

## The University of Regina OER by Subject Directory



# The University of Regina OER by Subject Directory

*UNIVERSITY OF REGINA*

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UNIVERSITY OF REGINA  
REGINA



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# About this Guide

## UNIVERSITY OF REGINA

*The University of Regina OER by Subject Directory* was adapted through a collaboration between the OER Publishing Program and the Dr. John Archer Library at the University of Regina.

This is an adaptation of the following three resources:

- OER by Discipline Resource Guide: Concordia University by Concordia University Library
- OER by Discipline Guide: McMaster University by Joanne Kehoe and Olga Perkovic, CC BY
- OER by Discipline Directory by Bccampus, CC BY

Changes made to the original resources include:

- Structure of the guide was changed to reflect departments and courses at the University of Regina
- New resources were added to the guide
- Some resources that are outdated or not suitable have been removed

This guide was developed as a part of the Open Educational Resources Program at the University of Regina, Regina. For more information, please contact:

- Arlysse Quiring, Dr. John Archer Library [arlysse.quiring@uregina.ca](mailto:arlysse.quiring@uregina.ca)
- Isaac Mulolani, OER Publishing Program [isaac.mulolani@uregina.ca](mailto:isaac.mulolani@uregina.ca) or [open.textbooks@uregina.ca](mailto:open.textbooks@uregina.ca)

# Introduction

## UNIVERSITY OF REGINA

The Open Educational Resource by Subject Directory is a joint collaboration between the University of Regina OER program and Archer Library that began in fall of 2020. Initially created as a cloning project by OER coordinator Isaac Mulolani, the project began as a smaller venture to create a resource of academic resources already being utilized by Canadian universities. Similarly, library staff led by Cara Bradley had created three Research Guides or LibGuides to assist researchers, staff and faculty in their search for open textbooks and similar resources. Divided into three sections, the library resources are still available in the following format on the Research Guides section of the website: Open Textbooks, Open Educational Resources, and Open Access.

In conversation between the two units, Isaac approached staff at the library in efforts for collaboration. The root idea was to create a single one-stop-shop for any individual looking for further research resources in their discipline, to see what open textbooks were available for their current classes, to learn about the possibilities in creating online texts and cloning, and learn of the benefits of a program like PressBooks. Isaac created the initial clone from Concordia University, and along with User Services staff member Arlysse Quiring (Archer Library), the project began.

The merge has not been without challenges as resources were sorted, filtered, updated and cross referenced. What began as a collaborative idea became a significant merging of resources and teams. As the project continued to grow however, it became apparent that the purpose and end-goal of the document was exemplified by its creation. While the LibGuides and other OER will remain available to campus staff, students and faculty, this resource will be the starting point for anyone interested in OER.

This guide is designed to help University of Regina faculty easily discover open educational resources (OER) for their courses. It is primarily a list of open textbooks organized by faculty and department at the University of Regina, but other OER such as videos may also be included. The guide will be continuously updated as new resources are identified and created across the OER ecosystem.

There are 9 main sections in the guide:

- Faculty of Media Art and Performance
- Faculty of Education
- Faculty of Science
- Faculty of Nursing
- Faculty of Kinesiology and Health Studies
- Faculty of Arts
- Faculty of Social Work
- Faculty of Engineering and Applied Science
- Faculty of Business Administration: Paul J. Hill School of Business

For each resource listed, the following are provided:

- A short summary of the book based on the content, author, or other features
- If available, the “Includes” line lists supplementary materials (e.g. exercises) that are available
- If available, the “May suit” line lists University of Regina courses in which the resource could potentially be adopted (work-in-progress)

Faculty are encouraged to make use of these resource in their courses either as textbooks or as supplementary readings.

**Thank you to the contributors to this resource, including but not limited to Cara Bradley, Charles Phelps, Brad Doerksen, and the Liaison Librarian team.**

The project, now entitled *The University of Regina OER by Subject Directory* is scheduled for public release on May 5th, 2021. The open book will be considered a living document, with continual resource updates as they are discovered, created and contributed. **For more information please contact Isaac Mulolani ([isaac.mulolani@uregina.ca](mailto:isaac.mulolani@uregina.ca)) or Arlysse Quiring ([arlysse.quiring@uregina.ca](mailto:arlysse.quiring@uregina.ca))**

# What is an Open Textbook?

*The following is a revised version of What is an Open Textbook? by Christina Hendricks:*

An open textbook is like a commercial textbook, except: (1) it is publicly available online free of charge (and at low-cost in print), and (2) it has an open license that allows others to reuse it, download and revise it, and redistribute it. For example, this guide has a Creative Commons Attribution license, which allows reuse, revision, and redistribution so long as the original creator is attributed.

In addition to saving students money, an open textbook can be revised to be better contextualized to one's own teaching. In a recent study of undergraduate students in an introductory level physics course, students reported that the thing they most appreciated about the open textbook used in that course was that it was customized to fit the course, followed very closely by the fact that it was free of cost (Hendricks, Reinsberg, and Rieger 2017). For example, in an open textbook one may add in examples more relevant to one's own context or the topic of a course, or embedded slides, videos, or other resources.

A number of commercial publishers offer relatively inexpensive digital textbooks (whether on their own or available through an access code that students must pay to purchase), but these may have certain limitations and other issues:

- Access for students is often limited to a short period of time;
- Students cannot buy used copies from others, nor sell their own copies to others, to save money;
- Depending on the platform, there may be limits to how students can interact with and take notes on the books (and they may not be able to export their notes outside the book, so lose access to those as well when they lose access to the book).

None of these is the case with open textbooks. Students can download any book and keep it for as long as they wish. They can interact with it in multiple formats: on the web; as editable word processing formats; offline as PDF, EPUB; as a physical print book, and more.

# General Resources and Information

**The following Library Guides are available through the University of Regina Library. Textbooks and external resources can be found both in this text and in the guides.**

Open Access LibGuide (Useful for general information)

Open Educational Resources LibGuide (Resources in an alternate format, and general information)

Open Textbooks LibGuide (Textbooks in an alternate format)

**Additionally, the following general resources may be of interest:**

CFLA – Advocacy on Copyright Issues

Owen, V., Swartz, M., Wakaruk, A. & Winter, C. (2021, February 5). Live Chat: CFLA – Advocacy on Copyright Issues. Presentation delivered at the OLA Superconference 2021 [online conference].

Canada's Two OER Copyright Video Series

Winter, C., Swartz, M., Johnson, R., Martin, H., Blair, K., Wakaruk, A., Fagnan, L. & McNally, M. (2020, November 25). Canada's Two OER Copyright Video Series. Presentation delivered at ABC Copyright Fall Speakers' Series [online].

Copyright Support for Scholarly Communications

Dandar, D, Kazakoff-Lane, C., Langrell, K., & Winter, C. (2020). Issue Brief: Copyright Support for Scholarly Communications. COPPUL Scholarly Communications Working Group.

General List of Open Access Publishers

**Faculty and Librarian General Information:**

Introduction to College Research

Walter D. Butler, Aloha Sargent, and Kelsey Smith

Getting Started with the Marrakesh Treaty – a Guide for Librarians

The Marrakesh Treaty entered into force in September 2016, faster than any other international copyright text in the last 40 years. It promises to remove some of the key barriers to access to information by people with print disabilities.

Yet the Treaty will only be effective, where it has been incorporated into national law, when libraries and others are using it. Not all librarians feel confident in dealing with copyright law, potentially leaving users without the access they need.

This guide, edited by Victoria Owen, and with the welcome support of the World Blind Union, the Canadian Association of Research Libraries, Electronic Information for Libraries, and the University of Toronto, offers answers to frequently asked questions. It can also be adapted by national actors to their own laws – IFLA encourages this, in order to get the largest possible number of libraries involved.

Project Management for Instructional Designers Project Management for Instructional Designers (PM4ID) is a textbook about project management tailored specifically for instructional designers, intended for use in graduate programs in educational technology. This book is based on a pre-existing openly licensed textbook donated to the commons by a benefactor who desires to remain anonymous. It has been collaboratively revised and updated by students and faculty at the University of Saskatchewan.

PART I  
FACULTY OF ARTS





# I. Classics, Modern Languages and Linguistics

## Basic Hindi I

Author: Rajiv Ranjan

Description: Basic Hindi I is an online, interactive, theme-based textbook for the true beginner of Hindi language. It promotes communicative, linguistic, and cultural competence. It has mixture of pedagogical approaches to fit all types of learning and teaching philosophies/styles to achieve intermediate low to mid ACTFL proficiency level within a semester.

## Bate-Papo: Introduction to Portuguese

Author: Eduardo Viana da Silva

Description: This book was developed having in mind university students who speak English as their first language. We also took into consideration speakers of Spanish by highlighting some key similarities and differences between the two languages. Although this material was developed for university students, we hope that most of its content is also applicable to high school students, adolescents, and adults learning Portuguese, including immigrants in Brazil. The main focus of this edition is on Brazilian Portuguese. Occasionally, we highlight main differences between Brazilian Portuguese, Portuguese spoken in Africa and Asia, and European Portuguese.

This e-book emphasizes meaningful communicative activities for a classroom setting, focusing on everyday language in Brazilian Portuguese. Some of the book content derived from unrehearsed conversations following a prompt (greeting each other, for example). Bate-Papo focuses on interactive activities, for a grammar reference, we linked parts of the text to the open e-book *Português para Principiantes*, hosted by PressBooks at the University of Wisconsin, Madison. We also incorporated pod-casts from another open education resource, *Língua da Gente*, developed by Orlando Kelm from the University of Texas, at Austin. Bate-Papo has been developed with the collaboration of volunteers and has been written with the goal of facilitating the teaching of Portuguese without the cost of traditional textbooks.

