

COLLEGE OF THE HUMANITIES
HUMS 4902 RESEARCH SEMINAR: THE GALILEO AFFAIR
FALL TERM, 2008

Prof. W. R. Laird
Paterson Hall 419
520-2600 x 2833

In this seminar we shall examine Galileo's condemnation for heresy in 1633, which had – and continues to have – profound effects on the relation between science and religion. Readings for the seminar will include the original trial documents, diplomatic correspondence, and related works, including recent statements by John Paul II and Benedict XVI.

Seminars Mondays 13:00-16:00 in Paterson Hall 436

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: Univ. California Press, 1989.

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

Students should also have a college-level dictionary and a guide to style. The following are available at All Books, and are highly recommended:

Strunk, William Jr., and E.B. White. *The Elements of Style*. 4th ed. Boston: Allyn and Bacon, 2000.

The Concise Oxford Dictionary. Oxford: Oxford Univ. Press, 1964; 6th ed. 1976.

Grades for the course will be based on

- 1) The critical examination of a document in the Galileo affair, taking the form of a 30-minute seminar presentation and discussion (September 22 to October 20), written up in an eight-page paper due on October 27th (30%);
- 2) The critical and historiographical examination of a document or theme, taking the form of a 30-minute seminar presentation and discussion (October 27 to November 17), written up in a 12-page research essay and due December 1st (50%); and
- 3) Active participation in all seminars (20%).

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

THE FINE PRINT

To pass, students must regularly attend the seminars, do both presentations, and complete both written assignments, all unless formally excused by the Instructors because of illness or some other legitimate reason. Failure to complete these requirements, unless excused, will result in the grade FND (Failed, No Deferral).

Attendance 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 seminars missed will be graded 0 (but weighted 0 with an acceptable excuse).

Late Assignments Assignments are to be submitted in class on the day they are due. Assignments that come into the Instructors' 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 papers accompanied by a medical certificate or other proof of a legitimate reason for lateness will be adjusted accordingly. No work can be accepted for any reason after the Senate's deadline published in the current *Calendar*.

Plagiarism The University Senate defines plagiarism as "to use and pass off as one's own idea or product the work of another without expressly giving credit to another." This can include

- Copying from another's work without indicating this through both the appropriate use of quotation marks and citations in footnotes;
- Lengthy and close paraphrasing of another's work (i.e., extensive copying interspersed with a few phrases or sentences of your own); and
- Submitting written work produced by someone else as your own work (e.g., another student's term paper, a paper purchased from a commercial term-paper factory, or materials or term papers downloaded from the Internet).

Plagiarism is a serious offence, and it cannot be dealt with by the Professor alone. In all cases where plagiarism is suspected, Instructors are now required to notify their Chairman or Director, who in turn is required to report the matter to the Associate Deans of the Faculty. The Associate Deans then conduct a formal investigation, including an interview with the student. Penalties can range from a mark of zero for the plagiarized work, a final grade of F for the course, suspension from all studies, to expulsion from the University.

The Senate also considers an instructional offence the submission of "substantially the same piece of work to two or more courses without the prior written permission of the instructors . . . involved."

Students should especially note that passages copied word-for-word without quotation marks, whether the source is cited or not, constitute plagiarism. Plagiarism from the internet is ridiculously easy to detect.

