This document lists the required and optional textbooks for Caltech courses offered during the SP 2019-20 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

No changes.


**AEROSPACE**
**APPLIED & COMPUTATIONAL MATH**
**APPLIED MECHANICS**
**APPLIED PHYSICS**
**ASTROPHYSICS**

**Ay 126. Interstellar and Intergalactic Medium.**

**Instructor**: Shrinivas Kulkarni

**Required textbooks:**

Draine, Bruce; *Physics of the interstellar and intergalactic medium (1)*, Princeton University Press, 2011. ISBN: 9781282976504

**Notes for students:**


**BIOCHEMISTRY & MOLECULAR BIOPHYSICS**

**BIOENGINEERING**

**BE 150. Biological Circuit Design.**

**Instructors**: Justin Bois, Michael Elowitz

**Required textbooks:**

Alon, Uri; *An introduction to systems biology : design principles of biological circuits (2)*, ISBN: 9781439837177

**BIOLOGY**

**Bi 001. Principles of Biology - The great theories of biology and their influence in the modern world.**

**Instructors**: Elliot Meyerowitz, Kai Zinn

**Required textbooks:**

Alberts, Bruce; *Molecular Biology of the Cell (6)*, ISBN: 9780815344322

Bi 009. Cell Biology.

Instructors: David Chan, David Prober

Required textbooks:

Bi/BE 024. Scientific Communication for Biological Scientists and Engineers.

Instructor: Sarah MacLean

Suggested textbooks:
Alley, Michael; The craft of scientific writing (4), ISBN: 9781441982872

Bi/CNS/NB/Psy 150. Introduction to Neuroscience.

Instructors: Ralph Adolphs, Henry Lester

Required textbooks:

BUSINESS, ECONOMICS, AND MANAGEMENT

BEM102. Introduction to Accounting.

Instructor: Michael Ewens

Required textbooks:

BEM104. Investments.

Instructor: Richard Roll

Required textbooks:
CHEMICAL ENGINEERING

ChE103C. Transport Phenomena.

Instructors: Richard Flagan, Mikhail Shapiro

Required textbooks:


CHEMISTRY

Ch 102. Introduction to Inorganic Chemistry.

Instructors: Ryan Hadt, Kimberly See

Required textbooks:


COMPUTER SCIENCE

CS 038. Algorithms.

Instructor: Leonard Schulman

Suggested textbooks:


Notes for students:

Recommended but not required. 1 copy of "Introduction to Algorithms" is available online: https://clsproxy.library.caltech.edu/login?url=http://site.ebrary.com/lib/caltech/docDetail.action?docID=10397652


Instructor: Leonard Schulman

Suggested textbooks:

Notes for students:
Recommended but not required. 1 copy available online:

CONTROL & DYNAMICAL SYSTEMS

Instructor: Eugene Lavretsky

Required textbooks:

ECONOMICS

Ec 117. Matching Markets.
Instructor: Luciano Pomatto

Required textbooks:

Ec 140. Economic Progress.
Instructor: Philip Hoffman

Required textbooks:

ELECTRICAL ENGINEERING

ENGINEERING

Instructor: Nathan Wilson

Required textbooks:
En 114. Shakespeare's Career: Tragedies and Tragicomedies.  

Instructor: George Pigman  

Required textbooks:  

En 134. The Career of Herman Melville.  

Instructor: Cindy Weinstein  

Required textbooks:  
Herman Melville; *Moby-Dick, or the Whale*, Northwestern-Newberry, 1988. ISBN: 0810102692  
Herman Melville; *Billy Budd, Bartleby, and Other Stories*, Penguin Classics, 2016. ISBN: 0143107607  

En 186. The Novel of Education.  

Instructor: Dehn Gilmore  

Required textbooks:  
Dorothy Sayers; *Gaudy Night*, . ISBN: 9780062196538  
Larkin, Philip; *Jill*, . ISBN: 0879519614  
Amis, Kingsley; *Lucky Jim*, . ISBN: 9780141182599  
Lodge, David; *Nice Work*, . ISBN: 9780140133967  
Smith, Zadie; *On Beauty*, . ISBN: 0143037749  
Schumacher, Julie; *Dear Committee Members*, . ISBN: 9780385538138
ENVIRONMENTAL SCIENCE & ENGINEERING
FRESHMAN SEMINARS

Instructor: Hugh Politzer

Required textbooks:
- Levitin, Daniel; *This Is Your Brain on Music*, ISBN: 978-0452288522
- Deutsch, Diana; *Musical Illusions and Phantom Words: ..., ISBN: 978-0190206833
- Milner, Greg; *Perfecting Sound Forever: ..., ISBN: 978-0865479388

Notes for students:
The Caltech library has a digital edition of *This Is Your Brain...* that you can read on-line or download with your Caltech log-in. Also, any edition is OK. A digital copy of *Musical Illusions...* is on order and should likewise be available through the Caltech library. *Perfecting Sound...* is only needed in the second half of the term. It is for sale as a paperback and a Kindle, but, depending on course enrollment, the Caltech library might have a scanned version by then.