## Beginning Japanese for Professionals: Book 1

Author: Emiko Konomi

Description: For more accessible and classroom-friendly (Word and PDF) versions of this book, please view and download them at PDXScholar. This Pressbooks version primarily exists to encourage others to adapt and adopt *Beginning Japanese for Professionals* using Pressbooks. This textbook is designed for beginning learners who want to learn basic Japanese for the purpose of living and working in Japan. Corresponding audio files are available for free online.

## Beginning Japanese for Professionals: Book 2

Author: Emiko Konomi

Description: For more accessible and classroom-friendly (Word and PDF) versions of this book, please view and download them at PDXScholar. This Pressbook version primarily exists to encourage others to adapt and adopt *Beginning Japanese for Professionals* using Pressbooks.

This textbook is designed for beginning learners who want to learn basic Japanese for the purpose of living and working in Japan. Corresponding audio files are available for free online via PDXScholar and PSU Media Space.

## Daily Departures: Speed Reading Passages for English Language Learners

Author: Regina D. Weaver

Description: For more accessible and classroom-friendly (Word and PDF) versions of this book, please view and download them at PDXScholar. This Pressbook version primarily exists to encourage others to adapt and adopt *Daily Departures: Speed Reading Passages for English Language Learners* using Pressbooks.

This textbook is designed to provide fluency support for English language learners at the Waystage level of the Common European Framework Reference.

## A Digital Workbook for Beginning ESOL

Authors: Eric Dodson, Davida Jordan, and Timothy Krause

Description: This book contains three levels of interactive grammar lessons and reading activities for beginning students of ESOL (English for Speakers of Other Languages). The grammar section includes a select set of YouTube videos, and the three original readers include short picture or chapter stories. Each lesson is accompanied by self-correcting exercises.

## Elementary Arabic

Authors: Ayman Mohamed and Sadam Issa

Description: This is an open textbook on Elementary Arabic for undergraduate students who are taking Arabic in their second semester. It addresses language structures in theme-based modules that cover the four language skills. The book can be used as a self-study resource or as the main textbook in beginning Arabic classes.

## English Literature II

Author: Whitney Nelson, Bunker Hill Community College

Description: *English Literature: Victorians and Moderns* is an anthology with a difference. In addition to providing

annotated teaching editions of many of the most frequently-taught classics of Victorian and Modern poetry, fiction and drama, it also provides a series of guided research casebooks which make available numerous published essays from open access books and journals, as well as several reprinted critical essays from established learned journals such as *English Studies in Canada* and the *Aldous Huxley Annual* with the permission of the authors and editors. Designed to supplement the annotated complete texts of three famous short novels: Henry James's *The Turn of the Screw*, Joseph Conrad's *Heart of Darkness*, and Aldous Huxley's *Brave New World*, each casebook offers cross-disciplinary guided research topics which will encourage majors in fields other than English to undertake topics in diverse areas, including History, Economics, Anthropology, Political Science, Biology, and Psychology. Selections have also been included to encourage topical, thematic, and generic cross-referencing. Students will also be exposed to a wide-range of approaches, including new-critical, psychoanalytic, historical, and feminist.

## Essentials of Linguistics

This peer-reviewed open textbook covers the core areas of theoretical linguistics (phonetics, phonology, morphology, syntax, and semantics), supplemented with discussion of psycholinguistic and neurolinguistic findings.

**Includes:** videos, interactive assessments.

## A Foundation Course in Reading German

A textbook published by University of Wisconsin-Madison and went through many versions over the years, it is designed to guide a learner who has no previous German experience to gain the ability to accurately understand formal written German prose, aided only by a comprehensive dictionary.

## From MSA to CA: A Beginner's Guide for Transitioning into Colloquial Arabic

Author: Lina Gomaa

Description: This Pressbooks version exists to encourage others to adapt and adopt From MSA to CA: A Beginner's Guide for Transitioning into Colloquial Arabic. For more accessible and classroom-friendly (Word and PDF) versions of this book, please view and download them at PDXScholar. PLEASE NOTE: This Pressbooks version includes sentence structure errors in tables because both English and Arabic are used in the same sentences, and this content cannot be correctly interpreted by your web browser. Any table reuse needs to be done from the Word or PDF versions.

## German Frame-semantic Online Lexicon

This open German-English vocabulary resource applies the linguistic theory of *Frame Semantics* to the language classroom in an effort to teach the meanings of vocabulary items and how to use them appropriately.

Includes: videos, activities.

## Green Tea Intermediate English Communication OER

Authors: Eric Dodson, Luciana Diniz, and Nanci Leiton

Description: This set of multimedia materials incorporates interesting topics and real-world language in an accessible way for adult English language learners at the low-to-mid intermediate level, using eclectic methods (communicative activities, content-based instruction lite, focus on form), all while maintaining a connection to our learners' lives.

## Hola a Todos: Elementary Spanish I

A textbook for introductory Spanish, created by faculty at University of North Georgia.

**Includes:** activities, exercises.

## How Language Works (Gasser)

This LibreTexts looks at a range of introductory topics and themes related to linguistics, the science of language. It examines some of the biases we all have concerning language and uses this as a base for its exploration.

**Includes:** exercises, instructor and student resources.

## Integrated and Open Interpreter Education

Authors: Elisa Maroney, Amanda Smith, Sarah Hewlett, Erin Trine, and Vicki Darden

Description: This Open Educational Resource (OER) on interpreting offers authors and readers free and open access to current, relevant, easy-to-access, and free materials. The editors have created a space where emerging scholars in the field of signed language interpreting make contributions with the ability to revise as the interpreting studies discipline and the scholars, themselves, develop and change. This OER provides faculty and students readings and practical application experiences that connect program specific coursework and concepts across the interpreter education curriculum emphasizing the holistic nature of the field of interpreting.

## JUNTXS: Introductory Spanish

Author: Adriana Diaz

Description: JUNTXS is an open access educational resource which can be used in conjunction with a variety of approaches to support beginning learners of Spanish. This media-rich learning resource is designed to guide learners in their Spanish language learning journey through a critical and intercultural lens and to provide regular opportunities to

explore, practise and improve their ability to read, speak, and understand this language as it is used across the Spanish-speaking world.

## The Languages of Berkeley: An Online Exhibition

Author: Claude H. Potts, curator

Description: This online library exhibition celebrates the magnificent diversity of languages that advance research, teaching, and learning at the University of California, Berkeley. Taking place between February 2019 and October 2020, it was the point of embarkation for an exciting sequential exhibit that built on one post per week, showcasing an array of digitized works in the original language chosen by those who work with these languages on a daily basis — librarians, professors, lecturers, staff, and students.

## Let's Read French Books

Authors: Somayeh Kamranian, Guy de Maupassant, Alphonse Daudet, and Jean Giono

Description: Reading books is a great way to learn a language. It helps to discover the culture, to learn new words, to be exposed to different language structures in the context. But, one of the biggest challenges in the language and literature classes is to encourage the students to read. This project aims to make reading literary books easier for the students by creating an open textbook reader using Public Domain 19th century French literature. Along with the text, there are activities for students to engage with and discover the text.

## Libro Libre: Beginning Spanish

A textbook for introductory Spanish that has been positively-reviewed.

**Includes:** activities, exercises.

## Mythology Unbound: An Online Textbook for Classical Mythology

This mythology text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in classical mythology, from Apollo to Zeus.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

## Novels for the End of a World

Author: Nathan Richardson

Description: *Novels for the End of a World* is an introduction to the twenty-first century novel as written and published across the Spanish-speaking world. It's also an argument for reading narrative fiction from Spain and Latin America as a single entity. Where once we analyzed literature within narrow national traditions, today's best-seller lists, literary prize money, and even the tales themselves point to the need for more holistic approaches. So too the themes they explore. Today's writers and readers inhabit a global world where our sense of space and time shrinks at exponential rates. At the same time so much of daily experience continues to be lived locally and, as always, with often overwhelming affect. Given that, it shouldn't surprise us to find common threads and themes running across narrative fiction from Madrid to Mexico, from Argentina to Asturias, and yet to find at each stop these themes registered through intensely and intimately local stories. In this way, *Novels for the End of a World* becomes at once an overview of major trends in narrative across the Spanish-speaking world and a trip through the rich, wide variety of local life. Arising out of this literary adventure is one thread common to all: that beyond the end is a barely distinguishable glimmer of light, a sign of new ways for a new world.

## Para vivir con salud

Authors: Kathryn Joy McKnight y Jill Kuhnheim

Description: We have developed this open access book for universities and colleges responding to the needs and interests of students preparing for careers in health or even seeking to add a "health track" to their majors or minors. *Para vivir* offers an introduction to reading different literary and cultural texts from the Spanish-speaking world with a thematic focus on health. It can be used as an alternative to the standard Introduction to Hispanic Literature course that teaches students techniques of close reading. It incorporates authors from seventeen countries, has an almost even representation of male and female authors and diverse communities in the Hispanic world (European, Creole, Afro Hispanic, Latinx, Indigenous, Jewish). In addition to introductions to reading different genres (narrative, poetry, theater, and film) we have scaffolded supporting material such as biographies, notes on the historical contexts, pre and post-reading questions.

While we have included primary source material when possible, due to copyright restrictions we have not been able to include some of the contemporary texts/sources. In these cases we encourage instructors to look for these online (when possible, we have indicated where they might be available) or to supplement this webbook with a packet or materials on your learning support system (such as Blackboard or Canvas). Instructors can also select which chapters to include in a class and may do so in terms of what is available at their libraries.

The book begins with presentations of genres in the first section. The second section opens with a chapter about the health humanities, followed by texts and films that are connected thematically. You might choose to set up your syllabus along these same lines, including all or some of the material; another possibility would be to organize the readings by genre or region or to group them historically and refer to the genre information as it is pertinent. While all the texts can be linked in some ways to health and illness, it is important to not only think of these thematically but to consistently examine how our different frames of reference provided by our disciplinary trainings may encourage us to read in a particular way. For example, medical histories or charts are also genres that structure and limit what physicians record and, perhaps, what they see.

