This document lists the required and optional textbooks for Caltech courses offered during the FA 2017-18 term. Not all courses are listed. Only those courses for which the Registrar has solid information are listed.

This document is updated as more information comes in from instructors.

Please consult the Library Catalog (TIND) to view class course reserves. Course reserves are available in the Sherman Fairchild Library only. Reserve material is available for 3-hour checkout.

Changes in the last 7 days

BE/Bi 103
Bi 122
Bi/BE 024
Ch 001A
Ch 041A
Ch 112
Ch 117
Ch 125A
## APPLIED COMPUTATIONAL MATH

**ACM101A. Methods of Applied Mathematics I.**

**Instructor:** Oscar Bruno

**Suggested textbooks:**

## ASTROPHYSICS

**Ay 020. Basic Astronomy and the Galaxy.**

**Instructors:** Lynne Hillenbrand, Evan Kirby

**Required textbooks:**

## BIOENGINEERING

**BE/Bi 103. Data Analysis in the Biological Sciences.**

**Instructor:** Justin Bois

**Required textbooks:**

## BIOLOGY

**Bi 122. Genetics.**

**Instructor:** Bruce Hay

**Required textbooks:**
Bi/Ch 110. Introduction to Biochemistry.
Instructors: Judith Campbell, Carl Parker

Required textbooks:

Suggested textbooks:

BUSINESS, ECONOMICS, AND MANAGEMENT

BEM105. Options.
Instructor: Jaksa Cvitanic

Required textbooks:

Suggested textbooks:

CHEMICAL ENGINEERING

ChE/Ch 165. Chemical Thermodynamics.
Instructor: Zhen-Gang Wang

Required textbooks:
sandler, stanley; chemical, biochemical engineering thermodynamics (latest), wiley, 2006. ISBN: 978-0471661740

ChE015. Introduction to Chemical Engineering Computation.
Instructor: Richard Flagan

Suggested textbooks:
ChE103A. Transport Phenomena.

Instructor: Julia Kornfield

Required textbooks:

CHEMISTRY

Ch 001A. General Chemistry.

Instructor: Nathan Lewis

Required textbooks:

Ch 041A. Organic Chemistry.

Instructor: Dennis Dougherty

Required textbooks:

Ch 125A. The Elements of Quantum Chemistry.

Instructor: Mitchio Okumura

Suggested textbooks:
Schrier, Joshua; Introduction to Computational Physical Chemistry, , ISBN: 978-1-938787-90-4
ECONOMICS

Ec 121A. Theory of Value.
Instructor: Kim Border

Suggested textbooks:

Ec 122. Econometrics.
Instructor: Robert Sherman

Required textbooks:
hill, r. carter;griffiths, william e.,lim, guay c.; principles of econometrics (4th), wiley, 2011. ISBN: 978-0-470-62673-3

ELECTRICAL ENGINEERING

EE 111. Signal-Processing Systems and Transforms.
Instructor: Palghat Vaidyanathan

Required textbooks:

EE/Ma/CS 126A. Information Theory.
Instructor: Michelle Effros

Required textbooks:

ENGINEERING

E 110. Principles of University Teaching and Learning in STEM.
Instructor: Cassandra Horii
Required textbooks:


ENGLISH

En 102. Origins of Science Fiction.

Instructor: Leah Klement

Required textbooks:

Cavendish, Margaret; The Blazing World and Other Writings, Penguin Classics, 2004. ISBN: 9780140433722

More, Bacon, Neville (ed. Susan Bruce); Three Early Modern Utopias, Oxford World's Classics, 2008. ISBN: 9780199537990


En 139. Reading Resistance in Cold War American Literature.

Instructor:

Required textbooks:


FRESHMAN SEMINARS

FS/Bi 013. Freshman Seminar: In Search of Memory.

Instructor: Jerome Pine

Required textbooks:


Instructor: Joann Stock

Required textbooks:


Instructor: Hugh Politzer

Required textbooks:

GEOLOGY

Ge 114A. Mineralogy.

Instructor: George Rossman

Suggested textbooks:

Ge 114B. Mineralogy Laboratory.

Instructor: George Rossman

Suggested textbooks:

Ge 161. Plate Tectonics.

Instructor: Joann Stock
HISTORY

H 135. War, Conquest, and Empires.

Instructor: Philip Hoffman

Required textbooks:


Instructor: Nicolas Wey-Gomez

Required textbooks:
- Marco Polo; The Travels of Marco Polo (ed. Peter Harris), Everyman’s Library, 2008. ISBN: 978-0307269133

HUMANITIES

Hum/En 020. Greek Epic and Drama.

Instructor: George Pigman

Required textbooks:
- Aristophanes; Frogs and Other Plays, ISBN: 978-0192824097
Hum/En 038. Telling Time in American Modernism.

Instructor:

Required textbooks:

- Toomer, Jean; *Cane*, Liveright, 2011. ISBN: 0871402106

Hum/H 009B. European Civilization: Early Modern Europe.

