

Book Adoptions for SP 2017-18

Prepared Friday, March 16, 2018

This document lists the required and optional textbooks for Caltech courses offered during the SP 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 150

BEM112

Bi 009

Bi 250B

Ch 014

Ge 001

Ma 191C

APPLIED PHYSICS

APh/MS 105C. States of Matter.

Instructor: Brent Fultz

Required textbooks:

Brent Fultz; *Phase Transitions in Materials (1)*, Cambridge University Press, 2014. ISBN: 978-1-017-06724-0

ART HISTORY

Art169. The Arts of Dynastic China.

Instructor: Juliann Wolfgram

Required textbooks:

Sullivan, Michael; *The Arts of China (5)*, University of California, 2008. ISBN: 978-0-520-25569-2

Silbergeld, Jerome; *Chinese Painting Style (1)*, University of Washington, 1982. ISBN: 0-295-95921-5

Sullivan, Michael; *The Three Perfections (revised)*, George Braziller, 1999. ISBN: 9780807614549

Suggested textbooks:

Ebrey, Patricia; *The Cambridge Illustrated History of China (2)*, Cambridge, 2010. ISBN: 978-0-521-12433-1

Barnhart, Richard; *Three Thousand Years of Chinese Painting (1)*, Yale, 2002. ISBN: 978-0300094473

ASTROPHYSICS

Ay 102. Physics of the Interstellar Medium.

Instructor: Lynne Hillenbrand

Suggested textbooks:

Kwok, S; *Physics and Chemistry of the Interstellar Medium*, University Science Books, . ISBN: 978-1-891389-46-7

Tielens, AGGM; *Physics and Chemistry of the Interstellar Medium*, Cambridge University Press, . ISBN: 978-0-521-82634-9

Ay 126. Interstellar and Intergalactic Medium.

Instructor: Charles Steidel

Required textbooks:

Draine, Bruce T.; *Physics of the interstellar and intergalactic medium*, Princeton University Press, 2011. ISBN: 9780691122137

Ay/Ph 104. Relativistic Astrophysics.

Instructor: Mansi Kasliwal

Required textbooks:

Rosswog Bruggen; *Introduction to High Energy Astrophysics*, Cambridge UP, 2007. ISBN: 9780521857697

BIOENGINEERING

BE 150. Design Principles of Genetic Circuits.

Instructors: Justin Bois, Michael Elowitz

Required textbooks:

Alon, Uri; *An introduction to systems biology : design principles of biological circuits (1st)*, Chapman Hall/CRC, 2007. ISBN: 9781584886426

BIOLOGY

Bi 009. Cell Biology.

Instructors: Alexei Aravin, David Chan

Required textbooks:

Alberts, Bruce; *Molecular Biology of the Cell (6th)*, Garland Science, Taylor and Francis Group, 2015. ISBN: 9780815344322

Bi 250B. Topics in Systems Biology.

Instructors: Justin Bois, Michael Elowitz

Required textbooks:

Alon, Uri; *An introduction to systems biology : design principles of biological circuits (1st)*, Chapman Hall/CRC, 2007. ISBN: 9781584886426

Bi 252. Responsible Conduct of Research.

Instructors: Elliot Meyerowitz, Paul Sternberg

Required textbooks:

Macrina, Francis L.; *Scientific Integrity: Text and Cases in Responsible Conduct of Research (4th ed)*, ASM Press, 2014. ISBN: 9781555816612

BUSINESS, ECONOMICS, AND MANAGEMENT

BEM102. Introduction to Accounting.

Instructor: Michael Ewens

Required textbooks:

Libby, Robert, Libby, Patricia, Hodge, Frank; *Financial Accounting (9)*, McGraw Hill, 2016. ISBN: 1259222136

BEM112. International Financial Markets.

Instructor: Richard Roll

Required textbooks:

Solnik, Bruno, McLeavey, Dennis; *Global Investments (6th)*, Pearson, 2009. ISBN: 978-0321527707

CHEMICAL ENGINEERING

ChE103C. Transport Phenomena.

Instructor: Richard Flagan

Required textbooks:

Bird, R. Byron, Stewart, Warren E., Lightfoot, Edwin N.; *Transport Phenomena, (Revised 2nd Edition) (2nd revised)*, Wiley, . ISBN: 9780470115398

ChE105. Dynamics and Control of Chemical Systems.