In the subtitle, "leyendo la salud y la literatura," we invite students to think about lived experience as a text that needs deciphering, just as do written or performed texts. Health, healing, illness, and death—all concepts and practices related to health—are formed within language and culture. Their meanings are not transparent. We believe that learning to read texts closely also helps us to read and interpret more effectively the spoken word, the words of patients and neighbors and loved-ones, and the health-related practices in which we all engage.

By centering on the practice of reading, the importance of how language is used and the silences that subtend someone's experiences of their bodies we may "learn to be affected by literature," and to ask "what is this work

forcing me to notice?”<sup>1</sup> In her study on how we read, Louise Rosenblatt contrasts “efferent” with “aesthetic” readings. These are terms that she defines with regard to focus. An **aesthetic** reading concentrates on the quality and the structure of what happens during the reading event. An **efferent** reading centers on what will remain after reading: the information, solution, or application of ideas.<sup>3</sup> Students who are interested in the medical fields bring tools from their own experiences and perspectives; perhaps adding epidemiological concepts such as the “counterfactual” to the discussion of a story by Cortázar or their knowledge of cultural, spiritual, or non-Western approaches to representations of health or the end of life. Incorporating diverse perspectives will increase mutual understanding in diverse cultural settings, times, and disciplines. Our pre and post-reading exercises are designed to help students think through issues and ideas raised by the works and these may also be supplemented by reflective analytic exercises or affective responses that take into account the interplay between these different perspectives.

## Paris à travers les pages

Author: French 427 Muhlenberg College

Contributors: Elizabeth Templeman, Casey Montgomery, Camille Warner, Annabelle Gaardsmoe, Sephora Delice, Rachel Legow, Patrick Sockler, Lucie Hopkins, and Eunice Umubyeyi

Description: *Paris Through the Pages* is the culminating project for an advanced level undergraduate French course that explores the images of Paris in literary works from the 17th to 20th centuries. As an open source book, it is intended to be re-used, revised, and repurposed by undergraduate students and academics in French studies. The students who participated in this project spent a semester reading works by French authors from the 17th, 18th, and 19th centuries, integrating them within their historical and cultural contexts. Given that the majority of the semester was spent introducing students to these authors and works, the students could only spend the final few weeks refining their research on a particular author and creating a chapter in groups that represented the literary images of Paris from a particular era. Although the students wrote and revised several versions of their individual articles, they have established a foundation of research for other classes and students to explore, expand, and revise themselves. The hope is to create a book that other French classes—at Muhlenberg and elsewhere—can build from and expand the thematic approach and literary perspectives.

## Pour une linguistique du développement

Author: Léonie Métangmo-Tatou

Description: Le développement des sociétés africaines n'est-il qu'une question économique? La linguistique est-elle condamnée à n'être qu'une science positiviste qui observe sans s'impliquer? Ce livre offre de riches perspectives à ceux et celles qui répondent non à ces deux questions. Il montre qu'il est possible de faire place, dans les sciences du langage, à des préoccupations citoyennes orientées vers la correction d'une précarité communicationnelle nuisible à l'épanouissement des sociétés africaines. Ce que l'autrice propose de nommer « linguistique du développement » peut,

1. <sup>2</sup>

2. [1]

3. <sup>4</sup>

4. [2]

par exemple, aider l'agronome intervenant dans le monde paysan à adopter la langue la plus appropriée. Des travaux linguistiques de codification ou de traduction peuvent contribuer à préserver et valoriser des savoirs locaux d'une pertinence sociale attestée. Les linguistes peuvent aussi mettre au jour les ressorts langagiers des pratiques corruptives. Il s'agit là de quelques-uns des chantiers de la linguistique du développement, nouveau paradigme des sciences du langage au service du bien commun, qui trouve dans ce livre ses fondements théoriques et éthiques.

## The Roman Empire

This roman empire text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in the roman empire.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

## Roman Gods

This peer-reviewed Roman text has been successfully adopted by other faculty. Drawing exclusively on the evidence from urban Rome up to the age of Constantine, the book analyzes the pagan, Jewish, and Christian concepts of “god” along the lines of space, time, personnel, function, iconography and ritual.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

## Spunti: Italiano elementare I

Authors: Daniel Leisawitz and Daniela Viale

*Description: Together, this pressbook, the in-class material and the practice exercises can replace a traditional textbook and workbook. Our approach to language instruction is interactive, conversational and fundamentally task-based. We see grammar as a means for enabling effective communication, which is why our explanations of grammar are concise and not overly technical.*

*After years of teaching Italian, we had become frustrated by two aspects of available textbooks. First, their exorbitant cost, which presents students with a significant financial burden. Second, the limitations textbooks necessarily impose on our courses' structure and approach to learning.*

*There is no lack of Open Educational Resources (OERs) in Italian; quite the contrary. One can find a jungle of disparate materials of varied quality, which are hard to locate and synthesize into a coherent course. This is why we created Spunti: a free, coherent, agile, functional, and culturally rich course for Muhlenberg students, and hopefully for students elsewhere, as well.*

*The Spunti pressbook is a work in progress, and we would greatly appreciate any feedback, suggestions, and adaptations that anyone can give us. Our hope for Spunti is that it can benefit from the input of Italian instructors and students from around the world.*

*This project would not be possible without the generous support of Muhlenberg College and our colleagues: Dr. Lora Taub-Pervizpour, Dean for Digital Learning; Dr. Kathy Harring, Provost of Muhlenberg College; and Dr. Eileen McEwan, chair of the Languages, Literatures & Cultures Department.*



## Spunti: Italiano elementare 2

Authors: Daniel Leisawitz & Daniela Viale

Description: Welcome to **Spunti: Italiano elementare 2** – a new, unique program, authored by the Italian faculty of Muhlenberg College, that takes the place of a traditional language textbook. Spunti is a fully designed course that a college instructor of Italian can use and adapt. It consists of:

- this OER pressbook;
- printable material for in-class use (available soon on this site);
- practice exercises on our Canvas site (available only to Muhlenberg students)\*;
- complete semester lesson plans (instructors can inquire about purchasing).

Together, this pressbook, the in-class material and the practice exercises can replace a traditional textbook and workbook. Our approach to language instruction is interactive, conversational and fundamentally task-based. We see grammar as a means for enabling effective communication, which is why our explanations of grammar are concise and not overly technical.

## Teaching Math for Emergent Bilinguals: Building on Culture, Language, and Identity

Authors: Ji-Yeong I and Ricardo Martinez

Description: This book is designed for pre-service/in-service teachers and others who will work or work with K-12 students who have linguistically and culturally diverse backgrounds, especially students of other languages (English language learners/Emergent bilingual/multilingual).

## Technical Writing @ SLCC

Authors: Department of English, Linguistics, and Writing Studies at SLCC

Description: This textbook is for use in the English 2100 Technical Writing courses at Salt Lake Community College. It contains reading materials that the Technical Writing Committee of the English department have deemed important for students of ENGL 2100 to learn.

It is also prepared for use by the tutors of the Student Writing and Reading Center at SLCC.

Finally we also present this book to everyone at SLCC and the general public as a resource for technical writing.

## Western Civilization

This peer-reviewed, open lumen learning course covers introductory concepts in western civilization, from the Hittites to the Protestant Reformation.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.



## 2. Communication Studies

### Advanced Professional Communication

Description: This open textbook supports the learning outcomes of Fanshawe College's Advanced Professional Communications curriculum (COMM 6019). This resource is designed to guide college students in advancing their existing skills in communication by using a principled approach to business communication for managerial and leadership success in the modern workplace.

### Be Credible

Description: This textbook, therefore, is the result of a collaboration between journalism and library faculty. It is an illustration of what happens when concepts developed in library science and instruction get applied to a specific field, in this case, journalism education. Our overarching intent in writing this book was to help undergraduate journalists develop the skills and a skeptical stance for accessing, evaluating, and using information, and in the process, to build their own authority as credible communication practitioners.

We were grateful to receive an Open Educational Resources Grant from the University of Kansas Libraries, which partially funded the production and promotion of this textbook. Josh Bolick and Ada Emmet in the Schulenburger Office of Scholarly Communication & Copyright helped to inspire this textbook's possibility and supported its creation.

### Business Communication for Success

Description: Business Communication for Success (BCS) provides a comprehensive, integrated approach to the study and application of written and oral business communication to serve both student and professor. For questions about this textbook please contact [textbookuse@umn.edu](mailto:textbookuse@umn.edu)

### Communication @ Work

Description: Whereas most commercial textbooks on communications maintain a high level of formality, this open textbook relaxes that a little to include contractions, colourful expressions, liberal use of “they” (rather than “he or she”) as a singular pronoun, and other characteristics of semi-formal or casual business writing. The idea is to model the style of a common email between work colleagues, which imitates a conversational business style of writing while still being grammatically correct. Notice in the previous sentence and section, for instance, that “email” and “internet” appear instead of the more formal, old-fashioned “e-mail” and “Internet” often used in other textbooks. For this, we take our cue from style guides in leading tech publications and international news organizations that trend towards lowercasing and de-branding the terms (Martin, 2016). See unit 13 on the formality spectrum in professional writing for more on the editorial decision to model a casual style for accessibility reasons.

# Communication in the Real World

Description: Communication in the Real World: An Introduction to Communication Studies overviews the time-tested conceptual foundations of the field, while incorporating the latest research and cutting-edge applications of these basics. Each chapter will include timely, concrete, and real-life examples of communication concepts in action. For questions about this textbook please contact [textbookuse@umn.edu](mailto:textbookuse@umn.edu)

## Communication Studies

Description: Communication in the Real World: An Introduction to Communication Studies is adapted from a work produced and distributed under a Creative Commons license (CC BY-NC-SA) in 2013 by a publisher who has requested that they and the original author not receive attribution. This adapted edition is produced by the University of Minnesota Libraries Publishing through the eLearning Support Initiative.

