Book Adoptions for WI 2018-19
Prepared Wednesday, December 19, 2018

This document lists the required and optional textbooks for Caltech courses offered during the WI 2018-19 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

APh023

BMB/Bi/Ch 173

H 114
AEROSPACE
APPLIED & COMPUTATIONAL MATH

ACM/IDS 101B. Methods of Applied Mathematics.
Instructor: Oscar Bruno

Suggested textbooks:

APPLIED PHYSICS
ASTROPHYSICS

Ay 021. Galaxies and Cosmology.
Instructor: Charles Steidel

Required textbooks:
Schneider, Peter; Extragalactic Astronomy and Cosmology (2nd), Springer, 2015. ISBN: 978-3642540820

Ay 127. Cosmology and Galaxy Formation.
Instructors: Christopher Martin, Charles Steidel

Required textbooks:

BIOCHEMISTRY & MOLECULAR BIOPHYSICS
BIOENGINEERING

BE/APh 161. Physical Biology of the Cell.
Instructor: Justin Bois
**BIOLOGY**

**Bi/BE 129. The Biology and Treatment of Cancer.**

**Instructors:** Judith Campbell, Kai Zinn

**Required textbooks:**


**Bi/Ch 111. Biochemistry of Gene Expression.**

**Instructors:** Judith Campbell, Carl Parker

**Required textbooks:**


**BUSINESS, ECONOMICS, AND MANAGEMENT**

**CHEMICAL ENGINEERING**

**ChE/BE/MedE 112. Design, Invention, and Fundamentals of Microfluidic Systems.**

**Instructor:** Rustem Ismagilov

**Required textbooks:**

Folch, Albert; *Introduction to BioMems*, ISBN: 1439818398


**Suggested textbooks:**


**ChE/Ch 164. Introduction to Statistical Thermodynamics.**

**Instructor:** Zhen-Gang Wang

**Required textbooks:**

Instructor: Frances Arnold

Required textbooks:


CHEMISTRY

Ch 014. Chemical Equilibrium and Analysis.

Instructors: Kevin Barraza, Jesse Beauchamp

Required textbooks:

Harris, Daniel C.; Quantitative Chemical Analysis (9th), MacMillan, 2016. ISBN: 9781464135385

Ch 021B. Physical Chemistry.

Instructor: Lu Wei

Required textbooks:


COMPUTATION & NEURAL SYS

CNS/SS/Psy/Bi 102A. Brains, Minds, and Society.

Instructors: Ralph Adolphs, John O'Doherty

Required textbooks:

COMPUTER SCIENCE

CS 021. Decidability and Tractability.
Instructor: Christopher Umans

Required textbooks:

ECONOMICS

Instructor: Robert Sherman

Required textbooks:

ENGINEERING

E 110. Principles of University Teaching and Learning in STEM.
Instructor: Jennifer Weaver

Required textbooks:

ENGLISH

En 086. Fiction and Creative Nonfiction Writing.
Instructor: Merrill Gerber

Required textbooks:
En 107. Medieval Romance.

Instructor: Jennifer Jahner

Required textbooks:
- Gottfried von Strassburg; Tristan with the "Tristan" of Thomas, Penguin Classics, ISBN: 978-0-14-044098-0

En 113A. Shakespeare's Career.

Instructor: George Pigman

Required textbooks:

En 142. Post-1945 American Literature and 'The Death of the Author'.

Instructor: Melanie Sherazi

Required textbooks:
- Demby, William; King Comus (First edition), Ishmael Reed Publishing Company, 2017. ISBN: 978-0918408259
**En 150. Chaos and Literature.**

**Instructor:** Jocelyn Holland

**Required textbooks:**
- Stoppard, Tom; *Arcadia*, Grove, 2017. ISBN: 0802126995

**ENVIRONMENTAL SCIENCE & ENGINEERING**

**ESE131A. Physical Oceanography I.**

**Instructor:** Joern Callies

**Required textbooks:**

**Suggested textbooks:**

**GEOLOGY**

**Ge/Ay 117. Bayesian Statistics and Data Analysis.**

**Instructor:** Heather Knutson

**Required textbooks:**

**HISTORY**

**H 114. Mysticism and the Self.**
Instructor: Gabriel Motzkin

**Required textbooks:**

Teresa of Avila; *The Life of Saint Teresa of Avila by Herself*, Penguin, . ISBN: 978-0140440737


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**H 137. Criminals, Outlaws, and Justice in a Thousand Years of Chinese History.**