Instructor: John Seinfeld

Required textbooks:

Seborg, Dale; *Process Dynamics and Control (3)*, Wiley, 2011. ISBN: 978-0-470-12867-1

CHEMISTRY

Ch 014. Chemical Equilibrium and Analysis.

Instructor: Nathan Dalleska

Required textbooks:

Harris, Daniel C.; *Quantitative Chemical Analysis (8th)*, W. H. Freeman and Co., 2010. ISBN: 9781429239899

CONTROL DYNAMICAL SYSTEMS

CDS110. Introduction to Feedback Control Systems.

Instructors: Richard Murray, John Seinfeld

Required textbooks:

Åström, Karl Johan, Murray, Richard M.; *Feedback Systems: An Introduction for Scientists and Engineers*, Princeton University Press, 2008. ISBN: 9780691135762

ENGLISH

En 106. Poetic Justice: Histories of Literature and Law.

Instructor: Jennifer Jahner

Required textbooks:

Sophocles, Richard Emil Braun, trans.; *Antigone*, . ISBN: 978-0195061673

Dante Alighieri, Robert and Jean Hollander, trans.; *The Inferno*, . ISBN: 978-0385496988

William Langland; *Piers Plowman*, Norton, . ISBN: 978-0393975598

William Shakespeare; *Merchant of Venice*, . ISBN: 978-0743477567

En 183. Victorian Crime Fiction.

Instructor: Dehn Gilmore

Required textbooks:

Collins, Wilkie; *The Moonstone*, . ISBN: 9780199536726

Braddon, Mary Elizabeth; *Lady Audley's Secret*, . ISBN: 9780199537242

Collins, Wilkie; *Law and the Lady*, . ISBN: 9780140436075

Chesterton, G.K.; *The Complete Father Brown Stories*, . ISBN: 9780141193854

Conan Doyle, Arthur; *The Adventures of Sherlock Holmes and the Memoirs of Sherlock Holmes*, . ISBN: 9780140437713

Dickens, Charles; *Oliver Twist*, . ISBN: 9781593080303

Stevenson, Robert Louis; *Adventures of Dr Jekyll and Mr. Hyde*, . ISBN: 9780199536221

GEOLOGY

Ge 001. Earth and Environment.

Instructor: Paul Asimow

Required textbooks:

Langmuir, Charles H., Broecker, Wally; *How to Build a Habitable Planet: The Story of Earth from the Big Bang to Humankind (Revised and Expanded)*, Princeton, 2012. ISBN: 978-0-691-14006-3

Ge/Ay 133. The Formation and Evolution of Planetary Systems.

Instructors: Konstantin Batygin, Heather Knutson

Required textbooks:

Armitage, Philip J; *Astrophysics of Planet Formation*, . ISBN: 978-0-521-88745-8

HISTORY

H 108B. The High Middle Ages.

Instructor: Warren Brown

Required textbooks:

Geary, Patrick J.; *READINGS IN MEDIEVAL HISTORY, VOLUME II: THE LATER MIDDLE AGES (5th)*, University of Toronto Press, 2015. ISBN: 9781442634367

H 132. Humanistic Ecology.

Instructor: Daniel Lewis

Required textbooks:

Adelson, Glenn; *Environment: An interdisciplinary anthology*, Yale University Press, . ISBN: 9780300110777

HISTORY AND PHILOSOPHY OF SCIENCE

HPS/H 160. Einstein and His Generation: The History of Modern Physical Sciences.

Instructor: Diana Kormos-Buchwald

Required textbooks:

Isaacson, Walter.; *Einstein- His Life and Universe (any, paper)*, Simon Schuster, 2007. ISBN: 0743264746

Einstein, Albert; *Ideas and Opinions (any, paper)*, Broadway, 1995. ISBN: 0517884402

HPS/PI 128. Philosophy of Mathematics.

Instructor: Christopher Hitchcock

Required textbooks:

Marcus, Russell and McEvoy, Mark; *An Historical Introduction to the Philosophy of Mathematics: A Reader*, Bloomsbury, . ISBN: 978-1-4725-2567-3

HUMANITIES

Hum/En 022 (Section 1). Inequality.