GEOLOGY

Ge 001. Earth and Environment.
Instructor: Paul Asimow

Required textbooks:

Notes for students:
Please ensure that you get a copy of this book that has revisions made between the third and fourth printing of the 2nd edition.

Ge 121C. Advanced Field Geology.
Instructor:

Suggested textbooks:
- Compton, Robert; *Geology in the Field (paperback)*, Earthspun books, 2017. ISBN: 9781547118779
Notes for students:

Students can use the older version of Compton's book; there are plenty of copies in the GPS library.


Instructor: Zachary Ross

Suggested textbooks:


HISTORY


Instructor: Maura Dykstra

Required textbooks:

Harold David Roth; *Original Tao: inward training (nei-yeh) and the foundations of Taoist mysticism.*, Columbia University Press, 2004. ISBN: 0231115652


H 192. The Crusades.

Instructor: Warren Brown

Required textbooks:

Gabrieli, Francesco; *Arab Historians of the Crusades*, University of California Press, 1969. ISBN: 0520052242

Allen, S. J.; Amt, Emilie; *The Crusades: A Reader (Second)*, University of Toronto, 2014. ISBN: 9781442606234

HISTORY AND PHILOSOPHY OF SCIENCE


Instructor: Mario Georg Hubert
Required textbooks:


HUMANITIES

Hum/En 024. The Scientific Imagination in English Literature.

**Instructor**: Dehn Gilmore

**Required textbooks**:


More, Thomas; *Three Modern Utopias*, . ISBN: 9780199537990

Shakespeare, William; *Tempest*, . ISBN: 9780393978193

Marlowe, Christopher; *Doctor Faustus*, . ISBN: 9780393977547


Stevenson, Robert Louis; *Jekyll and Hyde*, . ISBN: 978-1505552188

Hum/H 008B. Civilization, Science, and Archaeology: The Development of Science from Babylon though the Renaissance.

**Instructor**: Jed Buchwald

**Required textbooks**:


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

**Instructor**: Philip Hoffman

**Required textbooks**:


**Instructor:** Warren Brown

**Required textbooks:**

Hum114C. Spanish and Latin American Literature.

**Instructor:** Gloria Arjona

**Required textbooks:**
- CHANG-RODRIGUEZ, RAQUEL; *Voces de Hispanoamérica (5th)*, CENGAGE LEARNING, 2016. ISBN: 9781305584488

LANGUAGES

L 102C. Elementary French.

**Instructor:** Christiane Orcel

**Required textbooks:**

**Notes for students:**
- e-version also acceptable

L 106C (Section 1). Elementary Japanese.

**Instructor:** Megumi Fujio
L 106C (Section 2). Elementary Japanese.

Instructor: Megumi Fujio

Required textbooks:
Hirai, Ritsuko; *First Year Japanese Workbook (7th)*, Pearson, 2017. ISBN: 9781323587829

Notes for students:
We will use one textbook [JUNTOS] during the whole academic year. You have several purchase and rental options. Please make sure to select the proper one according to the number of terms you're planning to take elementary Spanish. The option listed at the Caltech Bookstore is for those students who plan to take three terms and want a printed copy of the textbook. For all the options, visit: https://www.cengage.com/c/mindtap-for-juntos-student-edition-1e-rubio/

L 110C (Section 1). Elementary Spanish.

Instructor: Daniel Garcia

Required textbooks:
Rubio, Fernando; Cannon, Tim; *Juntos (1st)*, Cengage, 2019. ISBN: 9781285869094

L 110C (Section 2). Elementary Spanish.

Instructor: Gloria Arjona

Required textbooks:
Rubio, Fernando; Cannon, Tim; *Juntos (1st)*, Cengage, 2019. ISBN: 9781285869094

Notes for students:
We will use one textbook [JUNTOS] during the whole academic year. You have several purchase and rental options. Please make sure to select the proper one according to the number of terms you're planning to take elementary Spanish. The option listed at the Caltech Bookstore is for those students who plan to take three terms and want a printed copy of the textbook. For all the options, visit: https://www.cengage.com/c/mindtap-for-juntos-student-edition-1e-rubio/
L 112C. Intermediate Spanish.

**Instructor:** Daniel Garcia

**Required textbooks:**


**Notes for students:**

We will use one textbook [Rutas] during the whole academic year. You have several purchase and rental options. Please make sure to select the proper one according to the number of terms you're planning to take. For all the options, visit: https://www.cengage.com/c/rutas-intermediate-spanish-1e-velardi/

L 170C. Introduction to Chinese.