## Communication Theory

Description: This communication studies text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in communication theory, from reduction to the network society.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

## Effective Professional Communication: A Rhetorical Approach

**Authors:** Rebekah Bennetch; Corey Owen; and Zachary Keesey

**Description:** Welcome to *Effective Professional Communication*, your text book for the RCM 200 course at the University of Saskatchewan in Saskatoon, Saskatchewan.

As you already know, this course focuses on communicating in professional environments. Even if you haven't held a job before, you know—at least on a basic level—that how you communicate changes depending on the context of your situation; specifically, you talk differently when you speak to customers/clients versus your co-workers versus your supervisors.

Our goal in this text is to break down the communication process in professional environments so you can maximize your chance to get hired and retain your job once you graduate from university. We will do this by looking at communication through political, rhetorical, ethical, and interpersonal lenses and applying this knowledge to your future career.

## Elements of Public Speaking

Description: Public speaking is the process of designing and delivering a message to an audience. Effective public

speaking involves understanding your audience and speaking goals, choosing elements for the speech that will engage your audience with your topic, and delivering your message skillfully. Good public speakers understand that they must plan, organize, and revise their material in order to develop an effective speech. This book will help you understand the basics of effective public speaking and guide you through the process of creating your own presentations. We'll begin by discussing the ways in which public speaking is relevant to you and can benefit you in your career, education, and personal life.

## The Evolving World of Public Relations: Beyond the Press Release

Description: This text is provided to you as an Open Educational Resource (OER) which you access online. It is designed to give you a comprehensive introduction to public relations at no or very nominal cost. It contains both written and graphic text material, intra-text links to other internal material which may aid in understanding topics and concepts, intra-text links to the appendices and glossary for tables and definitions of words, and extra-text links to videos and web material that clarifies and augments topics and concepts.

## Exploring Communication in the Real World

Description: This edition of Exploring Communication in the Real World (2020) was adapted by Christopher Miller and Mia Poston for use in Communication Studies courses at the College of DuPage, Glen Ellyn, IL. It is distributed with a Creative Commons license **CC BY-NC-SA**.

## Humans R Social Media – Open Textbook Edition

Description: Social media and humans exist in a world of mutual influence, and humans play central roles in how this influence is mediated and transferred. Originally created by University of Arizona Information scholar Diana Daly, this Third Edition of the book Humans are Social Media uses plain language and features contributions by students to help readers understand how we as humans shape social media, and how social media shapes our world in turn.

## Information Strategies for Communicators

Description: The definitive text for the information search and evaluation process as practiced by news and strategic communication message producers. Currently used at the University of Minnesota School of Journalism and Mass Communication; JOUR 3004W/V, Information for Mass Communication.

## Introduction to Communication

Description: Many colleges and universities around the country require students to take some type of communication course in order to graduate. Introductory Communication classes include courses on public speaking, interpersonal communication, or a class that combines both. While these are some of the most common introductory Communication courses, many Communication departments are now offering an introductory course that explains what Communication is, how it is studied as an academic field, and what areas of specialization make up the field of Communication. In other words, these are survey courses similar to courses such as Introduction to Sociology or Introduction to Psychology. Our goal in this text is to introduce you to the field of Communication as an academic discipline of study.

## Introduction to Professional Communications

Description: No matter your field, having professional communication skills is essential to success in today's workplace. This book covers key business communications topics that will help you in your career, including intercultural communication, team work, professional writing, audience analysis and adapting messages, document formatting, oral communication, and more.

*Introduction to Professional Communications* was adapted and remixed by Melissa Ashman from several open textbooks as indicated at the end of each chapter. Unless otherwise noted, *Introduction to Professional Communications* is (c) 2018 by Melissa Ashman and is licensed under a Creative Commons-Attribution-NonCommercial-ShareAlike 4.0 International license. In 2019, the textbook was updated. In 2020, minor updates were done to chapter 5.2 The adaptation statement below and all chapter attribution statements have been updated accordingly.

In *Introduction to Professional Communications*, examples have been changed to Canadian references, and information throughout the book, as applicable, has been revised to reflect Canadian content and language. Gender neutral language (they/their) has been used intentionally. In addition, while general ideas and content may remain unchanged from the sources from which this adapted version is based, word choice, phrasing, and organization of content within each chapter may have changed to reflect this author's stylistic preferences.

## Media, Society, Culture and You

Description: This communications studies text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in communications & multimedia, from social media to the fall of gaming.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

## Organizational Communication

Author: Julie Zink, Ph.D and Zink, Julie

Description: This course provides an overview of the principles and practices of organizational communication. Using familiar, real-world examples to help you connect theory to practice, the themes of systems, culture, power,

and how to develop various communication skills for the workplace will be explored. Highlights of the class include: working on conflict management and leadership skills, dealing with crisis communication, understanding the nature of power in organizations, establishing confirming communication climates, enhancing creativity, and managing meetings. By developing an awareness of your own communication style and adapting that style to a variety of interpersonal communication settings in the workplace, it is the goal of this class for your organizational communication skills to improve.

## Professional Communications

Description: This open textbook has been compiled, edited and partially adapted by faculty from the School of Language and Liberal Studies at Fanshawe College by using existing open educational sources available through a Creative Commons ShareAlike attribution licence.

If sections of this resource appear to contain several styles of writing and/or voice, then that's intentional! As a compilation, we have attempted to gather sources that not only reflect and reinforce the core teaching and learning methodologies we use in our professional communications curriculum, but also to mirror the often collaborative nature of professional communication itself.

## Stand up, Speak out

Description: Stand up, Speak out: The Practice and Ethics of Public Speaking features two key themes. First it focuses on helping students become more seasoned and polished public speakers, and second is its emphasis on ethics in communication. It is this practical approach and integrated ethical coverage that sets Stand up, Speak out: The Practice and Ethics of Public Speaking apart from the other texts in this market. For questions about this textbook please contact [textbookuse@umn.edu](mailto:textbookuse@umn.edu)

## Telling Our Stories

Description: Telling Our Stories: Student Experiences at UW Tacoma is a collection of video stories and reflections, created by undergraduate students in TCOM 347: Television Criticism & Application. Students worked in teams to document and produce short digital stories highlighting the experiences of other UW-Tacoma students with regards to one or various aspects of their identity, whether related to race, ethnicity, class, gender, sexuality, disability, place of origin, etc. With the goal of understanding how students' identity, and overall way of seeing the world, affect their college experience. Through this work, students engaged in conversation about their own social identities and their positionality in relationship to the people they are interviewing.

## Trends in Digital & Social Media (VI4)

Description: Social media, digital devices, and networked communication systems have entered our collective

bloodstream. This e-book touches upon the human experience of contemporary trends that affect how we perceive ourselves, others, and society.

## Understanding Media and Culture

Description: This media studies course is positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in media and culture, from the modernization to the violence in media.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

## Understanding Media and Culture

Description: Understanding Media and Culture: An Introduction to Mass Communication, will support an engaging and interesting course experience for students that will not only show them the powerful social, political and economic forces will affect the future of media technology, but will challenge students to do their part in shaping that future. For questions about this textbook please contact [textbookuse@umn.edu](mailto:textbookuse@umn.edu)

## Visual Communication

Author: Steve Covello

Description: A General Education textbook for the study of visual rhetoric

## Writing for Strategic Communication Industries

Description: Good writing skills are important in today's competitive work environment. This is especially the case for communication-related professions such as public relations, brand communication, journalism, and marketing.



## 3. Economics

### Applied Calculus (Openstax)

This Lumen Learning covers all of the concepts of first-year calculus with a balance of application and theory.

**Includes:** problem-solving guides, examples, videos, applications, problems, selected solutions, and summaries.

### CORE: The Economy

This open textbook (available in English and in French) functions as a standard introduction-to-economics text.

### Economics (Openstax)

This economics text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in economics, from elasticity to inflation.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

### Introductory Business Statistics (Openstax)

This statistics text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in business statistics, from probability to confidence intervals.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

### Macroeconomics 1-2

Volume 1 concepts: principles of macroeconomics

Volume 2 concepts: theories, models and policy

University macroeconomics: Lyryx has been successfully adopted, was developed by professors of economics from American institutions and emphasizes the connection between application and theory.

**Includes:** instructor resources, student resources, examples, exercises, solutions, summaries, and simulations.

## Microeconomics I-2

Volume 1 concepts: principles of microeconomics

Volume 2 concepts: markets, methods, and models

University microeconomics: Lyryx has been successfully adopted, was developed by professors of physics from American institutions and emphasizes the connection between application and theory.

**Includes:** instructor resources, student resources, examples, exercises, solutions, summaries, and simulations

## Principles of Economics

Author: Timothy Taylor, Macalester College, Steven A. Greenlaw, University of Mary Washington

Description: Published by OpenStax College, Principles of Economics covers the scope and sequence for a two-semester principles of economics course. The text also includes many current examples, including; discussions on the great recession, the controversy among economists over the Affordable Care Act (Obamacare), the recent government shutdown, and the appointment of the United States' first female Federal Reserve chair, Janet Yellen. The pedagogical choices, chapter arrangements, and learning objective fulfillment were developed and vetted with feedback from educators dedicated to the project. The outcome is a balanced approach to micro and macro economics, to both Keynesian and classical views, and to the theory and application of economics concepts. Current events are treated in a politically-balanced way, as well.

## Principles of Economics

Description: This book is intended for a two-semester course in Economics taught out of the social sciences or business school. Principles of Economics aims to teach considerable range and depth of Economic concepts through an approachable style and methodology. The authors take a three-pronged approach to every chapter: The concept is covered with a “Heads Up” to ward off confusion, a real-world application for that concept, and a “You Try It” section to make sure students are staying on top of the concept. For questions about this textbook please contact [textbookuse@umn.edu](mailto:textbookuse@umn.edu)

## Principles of Economics: Scarcity and Social Provisioning, 2nd Edition

Description: Welcome to *Principles of Economics: Scarcity and Social Provisioning*, a pluralistic textbook designed for two-semester principles of economics sequences. We are calling this the second edition of the text, though the first addition covered only the microeconomics side.

