
- Kuhn, Thomas. *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought*. Cambridge, Mass.: Harvard Univ. Press, 1957.
- Langford, Jerome J. *Galileo, Science, and the Church*. 1966; rev. ed. Ann Arbor: Univ. Michigan Press, 1971.
- McMullin, Ernan, ed. *The Church and Galileo*. Notre Dame: Univ. Notre Dame Press, 2005.
- Montesinos, José, and Carlos Solís, eds. *Largo campo di filosofare: Eurosymposium Galileo 2001*. La Orotava, Tenerife: Fundación Canaria Orotava de Historia de la Ciencia, 2001.
- Pagano, Sergio, and Antonio Luciani, eds. *I documenti del processo di Galileo Galilei*. Vatican City: Pontifical Academy of Sciences, 1984.
- Redondi, Pietro. *Galileo Heretic*. 1983. Tr. Raymond Rosenthal. Chicago: Univ. Chicago Press, 1987.

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Shea, William R., and Mariano Artigas. *Galileo in Rome: The Rise and Fall of a Troublesome Genius*. Oxford: Oxford Univ. Press, 2003.

Shea, William R., and Mariano Artigas. *Galileo Observed: Science and the Politics of Belief*. Saga more Beach: Science History Publications, 2006.

Speller, Jules. *Galileo's Inquisition Trial Revisited*. Frankfurt: Peter Lang, 2008.

Westfall, Richard S. *Essays on the Trial of Galileo*. Vatican City: Vatican Observatory, 1989.

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COURSE REGULATIONS

To pass, students must give both presentations and complete both written assignments, all unless formally excused by the Professor because of illness or some other compelling reason. Students who attend fewer than ten complete seminars will receive F on the course, subject to the University's provisions for medical and religious accommodation.

Seminars Students are expected to attend and participate in all seminars, to arrive on time, and to remain to the end. Students are responsible for all material covered, announcements made, course documents distributed, and assignments returned, whether they are present in class or not. Participation at missed seminars will be graded 0 (but weighted 0 with an acceptable excuse). Grades are not available on line.

Cell phones must be set to airplane mode – not merely to silent or vibrate – upon entering the classroom and must remain off until the end of the class. Students violating this rule will be deemed absent and asked to leave the classroom.

Lap-top computers, iPads, iPods, tablets, and other electronic devices may not be used during seminars except by presentors. Others may use them only with the express permission of the Professor and then only for taking notes and only on condition that wireless transmission and reception is turned off. Permission will be granted only for very compelling reasons.

Electronic recording devices may not be used to record seminars without the express permission of the Professor and all of the other students. Permission will be granted only for very compelling reasons and only on the understanding that the Professor (standing for the collective seminar) retains all copyright in the recordings, that the recordings and their transcriptions may not be copied, transmitted, broadcast, shared, posted, or otherwise distributed in any form whatsoever without permission from the Professor, and that the recordings and transcriptions be destroyed by the end of term.

Assignments are to be submitted in class on the day they are due. If assignments are submitted in any other way, such as being put into the departmental drop box, it is entirely the students' responsibility to see that they are received by the Professor. Assignments that come into the Professor's hands after the end of class will be docked one grade-point (e.g., from a B+ to a B) or 3-1/3 percentage points the first day or part thereof and each day subsequently. Late penalties on assignments accompanied by a medical certificate or other proof of a legitimate reason for lateness will be adjusted accordingly. But once the papers submitted on time are graded and returned, *no further papers will be accepted except for very compelling reasons*. No work can be accepted for any reason after the Senate's deadline published in the current *Calendar*.

Emails will be answered only during weekly office hours, and only to discuss administrative matters. Course material cannot be discussed by email. Emails must be sent from a Carleton account, must begin with the salutation "Dear Professor Laird," must be written in proper and correct English (including correct spelling, punctuation, and capitalization), and must end with a colophon such as "Yours truly," "Sincerely yours," or "Yours faithfully," followed by the full name of the sender. Non-conforming emails will be ignored.