Instructor: Maura Dykstra

**Required textbooks:**

Shi Nai'an, translated by J H Jackson; *The Water Margin*, Tuttle Classics, . ISBN: 9780804840958

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**H 138. From Sage Kings to the CCP: A Primer on Ruler, State and Empire in the History of Chinese Government.**

Instructor: Maura Dykstra

**Required textbooks:**

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


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**HUMANITIES**

**Hum/En 020. Greek Epic and Drama.**

Instructor: George Pigman
Required textbooks:
Homer; The Iliad, . ISBN: 9780140275360
Mary Lefkowitz and James Romm.; The Greek Plays, . ISBN: 978-0812983098

Hum/En 021. The Marvelous and the Monstrous: Literature at the Boundaries of the Real.
Instructor: Jennifer Jahner

Required textbooks:
Trans. Seamus Heaney; Beowulf (Bilingual edition), . ISBN: 978-0-393-32097-9
Carter, Angela; The Bloody Chamber, Penguin, . ISBN: 978-0-14-017821-0

Hum/En 022 (Section 1). Inequality.
Instructor: Kristine Haugen

Required textbooks:
Oz, Amos, Silverston, Sondra; Between Friends (reprint), Mariner, 2014. ISBN: 978-0544227743

Hum/En 022 (Section 2). Inequality.
Instructor: Kristine Haugen
Required textbooks:

Oz, Amos, Silverston, Sondra; *Between Friends (reprint)*, Mariner, 2014. ISBN: 978-0544227743

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

Instructor: Dehn Gilmore

Required textbooks:

Marlowe, Christopher; *Doctor Faustus*, . ISBN: 9780199537068
Shakespeare, William; *The Tempest*, . ISBN: 9780393978193
Bacon, Francis; *Three Modern Utopias*, . ISBN: 9780199537990
Stoppard, Tom; *Arcadia*, . ISBN: 9780571169344
Wells, HG; *Island of Dr. Moreau*, . ISBN: 9781784872106
Conan Doyle; *Hound of the Baskervilles*, . ISBN: 155117223
Mcewan, Ian; *Enduring Love*, . ISBN: 978-0385491129
Shelley, Mary; *Frankenstein*, . ISBN: 9781722471217

Hum/En 033. Modern Metamorphoses.

Instructor: Jocelyn Holland

Required textbooks:

Stevenson, Robert Louis; *The Strange Case of Dr. Jekyll and Mr. Hyde*, Seawolf, . ISBN: 1948132850

Hum/H 009B (Section 1). European Civilization: Early Modern Europe.

Instructor: Philip Hoffman

Required textbooks:
Hum/Pl 040 (Section 1). Right and Wrong.

Instructor: Ryan Hay

Required textbooks:

Hum/Pl 040 (Section 2). Right and Wrong.

Instructor: Ryan Hay

Required textbooks:

Hum105B. Topics in French Culture and Literature.

Instructor: Christiane Orcel

Required textbooks:
Edmiston, William F. and Dumenil, Annie; La France Contemporaine (5th), Cengage Learning, 2015. ISBN: 978-1305251083

LANGUAGES

L 102B. Elementary French.

Instructor: Christiane Orcel

Required textbooks:
L 105B. Topics in French Culture and Literature.

Instructor: Christiane Orcel

Required textbooks:
Edmiston, William F. and Dumenil, Annie; La France contemporaine (5th), Cengage Learning, 2015. ISBN: 978-1305251083

L 106B (Section 2). Elementary Japanese.

Instructor: Megumi Fujio

Required textbooks:
Ritsuko Hirai; First Year Japanese (6), Pearson, ISBN: 9781323419014
Ritsuko Hirai; First Year Japanese Workbook (7), Pearson, ISBN: 9781323587829

L 106B (Section 1). Elementary Japanese.

Instructor: Megumi Fujio

Required textbooks:
Ritsuko Hirai; First Year Japanese (6), Pearson, ISBN: 9781323419014
Ritsuko Hirai; First Year Japanese Workbook (7), Pearson, ISBN: 9781323587829

L 110B (Section 1). Elementary Spanish.

Instructor: Daniel Garcia

Required textbooks:

L 130B. Elementary German.
Instructor: Andreas Aebi

**Required textbooks:**

L 170B. Introduction to Chinese.
Instructor: Xiangyun Wang

**Required textbooks:**

L 172B. Intermediate Chinese.
Instructor: Xiangyun Wang

**Required textbooks:**

LAW

Law/PS/H 148A. The Supreme Court in U.S. History.
Instructor: J. Kousser

**Required textbooks:**

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

Instructor: Eric Rains

Required textbooks:
Apostol, T; *Calculus II*, ISBN: 978-0471000075

Ma 001D. Series.