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SEMINARS AND READINGS

- 1 Sept 8 **Introduction**
- 2 Sept 15 **The Documents of the Galileo Affair**
Finocchiaro, pp. 1-43; Beretta, “The Documents of Galileo’s Trial,” in McMullin, ed., *The Church and Galileo*, pp. 191-211.
- 3 Sept 22 **Copernicanism and Biblical Interpretation**
Bellarmine and the Council of Trent (in Blackwell, *Galileo, Bellarmine, and the Bible*, pp. 181-184; 187-193)
Castelli and Galileo (Finocchiaro, pp. 47-54)
Galileo and Dini (Finocchiaro, pp. 55-67)
Foscarini’s Letter (in Blackwell, pp. 217-251)
Bellarmine to Foscarini (Finocchiaro, pp. 67-69)
- 4 Sept 29 **The Case for Copernicus**
Galileo, *On the Copernican Opinion* (Finocchiaro, pp. 70-86)
Galileo, *Letter to the Grand Duchess Christina* (Finocchiaro, pp. 87-118)
Galileo, *Discourse on the Tides* (Finocchiaro, pp. 119-133)
- 5 Oct 6 **Complaints and Depositions**
Lorini’s Complaint and the Consultant’s Report on the Letter to Castelli (Finocchiaro, pp. 134-136)
Caccini’s Deposition (Finocchiaro, pp. 136-141)
Ximenes’s and Attavanti’s Depositions (Finocchiaro, pp. 141-146)
Oct 13 *Thanksgiving – University closed*
- 6 Oct 20 **The Condemnation of Copernicanism**
Consultants’ Report on Copernicanism, Inquisition Minutes (25 February and 3 March 1616), Special Injunction, and Decree of the Index (Finocchiaro, pp. 146-150); Zuñiga on Job (Blackwell, pp. 185-186)
Galileo to the Tuscan Secretary of State (6 and 12 March 1616) (Finocchiaro, pp. 150-153)
Bellarmine’s Certificate (Finocchiaro, p. 153)
- 7 Oct 27 **Arguments and Counter-arguments**
Galileo’s Reply to Ingoli, 1-2 (Finocchiaro, pp. 154-166)
Galileo’s Reply to Ingoli, 3-5 (Finocchiaro, pp. 166-175)
Galileo’s Reply to Ingoli, 6-10 (Finocchiaro, pp. 175-187)
Galileo’s Reply to Ingoli, 11-18 (Finocchiaro, pp. 187-197)
First Assignment due
- 8 Nov 3 **Troubles with the Licence**
Correspondence between Galileo, Niccolini, and Riccardi (Finocchiaro, pp. 204-214)
The Preface and Conclusion of the *Dialogue* (Finocchiaro, pp. 214-218)
The Report of the Special Commission (Finocchiaro, pp. 214-222)
- Nov 7 *Last day to withdraw*

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- 9 Nov 10 **The Call to Rome and the Trial**
Diplomatic Correspondence, 1632-1633 (Finocchiaro, pp. 227-250)
Galileo's First Deposition (Finocchiaro, pp. 256-262) and Niccolini's report to
the Grand Duke (Finocchiaro, pp. 250-251)
Reports of the Consultants (Finocchiaro, pp. 262-276)
Barberini, Maculano, and Galileo's Second Deposition and Defence
(Finocchiaro, pp. 276-281, 251-253)
- 10 Nov 17 **The Verdict**
Final Report to the Pope (Finocchiaro, pp. 281-286)
Sentence and Abjuration (Finocchiaro, pp. 286-293)
- 11 Nov 24 **Galileo Rehabilitated?**
Fantoli, *Galileo and the Catholic Church*
- 12 Dec 1 **Conclusion**
Course evaluation; research essay due in class

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ADDITIONAL REQUIRED READINGS (* = 2-HOUR RESERVES)

- *Beretta, Francesco. "The Documents of Galileo's Trial: Recent Hypotheses and Historical Criticism." In McMullin, Ernan, ed. *The Church and Galileo*. Notre Dame: Univ. Notre Dame Press, 2005. Pp. 191-212.
- *Blackwell, Richard. *Galileo, Bellarmine, and the Bible*. Notre Dame: Univ. Notre Dame Press, 1991. Pp. 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. A photocopy will be made available.

ADDITIONAL READINGS

- *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.
- *Feldhay, Rivka. *Galileo and the Church: Political Inquisition or Critical Dialogue?* Cambridge, New York: Cambridge Univ. Press, 1995.
- Finocchiaro, Maurice. *The Galileo Affair: A Documentary History*. Berkeley: Univ. California Press, 1989.
- *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*. Sausalito, CA: 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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FIRST ASSIGNMENT ANALYSIS OF A DOCUMENT IN THE GALILEO AFFAIR

Due: October 27, *in class* (for extensions & late penalties, see above)

Worth: 30% of the final grade

Write a carefully ordered essay, about eight typewritten pages (2000 words) in length, analyzing one of the documents or groups of documents (e.g., coherent sets of diplomatic correspondence) in Finocchiaro's *Galileo Affair*. Your analysis must include a description of the nature of the document, an account of its origin and purpose, its provenance and the history of its publication (refer to Pagano and Favaro, listed below) and translation, an analysis of its contents, including the identification of all persons and events it mentions, and its relation to and significance for the condemnation of Galileo. You should be particularly sensitive to what the document reveals about the persons involved – their thoughts, prejudices, and motivations – and the peculiar circumstances and events surrounding it – institutional, social, diplomatic, and judicial. To help with the historical circumstances of the document as well as its interpretation, you should consult Finocchiaro's Introduction, Notes, Chronology of Events, Concordance to the Documents, and Biographical Glossary. You may also consult some of the sources listed in Finocchiaro's Bibliography and on the list of "Required and Additional Readings" attached to this syllabus. But note that this is not a research paper: your purpose is to analyse a document, not to find sources. All sources that you do consult, however, including Finocchiaro, Pagano, and Favaro, must be cited in notes, either at the foot of the page or at the end of the paper, conforming to the style recommended in the *Chicago Manual of Style*, 14th edition (see esp. pp. 493-585). A separate bibliography is unnecessary. Internet sources and sources not listed in Finocchiaro or on the attached list are to be avoided unless approved in advance by the Professor.