*Principles of Economics: Scarcity and Social Provisioning* takes a pluralistic approach to the standard topics of introductory economics courses. The text builds on the chiefly neoclassical (or orthodox economics) material of the OpenStax Principles of Economics text, adding extensive content from heterodox economic thought. Emphasizing the importance of pluralism and critical thinking, the text presents the method and theory of neoclassical economics

alongside critiques thereof and heterodox alternatives in both method and theory. This approach is taken from the outset of the text, where contrasting definitions of economics are discussed in the context of the various ways in which orthodox and heterodox economists study the subject. The same approach—of theory and method, critique, and alternative theory and method—is taken in the study of consumption, production, market exchange, macroeconomic equilibrium, fiscal and monetary policy, as well as in the applied theory chapters. Historical and contemporary examples are given throughout, and both theory and application are presented with a balanced approach.

## Principles of Macroeconomics

Author: Timothy Taylor, Macalester College

Description: Published by OpenStax College, Principles of Macroeconomics covers the scope and sequence for a one-semester economics course. The text also includes many current examples, including: the housing bubble and housing crisis, Zimbabwe's hyperinflation, global unemployment, and the appointment of the United States' first female Federal Reserve chair, Janet Yellen. The pedagogical choices, chapter arrangements, and learning objective fulfillment were developed and vetted with feedback from educators dedicated to the project. The outcome is a balanced approach to economics, to both Keynesian and classical views, and to the theory and application of economics concepts. Current events are treated in a politically-balanced way, as well.

## Principles of Macroeconomics

Description: The goal of this textbook is to help students understand how real individuals actually work with economics. In this textbook, the authors illustrate the practicality and relevance of economics with a variety of new illustrations and insights. For questions about this textbook please contact [textbookuse@umn.edu](mailto:textbookuse@umn.edu)

## Principles of Macroeconomic Literacy

Principles of Macroeconomic Literacy emphasizes basic economic concepts such as value and cost in developing macroeconomic ideas. Students learn concepts involving credit markets, economic planning, and money through short fictional stories in which characters interact in an attempt to make themselves better off. Where many texts put the student in the position of an imagined macroeconomic policy dictator, Principles of Macroeconomic Literacy attempts to make macroeconomics comprehensible to students who live everyday.

## Principles of Macroeconomics: Lyryx

Author: Douglas Curtis, Ian Irvine, Lyryx Learning Team

Description: Principles of Macroeconomics is an adaptation of the text, Macroeconomics: Theory, Markets, and Policy by D. Curtis and I. Irvine (and edited by Lyryx Learning), and presents a complete and concise examination of introductory macroeconomics theory and policy suitable for a first introductory course. Examples are domestic and

international in their subject matter and are of the modern era – financial markets, monetary and fiscal policies aimed at inflation and debt control, globalization and the importance of trade flows in economic structure, and concerns about slow growth and the risk of deflation, are included. This text is intended for a one-semester course, and can be used in a two-semester sequence with the companion text, *Principles of Microeconomics*. The three introductory chapters are common to both books.

## Principles of Microeconomics

Author: Timothy Taylor, Macalester College

less...

Description: Published by OpenStax College, *Principles of Microeconomics* covers the scope and sequence for a one-semester economics course. The text also includes many current examples, including; the Keystone Pipeline, Occupy Wall Street, and debates over the minimum wage. The pedagogical choices, chapter arrangements, and learning objective fulfillment were developed and vetted with feedback from educators dedicated to the project. The outcome is a balanced approach to economics and to the theory and application of economics concepts. Current events are treated in a politically-balanced way, as well.

## Principles of Microeconomics: Lyryx

Author: Douglas Curtis, Ian Irvine, Lyryx Learning Team

Description: *Principles of Microeconomics* is an adaptation of the text, *Microeconomics: Markets, Methods, and Models* by D. Curtis and I. Irvine (and edited by Lyryx Learning), which provides concise yet complete coverage of introductory microeconomic theory, application and policy in a Canadian and global environment. This adaptation employs methods that use equations sparingly and do not utilize calculus. The key issues in most chapters are analyzed by introducing a numerical example or case study at the outset. Students are introduced immediately to the practice of taking a data set, examining it numerically, plotting it, and again analyzing the material in that form. The end-of-chapter problems involve numerical and graphical analysis, and a small number of problems in each chapter involve solving simple linear equations (intersecting straight lines). However, a sufficient number of questions is provided for the student to test understanding of the material without working through that subset of questions. This text is intended for a one-semester course, and can be used in a two-semester sequence with the companion text, *Principles of Macroeconomics*. The three introductory chapters are common to both books.

## Techniques of Calculus I

Description: The study of calculus is the study of change. Since change is all around us, calculus is one of the most applied topics in mathematics. In this course, we will use calculus methods to investigate many topics in economics, physical and biological sciences and social science fields. After a brief pre-calculus review, we will cover derivatives and rates of change, followed by a discussion of integration. Real world applications will be emphasized to allow us to see the use of calculus methods to solve examples from business, management, social science, etc. From these two basic

concepts of differentiation and integration, calculus techniques can be applied to solve advanced problems in many fields.

## 4. English (Literature and Grammar)

### Brehe's Grammar Anatomy

Written by a professor of English at the University of North Georgia, this book provides an in-depth look at beginner grammar terms and concepts, providing clear examples with limited technical jargon.

**Includes:** exercises.

### British Literature I Anthology: From the Middle Ages to Neoclassicism and the Eighteenth Century

Featuring over 50 authors and full texts of their works, this anthology follows the shift of monarchic to parliamentary rule in Britain, and the heroic epic to the more egalitarian novel as genre.

### British Literature II: Romantic Era to the Twentieth Century and Beyond

Featuring 37 authors and full texts of their works, the selections in this open anthology represent the literature developed within and developing through their respective eras.

### English Composition

This textbook serves as an introduction to writing at college.

**Includes:** sample essays, exercises.

### It's All Greek to Me!

Author: Charity Davenport

Description: "It's All Greek to Me!" has everything—entertaining stories, academic articles in a variety of disciplines, vocabulary crossover in literary and academic readings, connections to local, American, and Western culture, and plenty of chances for critical thinking for advanced students of English as a Second Language (ESL). All readings are authentic with minimal adaptation from a variety of sources. This textbook also gives help for advanced level grammar and writing issues, using outside sources, and reading and vocabulary strategies.

## Literature, the Humanities, and Humanity

This book aims to show how literature delights and how it instructs. It is hoped to inspire other teachers to emphasize the value and delight of reading literature.

## Naming the Unnameable: An Approach to Poetry for New Generations

The textbook offers practical advice and strategies for developing a writing process that is centered on play and supported by an understanding of America's rich literary traditions.

**Includes:** instructor resources, student resources, and summaries.

## Open Anthology of Earlier American Literature

The textbook was initially created by Robin deRosa at Plymouth State University. Working with students, they collected public domain texts, edited them as necessary and created introductions for each to form the beginnings of a new, definitive anthology of Early American Literature.

## Prose Fiction: An Introduction to the Semiotics of Narrative

The textbook outlines the principles and techniques of storytelling.

## The Simple Math of Writing Well: Writing for the 21st Century

This writing guide directly addresses the importance of writing well in the Google age, embracing the variety of media that define our internet-connected world.

## The Word on College Reading and Writing

Written by five college reading and writing instructors, this interactive, multimedia text draws from decades of experience teaching students who are entering the college reading and writing environment for the very first time.

**Includes:** activities, discussions.

## World Literature I: Beginnings to 1650

This anthology comprises of three comprehensive collections that provide samples of literature from around the world and across the ages, ranging from some of oldest tales that have survived into modernity to works from the 1650s. Sections of the text are divided by time period in three parts: the Ancient World, Middle Ages, and Renaissance, and then divided into chapters by location.

## Writing and Literature: Composition as Inquiry, Learning, Thinking, and Communication

Designed for a first-year English composition class, this book is filled with short stories, and plays, and discussion of literary devices to introduce composition in the context of literary studies.

**Includes:** instructor resources.

## Writing for Success 1st Canadian Edition

The textbook provides instruction in steps, builds writing, reading, and critical thinking, and combines comprehensive grammar review with an introduction to paragraph writing and composition.

**Includes:** discussions, examples, exercises.



## 5. Études françaises

### Français Interactif

This open textbook accompanies course content that explores the French language and culture by following the lives of students participating in an intensive French language programming.

**Includes:** videos, audio vocabulary recordings, phonetics lessons, and online activities.

### Introduction to French

Introduction to French is a basic French language textbook designed to develop reading, writing, and speaking skills of college students in classrooms across Canada.

**Includes:** audio files.

### Liberté

This is an introductory level French textbook that is focused on the communicative approach. Each chapter includes around communicative strategies, culture and grammar.

**Includes:** end-of-chapter exercises.

### Résumer, synthétiser, argumenter

Le manuel s'adresse aux étudiants de français langue seconde de niveau avancé.

**Includes:** exercices interactifs, points de langue.

### Sons & Lettres: A pronunciation method for intermediate-level French

This textbook provides a set of classroom materials to train students to hear and produce the sounds of French and to recognize the regular spellings used to represent those sounds in print.

**Includes:** exercises, audio on supplementary website.

## Tout un Monde: An Interdisciplinary Approach to Intermediate French

Written by a faculty at University of Texas Arlington, this book is intended for use with intermediate level college French classes. Its multidisciplinary approach introduces students to topics and vocabulary associated with fields such as medicine, advertising, travel, business, agriculture, and relationships.