Instructor:

Required textbooks:
Apostol, T; *Calculus Volume I*, ISBN: 978-0471000051

Ma 003. Introduction to Probability and Statistics.

Instructor: Kim Border

Required textbooks:

Ma 005B. Introduction to Abstract Algebra.

Instructor: Elena Mantovan

Required textbooks:
Dummit, D, Foote, R; *Abstract Algebra (3)*, ISBN: 978-0471433347

Ma 013. Problem Solving in Vector Calculus.

Instructor:

Required textbooks:
Schey, HM; *Div, grad, curl and all that - an informal text on vector calculus (4)*, ISBN: 978-0393925166
Ma 105B. Introduction to Abstract Algebra.

Instructor: Elena Mantovan

Required textbooks:
Dummit, D, Foote, R; Abstract Algebra (3), ISBN: 978-0471433347

Ma 108B. Classical Analysis.

Instructor: Polona Durcik

Required textbooks:
Wheeden, RL, Zygmund, A; Measure and Integral: An Introduction to Real Analysis (2), ISBN: 978-1498702898

Ma 109B. Introduction to Geometry and Topology.

Instructor: Lei Chen

Required textbooks:
Do Carmo; Differential geometry of curves and surfaces, ISBN: 9780132125895

Suggested textbooks:
John Milnor; Morse Theory, ISBN: 0691080089
Colding, Minicozzi; A course of Minimal Surface, ISBN: 0821853236

Ma 110B. Analysis.

Instructor: Nikolai Makarov

Required textbooks:

Ma 120B. Abstract Algebra.

Instructor: Xinwen Zhu

Required textbooks:
Lang, Serge; Algebra, ISBN: 978-0-387-95385-4
Ma 128. Homological Algebra.
Instructor: You Qi

Suggested textbooks:
Gelfand and Manin; *Methods of homological algebra*, ISBN: 3-540-43583-2

Ma 145B. Representation Theory.
Instructor: Eric Rains

Required textbooks:

Ma 148. Topics in Mathematical Physics.
Instructor: Sarthak Parikh

Suggested textbooks:

Ma 151B. Algebraic and Differential Topology.
Instructor: You Qi

Suggested textbooks:
Allen Hatcher; *Algebraic Topology*, ISBN: 978-0521795401

Ma/CS 006B. Introduction to Discrete Mathematics.
Instructor: Polona Durcik

Required textbooks:
West, D; *Introduction to Graph Theory*, ISBN: 978-0130144003
Ma/CS 106B. Introduction to Discrete Mathematics.

Instructor: Polona Durcik

Required textbooks:
West, D; Introduction to Graph Theory, . ISBN: 978-0130144003

MUSIC

Mu 058. Harmony I.

Instructor: Thomas Neenan

Required textbooks:
Benward and Saker; Music in Theory and Practice, Vm 1 (9th), McGraw, . ISBN: 978-0078025150

Mu 138. History II: Music History from 1750 to 1850.

Instructor: Thomas Neenan

Required textbooks:
Rice and Frisch; Music in the Eighteenth Century, Norton, . ISBN: 978-0393929188
Frisch, Walter; Music in the 19th century, norton, . ISBN: 978-0393929195

PHYSICS


Instructor: David Hsieh

Required textbooks:
Helliwell, T.M.; Special Relativity, . ISBN: 978-1891389610
Purcell, EM,Morin, DJ; Electricity and Magnetism (3), . ISBN: 978-1107014022


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

**Ph 012B. Waves, Quantum Physics, and Statistical Mechanics.**

**Instructor:** Bradley Filippone

**Required textbooks:**
Griffiths, David; *Introduction to Quantum Mechanics (3rd)*, Pearson Prentice Hall, . ISBN: 978-1107189638

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

**Instructors:** Yanbei Chen, Sunil Golwala

**Required textbooks:**
Hand, Louis N, & Finch, Janet D; *Analytical Mechanics*, . ISBN: 0521575729

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

**Ph 136B. Applications of Classical Physics.**

**Instructor:** E Phinney

**Required textbooks:**

**Suggested textbooks:**
SS/Ma 214. Mathematical Finance.

Instructor: Jaksa Cvitanic

**Required textbooks:**

Steven E. Shreve; *Stochastic Calculus for Finance II: Continuous-Time Models*, ISBN: 978-0387401010