Instructor: Nicolas Wey-Gomez

Required textbooks:

- Nuñez Cabeza de Vaca, Alvar; *Castaways*, University of California Press, 1993. ISBN: 978-0520070639


Instructor: Warren Brown

Required textbooks:

**Hum114A. Spanish and Latin American Literature.**  
**Instructor:** Gloria Arjona  

*Required textbooks:*  

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**LANGUAGES**

**L 102A. Elementary French.**

**Instructor:** Christiane Orcel  

*Required textbooks:*  

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**L 107A. Intermediate Japanese.**

**Instructor:** Ritsuko Toner  

*Required textbooks:*  

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**L 108A. Advanced Japanese.**

**Instructor:** Ritsuko Toner  

*Required textbooks:*  

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**L 110A (Section 2). Elementary Spanish.**

**Instructor:** Gloria Arjona
**Required textbooks:**


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**L 110A (Section 1). Elementary Spanish.**

**Instructor:** Daniel Garcia

**Required textbooks:**


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**L 112A. Intermediate Spanish.**

**Instructor:** Daniel Garcia

**Required textbooks:**


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**L 114A. Spanish and Latin American Literature.**

**Instructor:** Gloria Arjona

**Required textbooks:**


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**L 130A. Elementary German.**

**Instructor:** Andreas Aebi

**Required textbooks:**

Forester, Daniuk; *Auf Geht’s (3rd)*, Live Oak Media, 2015. ISBN: 978-1-886553-51-4

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**L 132A. Intermediate German.**

**Instructor:** Andreas Aebi
**Required textbooks:**
Forester, Daniuk; *Weiter Geht’s (3.3)*, Live Oak Media, 2014. ISBN: 978-1-886553

### L 170A. Introduction to Chinese.

**Instructor:** Xiangyun Wang

**Required textbooks:**

### L 172A. Intermediate Chinese.

**Instructor:** Xiangyun Wang

**Required textbooks:**

### L/F 109. Introduction to French Cinema from Its Beginning to the Present.

**Instructor:** Christiane Orcel

**Required textbooks:**

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**MATHEMATICS**

### Ma 001A. Calculus of One and Several Variables and Linear Algebra.

**Instructor:** Dinakar Ramakrishnan

**Required textbooks:**
Apostol, T; *Calculus Volume I*, . ISBN: 978-0471000051
Ma 001A (Ma 1a, Section 1). Calculus of One and Several Variables and Linear Algebra.
Instructor: Faramarz Vafaee

Required textbooks:
Apostol, Tom; *Calculus, Volume I*, , . ISBN: 0-471-00005-1

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Ma 005A. Introduction to Abstract Algebra.
Instructor: Matthias Flach

Required textbooks:

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Ma 105A. Introduction to Abstract Algebra.
Instructor: Matthias Flach

Required textbooks:

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Ma 108A. Classical Analysis.
Instructor:

Required textbooks:
Rudin, Walter; *Principles of Mathematical Analysis (3)*, , . ISBN: 978-0070542358

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Ma 109A. Introduction to Geometry and Topology.
Instructor: Matilde Marcolli

Required textbooks:
Ma 116A. Mathematical Logic and Axiomatic Set Theory.
Instructor:

Required textbooks:
Marker, David; Model Theory: An Introduction, . ISBN: 978-0-387-22734-4

Ma 120A. Abstract Algebra.
Instructor: Dinakar Ramakrishnan

Required textbooks:
Lang, Serge; Algebra, . ISBN: 978-0387953854

Ma 121A. Combinatorial Analysis.
Instructor: Eric Rains

Required textbooks:
van Lint, J. H.,Wilson, R. M.; A Course in Combinatorics, . ISBN: 978-0521006019

Ma 151A. Algebraic and Differential Topology.
Instructor: Yi Ni

Required textbooks:

MUSIC

Mu 051. Understanding Music.
Instructor: Thomas Neenan

Required textbooks:
Kelly, Thomas Forrest; Music Then And Now, Norton, . ISBN: 978-0393929881
Mu 137. History I: Music History to 1750.

Instructor: Thomas Neenan

**Required textbooks:**

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**PHYSICS**

Ph 001A. Classical Mechanics and Electromagnetism.

Instructor: Jonas Zmuidzinas

**Required textbooks:**

**Suggested textbooks:**
- Feynman, Richard; *The Feynman Lectures on Physics (Vol I and II)*, . ISBN: 978-0465023820

Ph 002A. Waves, Quantum Mechanics, and Statistical Physics.

Instructor: Rana Adhikari

**Required textbooks:**

Ph 003. Physics Laboratory.

Instructors: Eric Black, Kenneth Libbrecht

**Required textbooks:**

Ph 005. Analog Electronics for Physicists.

Instructors: Kenneth Libbrecht, Frank Rice

**Suggested textbooks:**
Ph 012A. Waves, Quantum Physics, and Statistical Mechanics.

**Instructor**: Xie Chen

**Suggested textbooks**:
- Georgi, Howard; *The Physics of Waves*, ISBN: 0136656218
- Crawford, Frank; *Waves*, ISBN: 0070048606

Ph 106A. Topics in Classical Physics.

**Instructor**: Alan Weinstein

**Required textbooks**:

Ph 127A. Statistical Physics.

**Instructor**: Olexei Motrunich

**Suggested textbooks**:

Ph 135A. Applications of Quantum Mechanics.

**Instructor**: Nai-Chang Yeh

**Suggested textbooks**:

Ph 205A. Relativistic Quantum Field Theory.

**Instructor**: Anton Kapustin
POLITICAL SCIENCE

PS 121. Analyzing Congress.
Instructor: Alexander Hirsch

Required textbooks:

PS 135. Analyzing Legislative Elections.
Instructor: Jonathan Katz

Required textbooks:

SOCIAL SCIENCE

SS 202A. Political Theory.
Instructor: Alexander Hirsch

Required textbooks:
- Austen-Smith, David, Banks, Jeffrey S.; *Positive Political Theory I: Collective Preference*, ISBN: 978-0472087211