Almost all of the documents (Pagano includes several newly discovered ones) can be found in their original languages in both

Galilei, Galileo. *Opere*. Edizione Nazionale. Ed. Antonio Favaro. 20 vols. Florence: Barbarà, 1890-1909. Reprinted many times; an electronic scanned copy can be found at <<<http://gallica.bnf.fr/>>>.

Pagano, Sergio M., ed. *I documenti del processo di Galileo Galilei*. Vatican City: Pontificia Academia Scientiarum, 1984.

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REGULATIONS COMMON TO ALL HUMANITIES 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 “to use and pass off as one’s own idea or product the work of another without expressly giving credit to another.” This can include:

- Copying from another person's work without indicating this through appropriate use of quotation marks and footnote citations.
- Lengthy and close paraphrasing of another person's work (i.e. extensive copying interspersed with a few phrases or sentences of your own).
- Submitting written work produced by someone else as if it were your own work (e.g. another student's term paper, a paper purchased from a term paper "factory", materials or term papers downloaded from the Internet, etc.).
- Handing in "substantially the same piece of work to two or more courses without the prior written permission of the instructors...involved." (University Senate)

Plagiarism is a serious offence which cannot be resolved directly with the course’s instructor. The Associate Deans of the Faculty conduct 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 range from a mark of zero for the plagiarized work to a final grade of "F" for the course, and even suspension from all studies or expulsion from the University.

GRADING SYSTEM

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

A+ = 90-100 (12)	B+ = 77-79 (9)	C+ = 67-69 (6)
A = 85-89 (11)	B = 73-76 (8)	C = 63-66 (5)
A - = 80-84 (10)	B - = 70-72 (7)	C - = 60-62 (4)
D+ = 57-59 (3)	D = 53-56 (2)	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	“Failed, no Deferral” – assigned when the student is absent from the final exam and has failed the course on the basis of inadequate term work as specified in the course outline.

WITHDRAWAL WITHOUT ACADEMIC PENALTY

The last date to withdraw from Fall term courses is November 7th, 2008. Last day to withdraw from Fall/Winter (full year) and Winter term courses is March 6th, 2009.

REQUESTS FOR ACADEMIC ACCOMMODATION

For Students with Disabilities

Students with disabilities requiring academic accommodations in this course must register with the Paul Menton Centre for Students with Disabilities for a formal evaluation of disability-related needs. Registered PMC students are required to contact the centre, 613-520-6608, every term to ensure that I receive your letter of accommodation, no later than two weeks before the first assignment is due or the first in-class test/midterm requiring accommodations. If you require accommodation for your formally scheduled exam(s) in this course, please submit your request for accommodation to PMC by November 7, 2008, for December examinations, and March 6, 2009, for April examinations.

For Religious Obligations:

Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructors for alternate dates and/or means of satisfying academic requirements. Such requests should be made during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist, but no later than two weeks before

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the compulsory event. Accommodation is to be worked out directly and on an individual basis between the student and the instructor(s) involved. Instructors will make accommodations in a way that avoids academic disadvantage to the student. Students or instructors who have questions or want to confirm accommodation eligibility of a religious event or practice may refer to the Equity Services website for a list of holy days and Carleton's Academic Accommodation policies, or may contact an Equity Services Advisor in the Equity Services Department for assistance. (613-520-5622)

For Pregnancy:

Pregnant students requiring academic accommodations are encouraged to contact an Equity Advisor in Equity Services to complete a *letter of accommodation*. The student must then make an appointment to discuss her needs with the instructor at least two weeks prior to the first academic event in which it is anticipated the accommodation will be required.

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 in writing 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

College of the Humanities 520-2809	300 Paterson
Classics and Religion Office 520-2100	2A39 Paterson
Registrar's Office 520-3500	300 Tory
Student Academic Success Centre 520-7850	302 Tory
Paul Menton Centre 520-6608	500 Unicentre
Writing Tutorial Service 520-6632	4 th floor Library