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REGULATIONS COMMON TO ALL HISTORY COURSES

COPIES OF WRITTEN WORK SUBMITTED

Always retain for yourself a copy of all essays, term papers, written assignments or take-home tests submitted in your courses.

PLAGIARISM

The University Senate defines plagiarism as *“presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one’s own.”* This can include:

- reproducing or paraphrasing portions of someone else’s published or unpublished material, regardless of the source, and presenting these as one’s own without proper citation or reference to the original source;
- submitting a take home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another’s data or research findings;
- failing to acknowledge sources through the use of proper citations when using another’s works and/or failing to use quotation marks;
- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs."

Plagiarism is a serious offence which cannot be resolved directly with the course’s instructor. The Associate Dean of the Faculty conducts a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course.

COURSE SHARING WEBSITES and COPYRIGHT

Classroom teaching and learning activities, including lectures, discussions, presentations, etc., by both instructors and students, are copy protected and remain the intellectual property of their respective author(s). All course materials, including PowerPoint presentations, outlines, and other materials, are also protected by copyright and remain the intellectual property of their respective author(s).

Students registered in the course may take notes and make copies of course materials for their own educational use only. Students are not permitted to reproduce or distribute lecture notes and course materials publicly for commercial or non-commercial purposes without express written consent from the copyright holder(s).

STATEMENT ON CLASS CONDUCT

The Carleton University Human Rights Policies and Procedures affirm that all members of the University community share a responsibility to:

- promote equity and fairness,
- respect and value diversity,
- prevent discrimination and harassment, and
- preserve the freedom of its members to carry out responsibly their scholarly work without threat of interference.

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Carleton University Equity Services states that “every member of the University community has a right to study, work and live in a safe environment free of discrimination or harassment”. [In May of 2001 Carleton University’s Senate and Board of Governors approved the Carleton University Human Rights Policies and Procedures. The establishment of these policies and procedures was the culmination of the efforts of the Presidential Advisory Committee on Human Rights and a Human Rights Implementation Committee.]

GRADING SYSTEM

Letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100 (12)	B = 73-76 (8)	C - = 60-62 (4)
A = 85-89 (11)	B - = 70-72 (7)	D+ = 57-59 (3)
A - = 80-84 (10)	C+ = 67-69 (6)	D = 53-56 (2)
B+ = 77-79 (9)	C = 63-66 (5)	D - = 50-52 (1)

F Failure. No academic credit WDN Withdrawn from the course

ABS Absent from the final examination

DEF Official deferral (see "Petitions to Defer")

FND Failure with no deferred exam allowed -- assigned only when the student has failed the course on the basis of inadequate term work as specified in the course outline.

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

WITHDRAWAL WITHOUT ACADEMIC PENALTY

The last date to withdraw from Fall term courses is December 8, 2017. Last day to withdraw from full-year courses is April 11, 2018.

REQUESTS FOR ACADEMIC ACCOMMODATIONS

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 me 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 see the Student Guide: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>

Religious obligation: write to me 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 see the Student Guide: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>

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 me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the

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first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the [PMC website](#) for the deadline to request accommodations for the formally-scheduled exam (if applicable).

PETITIONS TO DEFER

Students unable to complete a final term paper or write a final examination because of illness or other circumstances beyond their control or whose performance on an examination has been impaired by such circumstances may apply within five working days to the Registrar's Office for permission to extend a term paper deadline or to write a deferred examination. The request must be fully and specifically supported by a medical certificate or other relevant documentation. Only deferral petitions submitted to the Registrar's Office will be considered.

ADDRESSES (613-520-2600, phone ext.)

- Department of History (2828) 400 PA
- Registrar's Office (3500) 300 Tory
- Academic Advising Centre (7850) 302 Tory
- Paul Menton Centre (6608) 500 Unicentre
- Centre for Student Academic Support – Study Skills, Writing Tutorials, Bounce Back (3822) 4th fl Library

Application for Graduation Deadlines

- Spring Graduation (June): March 1
- Fall Graduation (November): September 1
- Winter Graduation (February): December 1