**Instructor:** Xiangyun Wang

**Required textbooks:**


L 172C. Intermediate Chinese.

**Instructor:** Xiangyun Wang

**Required textbooks:**


L/Hum 150A. Japanese Literature in Translation.

**Instructor:** Ritsuko Toner

**Required textbooks:**


Toner, Ritsuko; *Course Reader*, . ISBN: 0000000000

Instructor: Trevor Merrill

**Required textbooks:**


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**LAW**

Law/PS/H 148B. The Supreme Court in U.S. History.

Instructor: J. Kousser

**Required textbooks:**


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**MATERIALS SCIENCE**

**MATHEMATICS**

Ma 001C (Practical). Calculus of One and Several Variables and Linear Algebra.

Instructor: Matthias Flach

**Required textbooks:**

Jerrold E. Marsden, Anthony Tromba; *Vector Calculus (6)*, W.H.Freeman, . ISBN: 978-1429215084

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Ma 001C (Analytical). Calculus of One and Several Variables and Linear Algebra.

Instructor: Yi Ni

**Required textbooks:**


Notes for students:
Ma 104. Introduction to Mathematical Chaos.

Instructor: Sarthak Parikh

Required textbooks:

Suggested textbooks:

Notes for students:
Both course textbooks (Alligood, Sauer, Yorke; Chaos : An Introduction to Dynamical Systems and Pesin, Climenhaga; Lectures on fractal geometry and dynamical systems) are available online via the Caltech library. Some copies will also be available at the Library Course Reserves. "Chaos: an introduction to dynamical systems" is available online: https://clsproxy.library.caltech.edu/login?url=http://dx.doi.org/10.1007/978-3-642-59281-2

Ma 108C. Classical Analysis.

Instructor: Nikolai Makarov

Required textbooks:
Marshall, Donald; Complex Analysis, ISBN: 9781107134829

MECHANICAL ENGINEERING
MUSIC

Mu 139. History III: Music History from 1850 to the Present.

Instructor: Thomas Neenan

Required textbooks:
Ross, Alex; The Rest Is Noise, Picador, ISBN: 978-0312427719
Frisch, Walter; Music In The Nineteenth Century, Norton, ISBN: 978-0393929195

Notes for students:
Frisch is available in various formats including Kindle from Sherman-Fairchild. Ross is an inexpensive paperback. You may be order to borrow used copies from other students who have taken Mu139 in the past. You must have
access to both books in order to complete the work.

PHILOSOPHY

PI 098. Reading in Philosophy.
Instructor: Christopher Hitchcock

Required textbooks:
Marcus, Russell, McEvoy, Mark; An Historical Introduction to the Philosophy of Mathematics: A Reader (1st), Bloomsbury Academic, 2016. ISBN: 9781472525673

PHYSICS

Ph 001C (Analytical). Classical Mechanics and Electromagnetism.
Instructor: David Hsieh

Required textbooks:
Purcell, EM, Morin, DJ; Electricity and Magnetism (3), ISBN: 978-1107014022

Ph 001C (Practical). Classical Mechanics and Electromagnetism.
Instructor: Jason Alicea

Required textbooks:
Serway, Raymond A., Jewett, John W.; Physics for Scientists and Engineers (9th Edition), ISBN: 978-1133947271

Ph 002C. Waves, Quantum Mechanics, and Statistical Physics.
Instructor: Bradley Filippone

Required textbooks:
Kittel, Charles, Kroemer, Herbert; Thermal Physics (2nd), ISBN: 0716710889

Ph 012C. Waves, Quantum Physics, and Statistical Mechanics.
Instructor: David Simmons-Duffin
**Required textbooks:**

**Ph 106C. Topics in Classical Physics.**

**Instructors:** Sunil Golwala, Nicholas Hutzler

**Required textbooks:**

**Suggested textbooks:**
Heald, Mark A., Marion, Jerry B.; *Classical Electromagnetic Radiation (3)*, Dover, 2012. ISBN: 978-0486490601

**POLITICAL SCIENCE**

**PS 141B. A History of Budgetary Politics in the United States.**

**Instructor:** D Kiewiet

**Required textbooks:**
Studenski, Paul, Krooss, Herman; *Financial history of the United States*, . ISBN: 9781587981753

**PS/SS 139. Comparative Politics.**

**Instructor:** Gabriel Lopez-Moctezuma Jassan

**Required textbooks:**

**SOCIAL SCIENCE**

**SS 222C. Econometrics.**

**Instructor:** Robert Sherman
VISUAL CULTURE

VC 169. The Arts of Dynastic China.

Instructor: Juliann Wolfgram

Required textbooks:

Suggested textbooks:

Notes for students:
These five texts are recommended for purchase. The course is actually a Zero Textbook Cost course.