**Includes:** exercises.

## 6. General Literature

### Compact Anthology of World Literature Parts 1, 2, and 3

**Editors:** Laura Getty, Kyounghee Kwon

**Description:** A world literature class may be the first place that some students have encountered European works, let alone non-Western texts. The emphasis in this anthology, therefore, is on non-Western and European works, with only the British authors who were the most influential to European and non-Western authors (such as Shakespeare, whose works have influenced authors around the world to the present day). In a world literature class, there is no way that a student can be equally familiar with all of the societies, contexts, time periods, cultures, religions, and languages that they will encounter; even though the works presented here are translated, students will face issues such as unfamiliar names and parts of the story (such as puns) that may not translate well or at all. Since these stories are rooted in their cultures and time periods, it is necessary to know the basic context of each work to understand the expectations of the original audience.

The introductions in this anthology are meant to be just that: a basic overview of what students need to know before they begin reading, with topics that students can research further. An open access literature textbook cannot be a history book at the same time, but history is the great companion of literature: The more history students know, the easier it is for them to interpret literature.

These works can help students understand the present, as well. In an electronic age, with this text available to anyone with computer access around the world, it has never been more necessary to recognize and understand differences among nationalities and cultures. The literature in this anthology is foundational, in the sense that these works influenced the authors who followed them.

A word to the instructor: The texts have been chosen with the idea that they can be compared and contrasted, using common themes. Rather than numerous (and therefore often random) choices of texts from various periods, these selected works are meant to make both teaching and learning easier. While cultural expectations are not universal, many of the themes found in these works are.

### The Emergence of Irish Gothic Fiction – Histories, Origins, Theories

This book provides a robustly theorised and thoroughly historicised account of the ‘beginnings’ of Irish gothic fiction, maps the theoretical terrain covered by other critics, and puts forward a new history of the emergence of the genre in Ireland.

### FREE: Federal Resources for Educational Excellence

“More than 1,500 federally supported teaching and learning resources are included from dozens of federal agencies. New sites are added regularly.” Keep up with additions by subscribing to the RSS feed.

## MIT OpenCourseWare: Literature

Free course materials from MIT; Undergraduate and graduate-level.

### Writing the Nation: A Concise Introduction to American Literature 1865 to Present

**Editors:** Amy Berke, Robert R. Bleil, Jordan Cofer, Doug Davis.

**Description:** Since America's founding, the diversity of American writers has shaped its literature. Authors and poets of the past have created a colorful collection of works that are still studied today alongside contemporary works. *Writing the Nation* is designed to continue the preservation of famous American literary works in the minds of college students.

Readers will encounter a comprehensive collection of over seventy-five short stories, poems, and novel selections that encompass the distinct writing styles of the writers and eras. The text takes students on an academic journey of American Literature from the period of Late Romanticism to Modernism and the present. Each chapter begins with brief writer bios and includes a concise introduction to the time period and how certain societal, economical, and political factors influenced writers in that era.

Featured authors and poets include favorites such as Walt Whitman, Mark Twain, and Flannery O'Connor among many more. This anthology provides an opportunity for students to engage in extensive analysis of American works, both past and present.

## Yale Open Courses

Full courses available. 'All lectures were recorded in the Yale College classroom and are available in video, audio, and text transcript format. Registration is not required and no course credit is available.'

## 7. General Women's and Gender Studies (Simone de Beauvoir Institute)

### Badass Womxn in the Pacific Northwest

Description: This zine is a collection of biographies and portraits of badass womxn in the Pacific Northwest. Undergraduate students collaborated to create this resource that fuses multilingual poetry, art, and writing to celebrate and honor some of the strongest people you might not have heard of. It was created in an interdisciplinary gender, women & sexuality studies classroom led by Professor Julie Shayne, librarians Penelope Wood and Denise Hattwig, and peer facilitator Nicole Carter.

### Global Women's Issues: Women in the World Today

This global politics text has been positively-reviewed and has been successfully adopted by other faculty. It covers concepts in women's political issues, from women and education to the rights of children.

**Includes:** instructor resources, student resources, and summaries.

### Global Women's Issues: Women in the World Today, extended version

Description: We cannot solve global challenges unless women participate fully in efforts to find solutions. Female participation in the private sector is a crucial economic driver for societies worldwide. Economic security benefits every facet of a woman's life, with positive effects on the health, education and vitality of families. Learn about women who are changing their societies for the better. This extended version of Global Women's Issues: Women in the World Today includes, for each chapter, a summary, key words, multiple choice questions, discussion questions, essay questions, and a list of additional resources.

### HUM210 Introduction to Women and Gender Studies

Description: This book was created to align with the goals and objectives of HUM210 – Introduction to Women and Gender Studies. The idea to create this Open Educational Resource came from my desire to do what I can to help reduce the cost of textbooks for students. This book is free, and you are welcome to share it. The textbook can be read online or downloaded, and when downloading the textbook you will notice there are numerous download formats available to you. For example, you may decide to download the textbook as a PDF file and save it to your computer, so you can read it offline. Additionally, the use of Open Educational Resources enables an instructor to customize a course textbook so that content is specifically designed to meet the course goals and objectives.

The content selected for the creation of the Open Educational Resource is designed to meet the following goal:

Broaden understanding and awareness of Women and Gender studies in the Humanities produced within the cultural and historical contexts of social groups throughout the world drawing upon such fields as art, literature, religion, philosophy, and music.

## **Introduction to Women, Gender, Sexuality Studies**

This textbook introduces key feminist concepts and analytical frameworks used in the interdisciplinary Women, Gender, Sexualities field. It emphasizes feminist sociological approaches to analyzing structures of power, drawing heavily from empirical feminist research.

*Must suit: WSDB 290, WSDB, 291.*

## **Persistence is Resistance: Celebrating 50 Years of Gender, Women & Sexuality Studies**

Description: Persistence is Resistance is a collection celebrating 50 years of Gender, Women and Sexuality Studies. Contributors are a diverse group of scholars, from undergraduate students to faculty emeritus, representing twenty-two institutions. Essays cover GWSS's history, praxis, and implementation. The book also includes artwork by GWSS undergraduates and alumni, and their answers to "why GWSS?" Persistence is Resistance is ideal for the classroom because the essays are short, jargon light, and inspire feminist inquiry, activism, and pride.

## 8. History

### Canadian History: Pre-Confederation

Canadian History: Pre-Confederation is a survey text that introduces undergraduate students to important themes in North American history to 1867. Written and reviewed by subject experts drawn from colleges and universities, this is the first open textbook on the topic of Canadian history.

**Includes:** instructor resources (videos)

### Canadian History: Post-Confederation

This textbook introduces aspects of the history of Canada since Confederation. “Canada” in this context includes Newfoundland and all the other parts that come to be aggregated into the Dominion after 1867.

**Includes:** instructor resources (videos).

### Confronting Canadian Migration History

This open collection of essays speak to the broad range of research being done in Canadian migration history; they also highlight the commitment of their authors to an engaged, public-facing scholarly practice.

### Global History and New Polycentric Approaches

This well-reviewed open textbook rethinks the ways global history is envisioned and conceptualized in diverse countries such as China, Japan, Mexico or Spain, and considers how global issues are connected with our local and national communities.

**Includes:** learner exercises

### Historical and Contemporary Realities: Movement Towards Reconciliation

This open textbook is written as a resource for educators to teach students about the Indigenous historical significance of the lands encompassing the Robinson-Huron Treaty area and more specifically the Greater Sudbury and Manitoulin area. It also, through the use of interactive mapping strategies, serves as a guide for educators to develop a similar resource to document Indigenous stories from their own areas.

**Includes:** instructor and student resources

# History in the Making: A History of the People of the United States of America to 1877

**Authors:** Catherine Locks, Sara K. Mergel, Pamela Thomas Roseman, Tamara Spike

**Description:** *History in the Making: A History of the People of the United States of America to 1877* is a downloadable, free-to-use textbook licensed under a CC-BY-SA 3.0 unported license.

This textbook examines U.S. History from before European Contact through Reconstruction, while focusing on the people and their history.

Prior to its publication, *History in the Making* underwent a rigorous double blind peer review, a process that involved over thirty scholars who reviewed the material carefully, objectively, and candidly in order to ensure not only its scholarly integrity but also its high standard of quality.

This book provides a strong emphasis on critical thinking about US History by providing several key features in each chapter. Learning Objectives at the beginning of each chapter help students to understand what they will learn in each chapter. Before You Move On sections at the end of each main section are designed to encourage students to reflect on important concepts and test their knowledge as they read. In addition, each chapter includes Critical Thinking Exercises that ask the student to deeply explore chapter content, Key Terms, and a Chronology of events.

## Keys to Understanding the Middle East

This reviewed open textbook covers the fundamentals and is intended for readers who have never studied the Middle East, or experts who may wish to fill gaps in their knowledge of the region from other disciplines.

**Includes:** instructor and student resources

## An Outline History of East Asia to 1200, second edition

**Author:** Sarah Schneewind

**Description:** This open access textbook arose out of a course at the University of California, San Diego, called HILD 10: East Asia: The Great Tradition. The course covers what have become two Chinas, Japan, and two Koreas from roughly 1200 BC to about AD 1200. As we say every Fall in HILD 10: “2400 years, three countries, ten weeks, no problem.” The book does not stand alone: the teacher should assign primary and secondary sources, study questions, dates to be memorized, etc. The maps mostly use the same template to enable students to compare them one to the next.

## Sage American History – Era of the American Revolution

This peer-reviewed open textbook is a comprehensive look at the American Revolution, containing links to primary source documents and other resources of this important era in U.S. history.

**Includes:** instructor and student resources.



## U.S. History

This open textbook covers the breadth of the chronological history of the United States and the key forces and major developments that together form the American experience, with particular attention paid to considering issues of race, class, and gender.