Instructor: Kristine Haugen

Required textbooks:

Ovid; *The Metamorphoses of Ovid, tr. Allen Mandelbaum*, Harcourt Brace, 1995. ISBN: 978-0156001267

Xu Bing; *Book from the Ground: From Point to Point*, MIT Press, 2014. ISBN: 978-0262027083

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

Alexievich, Svetlana (tr. Keith Gessen); *Voices from Chernobyl: The Oral History of a Nuclear Disaster (reprint)*, Picador, 2006. ISBN: 978-0312425845

Deborah Rhode; *What Women Want: An Agenda for the Women's Movement (reprint)*, Oxford University Press, 2017. ISBN: 978-0190623364

More, Thomas, Turner, Paul; *Utopia (reissue)*, Penguin, 2003. ISBN: 978-0140449105

Hum/En 022 (Section 2). Inequality.

Instructor: Kristine Haugen

Required textbooks:

Ovid; *The Metamorphoses of Ovid*, tr. Allen Mandelbaum, Harcourt Brace, 1995. ISBN: 978-0156001267

Xu Bing; *Book from the Ground: From Point to Point*, MIT Press, 2014. ISBN: 978-0262027083

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

Alexievich, Svetlana (tr. Keith Gessen); *Voices from Chernobyl: The Oral History of a Nuclear Disaster (reprint)*, Picador, 2006. ISBN: 978-0312425845

Deborah Rhode; *What Women Want: An Agenda for the Women's Movement (reprint)*, Oxford University Press, 2017. ISBN: 978-0190623364

More, Thomas, Turner, Paul; *Utopia (reissue)*, Penguin, 2003. ISBN: 978-0140449105

Hum/En 023. Literature and Medicine.

Instructor: Dehn Gilmore

Required textbooks:

Jamison, Leslie; *The Empathy Exams*, . ISBN: 9781555976712

williams, Ian; *Bad doctor*, . ISBN: 0271067543

porcellino; *Hospital suite*, . ISBN: 1770461647

Williams, William Carlos Williams; *Doctor Stories*, . ISBN: 0811209261

Conan Doyle, Arthur; *The Adventures of Sherlock Holmes*, . ISBN: 0199536953

Ishiguro, Kazuo; *Never Let Me Go*, . ISBN: 9781400078776

Mantel, Hilary; *Giving Up the Ghost*, . ISBN: 0312423624

Shelley, Mary; *Frankenstein*, . ISBN: 9780199537150

Manguso, Sarah; *The Two Kinds of Decay*, . ISBN: 9780312428440

Forney, Ellen; *Marbles*, . ISBN: 9781592407323

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

Instructor: Jed Buchwald

Required textbooks:

Lindberg, David C; *The Beginnings of Western Science ((2nd ed. edition))*, University Of Chicago Press, . ISBN: 978-0226482057

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

Instructor: Diana Kormos-Buchwald

Required textbooks:

Roth, Joseph; *What I Saw: Reports from Berlin 1920-1933 (any, paper)*, Norton, 2004. ISBN: 0393325822

Marx, Karl and Frederick Engels; *The Communist Manifesto, A Modern Edition (1998) (this edition only)*, Verso, 1998. ISBN: 1-85984-898-2

Hum119. Selected Topics in Humanities: Literature and Deception.

Instructor: Jocelyn Holland

Required textbooks:

Diderot, Denis; *The Nun*, Oxford University Press, 2008. ISBN: 9780199555246

Shakespeare, William; *Othello*, Cambridge University Press, 2003. ISBN: 0521535174

INFORMATION SCIENCE AND TECHNOLOGY LANGUAGES

L 102C. Elementary French.

Instructor: Christiane Orcel

Required textbooks:

Jansma, Kimberly and Kassen, Margaret Ann; *Motifs: An Introduction to French (sixth edition)*, Heinle Cengage Learning, 2014. ISBN: 978-1-133-31128-7

Jansma, Kimberly and Kassen, Margaret Ann; *Student Activities Manual: Motifs: An Introduction to French (sixth edition)*, Heinle Cengage Learning, 2014. ISBN: 978-1-133-61180-6

L 103C. Intermediate French.