**Includes:** instructor and student resources.

## Western Civilization: A Concise History – Volume 1

This peer-reviewed open textbook is about the origins of civilization in Mesopotamia c. 8,000 BCE through the early Middle Ages in Europe c. 1,000 CE. This volume covers topics including Mesopotamia, Egypt, Persia, Greece, Rome, the Islamic caliphates, and the early European Middle Ages.

*May suit:* LBCL 291, LBCL 391.

## Western Civilization: A Concise History – Volume 2

This open textbook looks at the early Middle Ages to the French Revolution in 1789 CE. This volume covers topics including the High Middle Ages, the Renaissance, the European conquest of the Americas, the Reformation, the Scientific Revolution, and the Enlightenment.

*May suit:* LBCL 291, LBCL 391.

## Western Civilization: A Concise History – Volume 3

This open textbook looks at the Napoleonic era to the recent past. Volume 3 covers topics including the Industrial Revolution, the politics of Europe in the nineteenth century, modern European imperialism, the world wars, fascism, Nazism, and the Holocaust, the postwar era, the Cold War, and recent developments in economics and politics.

*May suit:* LBCL 291, LBCL 391.

## World History: Cultures, States, and Societies to 1500

World History: Cultures, States, and Societies to 1500 is a peer-reviewed textbook which offers a comprehensive introduction to the history of humankind from prehistory to 1500.

**Includes:** high-res images and maps, chronologies, and learning questions to help guide student learning.

## Yale Lectures: The Early Middle Ages, 284–1000

This open course looks into the major developments in the political, social, and religious history of Western Europe from the accession of Diocletian to the feudal transformation.

**Includes:** all course materials (zipped file).

## 9. Journalism

### The Data Journalism Handbook

A project of the European Journalism Centre and the Open Knowledge Foundation, this handbook is a collection of tips and techniques from leading journalists, professors, software developers, and data analysts.

### Media Innovation and Entrepreneurship

This is a modular open textbook designed for entrepreneurial journalism, media innovation, and related courses. It underwent student and faculty testing and open review.

**Includes:** instructor resources.

# 10. Philosophy

## Analyzing Meaning: An Introduction to Semantics and Pragmatics

This open textbook provides an introduction to the study of meaning in human language, from a linguistic perspective including foundational concepts, word meanings, implicature (including indirect speech acts), compositional semantics, modals, conditionals, and causation and tense & aspect.

**Includes:** instructor resources.

## A Concise Introduction to Logic

Concise Introduction to Logic is an introduction to formal logic suitable for undergraduates taking a general education course in logic or critical thinking, and is accessible and useful to any interested in gaining a basic understanding of logic.

## Introduction to Logic and Critical Thinking

This is an introductory textbook in logic and critical thinking, aimed at providing the reader with a set of tools and skills that will enable them to identify and evaluate arguments.

**Includes:** exercises.

## An Introduction to Philosophy

This peer-reviewed open textbook presents philosophy to newcomers as a living discipline with historical roots. Early chapters are historically organized, to help trace a developmental progression of thought that introduce basic philosophical methods and frames issues that remain relevant today.

**Includes:** instructor resources.

## Introduction to Philosophy: Aesthetic Theory and Practice

**Authors:** Yuriko Saito; Ruth Sonderegger; Ines Kleesattel; Elizabeth Burns Coleman; Elizabeth Scarbrough; Matteo Ravasio; Xiao Ouyang; Richard Hudson-Miles; Andrew Broadey; Pierre Fasula; Alexander Westenberg; Matthew Sharpe; Valery Vino (Book Editor); and Christina Hendricks (Series Editor)

**Editors:** Valery Vino (Book Editor) and Christina Hendricks (Series Editor)

**Description:** *Aesthetic Theory and Practice* offers fresh perspectives on canonical and emerging topics in aesthetics, and also brings attention to a number of culturally sensitive topics that are customarily silenced in introductions to philosophical aesthetics. The papers are heterogeneous in terms of length and degrees of difficulty, inviting the reader into the study of contemporary aesthetics, which spans a lifetime.

## Introduction to Philosophy: Ethics

**Authors:** Frank Aragbonfoh Abumere; Douglas Giles; Ya-Yun (Sherry) Kao; Michael Klenk; Joseph Kranak; Kathryn MacKay; Jeffrey Morgan; Paul Rezkalla; George Matthews (Book Editor); and Christina Hendricks (Series Editor)

**Editors:** George Matthews and Christina Hendricks

**Description:** We often make judgments about good and bad, right and wrong. Philosophical ethics is the critical examination of these and other concepts central to how we evaluate our own and each others' behavior and choices. This text examines some of the main threads of discussion on these topics that have developed over the last couple of millennia, mostly within the Western cultural tradition.

## Introduction to Philosophy: Epistemology

**Authors:** Guy Axtell; Brian C. Barnett; Todd R. Long; Jonathan Lopez; Daniel Massey; Monica C. Poole; William D. Rowley; K. S. Sangeetha; Brian C. Barnett (Book Editor); and Christina Hendricks (Series Editor)

**Editors:** Brian C. Barnett and Christina Hendricks

**Description:** *Introduction to Philosophy: Epistemology* engages first-time philosophy readers on a guided tour through the core concepts, questions, methods, arguments, and theories of epistemology—the branch of philosophy devoted to the study of knowledge. The book progresses systematically while placing key ideas and thinkers in historical and contemporary context. Central topics include the analysis of knowledge, the nature of epistemic justification, rationalism vs. empiricism, skepticism, the value of knowledge, the ethics of belief, Bayesian epistemology, social epistemology, and feminist epistemologies.

## Introduction to Philosophy: Logic

**Authors:** Bahram Assadian; Matthew Knachel; Cassiano Terra Rodrigues; Michael Shaffer; Nathan Smith; Benjamin Martin (Book Editor); and Christina Hendricks (Series Editor)

**Editors:** Benjamin Martin and Christina Hendricks

**Description:** *Introduction to Philosophy: Logic* provides students with the concepts and skills necessary to identify and evaluate arguments effectively. The chapters, all written by experts in the field, provide an overview of what arguments are, the different types of arguments one can expect to encounter in both philosophy and everyday life, and how to recognise common argumentative mistakes.

# Introduction to Philosophy: Philosophy of Mind

**Authors:** Eran Asoulin; Paul Richard Blum; Tony Cheng; Daniel Haas; Jason Newman; Henry Shevlin; Elly Vintiadis; Heather Salazar (Editor); and Christina Hendricks (Series Editor)

**Editors:** Heather Salazar and Christina Hendricks

**Description:** *Introduction to Philosophy: Philosophy of Mind* surveys the central themes in philosophy of mind and places them in a historical and contemporary context intended to engage first-time readers in the field. It focuses on debates about the status and character of the mind and its seemingly subjective nature in an apparently more objective world.

# Introduction to Philosophy: Philosophy of Religion

**Authors:** Beau Branson; Marcus William Hunt; Timothy D. Knepper; Robert Sloan Lee; Steven Steyl; Hans Van Eyghen; Beau Branson (Book Editor); and Christina Hendricks (Series Editor)

**Editors:** Beau Branson and Christina Hendricks

**Description:** *Introduction to Philosophy: Philosophy of Religion* introduces some of the major traditional arguments for and against the existence of God, as well as some less well-known, but thought-provoking arguments for the existence of God, and one of the most important new challenges to religious belief from the Cognitive Science of Religion. An introductory chapter traces the connection between philosophy and religion throughout Western history, and a final chapter addresses the place of non-Western and non-monotheistic religions within contemporary philosophy of religion.

# Modern Philosophy

This well reviewed open textbook in modern philosophy combines readings from primary sources with two pedagogical tools.

# Philosophical Thought

**Editor:** Heather Wilburn, Ph.D.

**Description:** *Philosophical Thought: across cultures and through the ages*, is an open-educational resource (OER) to be used as a collection of readings for introductory philosophy courses. The objectives for developing and sharing this open resource are three-fold:

1. to provide a collection of philosophical works that can be used as a foundation for faculty and students to use in undergraduate philosophy courses
2. to provide a resource that is free to students
3. to provide a resource that compiles philosophical thought from a variety of cultures and eras

The works included in this book come from a wide range of sources. However, this book is indebted to Henry Imler's editorial work on *Sapientia* and *Phronesis*, both of which are OER texts available on Pressbooks.

## The Originals: Classic Readings in Western Philosophy

This peer-reviewed, open textbook provides readers with an appreciation and understanding of philosophy framed by the very words and ideas of those who have shaped our thinking over the centuries.

**Includes:** primary source documents.

## Yale Open Courses

Full courses available. 'All lectures were recorded in the Yale College classroom and are available in video, audio, and text transcript format. Registration is not required and no course credit is available.'

## II. Political Science

### American Government: OpenStax

This OpenStax government text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in American government, from civil liberties to domestic policy.

**Includes:** instructor resources, student resources, and summaries.

### The Arab Spring of Discontent

This Middle-Eastern politics text has been positively-reviewed. It covers concepts in the Arab Spring, from tensions in Tunisia to the fall of the Egyptian regime.

**Includes:** instructor resources, student resources, and summaries.

### The Basics of American Government (Second Edition)

**Editor:** Carl Cavalli

**Contributors:** Ms. Maria Albo-Carabelli, Ross Alexander, Carl Cavalli, Barry Friedman, Craig Greathouse, Jonathan Miner, Courtney Mitchell, Brian Murphy, K. Michael Reese, Charles “Trey” Wilson

**Description:** *The Basics of American Government* is a collaborative effort among eight current and one former faculty members in the Departments of Political Science & International Affairs and Criminal Justice at the University of North Georgia. The purpose of this book is to offer a no-frills, low-cost, yet comprehensive overview of the American political system for students taking introductory courses in American national government.

Furthermore, the work combines the best aspects of both a traditional textbook and a reader in that most chapters offer a piece of original scholarship as a case study to bolster or reinforce the material presented in the chapter. In addition, many chapters present a civic engagement-type exercise and discussion questions intended to challenge, engage, and foster student participation in the political system.