Instructor: Christiane Orcel

Required textbooks:

Camus, Albert; *L'exil et le royaume*, Gallimard (Collection Folio), 2000. ISBN: 2-07-036078-4

L 106C (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

Suggested textbooks:

Ritsuko Hirai; *First Year Japanese package for Pasadena City College*, Pearson, . ISBN: 9781323608753

L 110C (Section 1). Elementary Spanish.

Instructor: Daniel Garcia

Required textbooks:

Debbie Rusch, Marcela Domínguez, Lucía Caycedo Garner; *Imágenes: An Introduction to Spanish Language and Cultures (3rd)*, Cengage Learning, 2014. ISBN: 9781285927145

L 112C. Intermediate Spanish.

Instructor: Daniel Garcia

Required textbooks:

Samaniego, Fabian et al.; *Mundo 21. Español para el siglo 21 4th + iLrn™ Heinle Learning Center Printed Access Card 4th Edition (4th)*, Cengage / Heinle, 2012. ISBN: 978-1-111-70719-4

L 130C. Elementary German.

Instructor: Andreas Aebi

Required textbooks:

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

L 132C. Intermediate German.

Instructor: Andreas Aebi

Required textbooks:

Forester, Daniuk; *Weiter Geht's (3.3)*, Live Oak Media, 2014. ISBN: 978-1-886553

L 167A. Latin Literature.

Instructor: George Pigman

Required textbooks:

Horace; *Odes Book II. ed. Stephen Harrison*, . ISBN: 978-1107600904

L 170C. Introduction to Chinese.

Instructor: Xiangyun Wang

Required textbooks:

Liu, Yuehua, et al ; *Integrated Chinese textbook, Level 1 Part 2 (3rd)*, Cheng Tsui, . ISBN: 9780887276705

Liu, Yuehua, et al.; *Integrated Chinese workbook, Level 1 Part 2 (3rd)*, Cheng Tsui, . ISBN: 9780887276743

L 172C. Intermediate Chinese.

Instructor: Xiangyun Wang

Required textbooks:

Liu, Yuehua, et al; *Integrated Chinese textbook, Level 2 Part 2 (3rd)*, Cheng Tsui, . ISBN: 9780887276880

Liu, Yuehua et al.; *Integrated Chinese workbook, Level 2 Part 2 (3rd)*, Cheng Tsui, . ISBN: 9780887276927

MATERIALS SCIENCE

MS/ME 166. Fracture of Brittle Solids.

Instructor: Katherine Faber

Suggested textbooks:

Lawn, Brian; *Fracture of Brittle Solids - Second Edition (Second Edition)*, Cambridge , 1993. ISBN: 0 521 40972 1

MATHEMATICS

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

Instructor: Matthias Flach

Required textbooks:

Marsden, Jerrold E.,Tromba, Anthony; *Vector Calculus (6th)*, W.H.Freeman, . ISBN: 1429215089

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

Instructor: Nets Katz

Required textbooks:

Spivak, Michael; *Calculus on Manifolds (5th edition)*, CRC Press, 1971. ISBN: 978-0805390216

Ma 005C. Introduction to Abstract Algebra.

Instructor: Zavosh Amir Khosravi

Required textbooks:

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

Ma 007. Number Theory for Beginners.

Instructor: Zavosh Amir Khosravi

Required textbooks:

H. Davenport; *The Higher Arithmetic*, , . ISBN: 0521722365

Ma 105C. Introduction to Abstract Algebra.

Instructor: Zavosh Amir Khosravi

Required textbooks:

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

Ma 107. Number Theory for Beginners.

Instructor: Zavosh Amir Khosravi

Required textbooks:

H. Davenport; *The Higher Arithmetic*, , . ISBN: 0521722365

Ma 108C. Classical Analysis.

Instructor: Oleg Ivrii

Suggested textbooks:

Cartan, Henri; *Elementary Theory of Analytic Functions of One or Several Complex Variables*, Dover Publications; Text is Free of Markings edition, 1995. ISBN: 978-0486685434

Ma 109C. Introduction to Geometry and Topology.

Instructor: Faramarz Vafaei

Required textbooks:

Guillemin, Pollack; *Differential Topology*, . ISBN: 978-0821851937

Ma 110C. Analysis, I.

Instructor: Nets Katz

Required textbooks:

Duoandikoetxea, Javier; *Fourier Analysis*, American Math Society, 2000. ISBN: 978-0821821725

Ma 116C. Mathematical Logic and Axiomatic Set Theory.

Instructor: Aristotelis Panagiotopoulos

Suggested textbooks:

Shashi Mohan Srivastava; *A Course on Borel Sets*, . ISBN: 0387984127

Alexander Kechris; *Classical Descriptive Set Theory*, . ISBN: 1461286921

Ma 120C. Abstract Algebra.

Instructor: Alexander Yom Din

Required textbooks:

Lang, Serge; *Algebra*, . ISBN: 038795385X

Ma 151C. Algebraic and Differential Topology.

Instructor: Faramarz Vafaei

Required textbooks:

Milnor, John and Stasheff, James; *Characteristic Classes*, , . ISBN: 9781400881826

Ma 157C. Riemannian Geometry.

Instructor: Qiongling Li

Required textbooks:

Arvanitogeorgos, A; *An Introduction to Lie Groups and the Geometry of Homogeneous Spaces*, , . ISBN: 978-0821827789

Helgason, S; *Differential Geometry, Lie Groups, and Symmetric Spaces*, , . ISBN: 978-0821828489

Ma 191C (Section 3). Selected Topics in Mathematics.

Instructor: Polona Durcik

Suggested textbooks:

Muscalu, C,Schlag, W; *Classical and Multilinear Harmonic Analysis Volume 1*, , . ISBN: 978-0521882453

Muscalu, C,Schlag, W; *Classical and Multilinear Harmonic Analysis Volume 2*, , . ISBN: 978-1107031821

Duoandikoetxea, Javier; *Fourier Analysis (Graduate Studies in Mathematics)* , American Mathematical Society, 2000. ISBN: 978-0821821725

Ma/ACM 142. Ordinary and Partial Differential Equations.

Instructor: Sarthak Parikh

Suggested textbooks:

Evans, L; *Partial Differential Equations*, , . ISBN: 978-0821849743

MECHANICAL ENGINEERING

ME 012C. Mechanics.

Instructor: Chiara Daraio

Required textbooks:

Russell C. Hibbeler; *Mechanics of Materials (10th)*, Pearson, 2017. ISBN: 978-0134319650

MUSIC

Mu 058. Harmony I.

Instructor: Thomas Neenan

Required textbooks:

Benward and Saker; *Music in Theory and Practice Vm 1*, McGraw Hill, 2014. ISBN: 978-0078025150

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

PHILOSOPHY

PI 100. Free Will.

Instructor: Christopher Hitchcock

Required textbooks:

Pereboom, Derk; *Free Will (2nd)*, Hackett, 2009. ISBN: 978-1-60384-129-0

Mele, Alfred; *Free*, Oxford University Press, 2014. ISBN: 978-0-19-937162-4

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)*, , . 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: Jonas Zmuidzinis

Required textbooks:

Kittel, C., Kroemer, H; *Thermal Physics (2)*, , . ISBN: 978-0716710882

Ph 106C. Topics in Classical Physics.

Instructor: Sunil Golwala

Required textbooks:

Griffiths, David J.; *Introduction to Electrodynamics (4)*, Addison-Wesley, 2012. ISBN: 978-0321856562

Suggested textbooks:

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

Jackson, J. D.; *Classical Electrodynamics (3)*, Wiley, 1998. ISBN: 978-0471309321

Ph 125C. Quantum Mechanics.

Instructor: Clifford Cheung

Required textbooks:

Shankar, R; *Principles of Quantum Mechanics*, , . ISBN: 978-1461576754

Ph 127C. Statistical Physics.

Instructor: Fernando Guadalupe Dos Santos Lins Brandao

Required textbooks:

Kardar, M; *Statistical Physics of Fields*, . ISBN: 978-0521873413

SOCIAL SCIENCE

SS 222C. Econometrics.

Instructor: Robert Sherman

Required textbooks:

wooldridge, jeffrey; *econometric analysis of cross section and panel data (second)*, mit press, 2010. ISBN: 978-0-262-23258-6