The authors undertook this project for several reasons, most notably the high costs of textbooks for students and the lack of college-level scholarship found in most American Government texts. This 375-page, peer-reviewed, edited book that combines traditional material with original scholarship will cost students \$27.99, well below market standards. All of the authors are experienced classroom instructors, subject matter experts, and published researchers in the field of American politics.

### Contemporary Issues in Human Rights Law

This human rights text has been positively-reviewed. It covers concepts in rights, from mechanisms to protect human rights to china's development banks in Asia.



**Includes:** instructor resources, student resources, and summaries.

## Critical Epistemologies of Global Politics

This politics text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in epistemologies of global politics, from decolonial feminism to ontological violence.

**Includes:** instructor resources, student resources, and summaries.

## Critical Perspectives on Migration in the Twenty-First Century

This migration text has been positively-reviewed and has been successfully adopted by other faculty. It covers concepts in 21st-century migration, from human rights to the 2015 migrant crisis.

**Includes:** instructor resources, student resources, and summaries.

## Democracy in Brief

This democracy text covers introductory concepts in democracy, from rights change to political parties.

**Includes:** instructor resources, student resources, and summaries.

## Democratization through the looking glass

This political science text has been positively-reviewed and peer-edited. It covers concepts in democratization, from economics to law.

**Includes:** instructor resources, student resources, and summaries.

## Environment, Climate Change and International Relations

This world international relations text covers introductory concepts in climate politics, from fossil fuel divestment to global climate finance.

**Includes:** instructor resources, student resources, and summaries.

## Global Women's Issues: Women in the World Today

This global politics text has been positively-reviewed and has been successfully adopted by other faculty. It covers concepts in women's political issues, from women and education to the rights of children.

**Includes:** instructor resources, student resources, and summaries.

## International Relations Theory

This libre text on international relations theory text covers introductory concepts in political science. It covers concepts in political science, from constructivism to postcolonialism.

**Includes:** instructor resources, student resources, and summaries.

## Keys to Understanding the Middle East

This Middle-Eastern politics text has been positively-reviewed. It covers introductory concepts in Middle-Eastern politics, from religious identity to stateless nations.

**Includes:** instructor resources, student resources, and summaries.

## Migration and the Ukraine Crisis: A Two Country Perspective

This migration text has been positively-reviewed and has been successfully adopted by other faculty. It focuses on the 2014 Ukraine crisis and the ongoing war for Crimea, covering introductory concepts in migration studies, from geopolitical fault-lines to labour migration.

**Includes:** instructor resources, student resources, and summaries.

## Nationalism, Self-determination and Secession

This text on nationalism covers salient issues in the nation-building using themes of nationalism, self-determination, and secession to tie nation-building in with world politics. It covers introductory concepts in politics, from statehood to national self-determination.

**Includes:** instructor resources, student resources, and summaries.

# Political Ideologies and Worldviews: An Introduction

**Editor:** Valérie Vézina

**Reviewer:** Robert Cahill

**Authors:** Valérie Vézina, Francis Abiew, Jennifer Anaquod, Tyler Chamberlain, Frédérick Guillaume Dufour, Serdar Kaya, Conrad King, Logan Masilamani, Gregory Millard, Ross Pink, Dave Poitras, Étienne Schmitt, Jackie F. Steele, Arjun Tremblay, Serbulent Turan, and John Wright

**Description:** *Political Ideologies and Worldviews: An Introduction* takes a “pluralist” approach and, in addition to being the first open textbook on its subject, also pushes back against the Eurocentric tendencies of standard textbooks by including chapters on Indigenous worldviews and Confucianism. Providing the latest scholarship on “classical ideologies” (liberalism, conservatism, socialism, anarchism, etc.), the textbook also includes innovative chapters on populism, feminism, and multiculturalism, as well as looking at the future of ideologies in a globalized world. Joining together scholars from Canada and beyond, the text also contains discussion questions to help students and readers to think further.

This edited open textbook will be a great asset for introductory courses at the college and university levels on political ideologies and political thought and philosophy, but could also be used in other disciplines, as each chapter assesses the state of the ideology in today’s world. The general reader looking for a better understanding of the competing ideological currents of our time – currents which flow into our daily political debates and real-life government decisions – will also greatly benefit from this book.

## Popular Culture and World Politics: Theories, Methods, Pedagogies

This political science text covers salient issues in popular culture and world politics. It covers concepts in popular culture, from comics to video games.

**Includes:** instructor resources, student resources, and summaries.

## The R2P: Challenges and Opportunities in Light of the Libyan Intervention

This text has been positively-reviewed. It covers the Liberian intervention, from the revolution to peacemaking.

**Includes:** instructor resources, student resources, and summaries.

## Realism in Practice

This politics text covers issues in realism using a practical approach. It covers concepts in realism, from the refugee crisis to peaceful change.

**Includes:** instructor resources, student resources, and summaries.

# The Universal Declaration of Human Rights in the 21st Century: A Living Document in a Changing World

This rights text has been positively-reviewed. It covers concepts in the UDHR, from the conception of the UDHR to the implementation of human rights.

**Includes:** instructor resources, student resources, and summaries.

## 12. Psychology

### Discover Psychology 2.0 – A Brief Introductory Text

As part of the Noba project for free textbooks, this text was written by psychology professor Dr. Diener and his son Dr. Biswas-Diener. The textbook covers all of the material of introductory psychology and combines the works of many contributors.

**Includes:** instructor resources, external resources, applications, discussion questions, and summaries.

### History of Psychology

This module provides an introduction and overview of the historical development of the science and practice of psychology in America. Ever-increasing specialization within the field often makes it difficult to discern the common roots from which the field of psychology has evolved. By exploring this shared past, students will be better able to understand how psychology has developed into the discipline we know today.

### Introduction to Psychology – First Canadian Edition

This textbook is an adaptation of the open Introduction to Psychology book by Charles Stangor, a professor of psychology at the University of Maryland. A psychology professor from Royal Roads University adapted it as part of the B.C. Open Textbook Project and added several case studies, examples, and sections. This textbook, and its original version, have both been successfully adopted and has over a 4.5/5 rating from several professors.

**Includes:** instructor resources, student resources, applications, summaries, case studies, and exercises and critical thinking problems.

### Mind, Body, World – Foundations of Cognitive Science

This textbook emphasizes on introducing the key ideas that serve as the foundations for each school of thought in cognitive science. An attempt is made to consider whether differences among these key ideas can be used to inform conceptions of the cognitive architecture.

# Principles of Social Psychology: 1st International Edition

This sociology text has been positively-reviewed. It covers introductory concepts in sociology, from government and politics to health, medicine, and society.

**Includes:** index, glossary, and exercises.

## Psychology

Author: Rose M. Spielman, PhD

Description: Published by OpenStax College, Psychology is designed to meet the scope and sequence for the single-semester introduction to psychology course. For many students, this may be their only college-level psychology course. As such, this textbook provides an important opportunity for students to learn the core concepts of psychology and understand how those concepts apply to their lives. The authors strive to make psychology, as a discipline, interesting and accessible to students. A comprehensive coverage of core concepts is grounded in both classic studies and current and emerging research, including coverage of the DSM-5 in discussions of psychological disorders. The text incorporates discussions that reflect the diversity within the discipline, as well as the diversity of cultures and communities across the globe.

## Psychology – H5P Edition

**Editors:** Rose M. Spielman, Kathryn Dumper, William Jenkins, Arlene Lacombe, Marilyn Lovett, and Marion Perlmutter

**Description:** *Psychology – H5P Edition* is designed to meet scope and sequence requirements for the single-semester introduction to psychology course. The book offers a comprehensive treatment of core concepts, grounded in both classic studies and current and emerging research. The text also includes coverage of the DSM-5 in examinations of psychological disorders. Psychology incorporates discussions that reflect the diversity within the discipline, as well as the diversity of cultures and communities across the globe.

## Psychology: OpenStax

This OpenStax textbook written by a professor of psychology covers all of the first year psychology concepts. It has been successfully adopted and was written with diversity, both of the discipline and of the students taking the courses, in mind.

**Includes:** applications, instructor resources, student resources, animations and simulations, as well as content, critical thinking, and reflection exercises.

## Research Methods in Psychology: 2nd Canadian Edition

This peer-reviewed open textbook introduces students to the fundamental principles of what it is like to think like a psychology researcher. It connects research being generated in Canada as well as provide an accurate picture of the Canadian context for ethical human research. This textbook is an adaptation of one written by Paul C. Price (California State University, Fresno).

**Includes:** exercises, key takeaways and glossary.

## Think Bayes: Bayesian Statistics Made Simple

This statistics text has been positively-reviewed. It covers introductory concepts in Bayesian statistics, from computational statistics to dimensions.

**Includes:** student resources, summaries, examples, problems, and real-world applications.

## Together: The Science of Social Psychology

This sociology text has been positively-reviewed by peers. It covers introductory concepts in sociology, from the science of social psychology to organizational behaviour.

**Includes:** instructor resources, student resources, summaries, and real-world applications.

## 13. Religions & Cultures

### Philosophy of Western Religions

This is designed for an introductory-level philosophy of religion class. It includes contemporary arguments about the nature and existence of God and religions.

### Studying the Bible: The Tanakh and Early Christian Writings

An introduction to the study of the Bible, its literary forms, and historical and cultural contexts. This textbook examines the Hebrew Bible (also known as the Tanakh) and the early Christian writings of the New Testament.

**Includes:** discussion questions.

### Yale Open Courses

Full courses available. 'All lectures were recorded in the Yale College classroom and are available in video, audio, and text transcript format. Registration is not required and no course credit is available.'



## 14. Sociology & Anthropology

### The Art of Being Human: A Textbook for Cultural Anthropology

This Anthropology textbook has been positively-reviewed by peers. It covers introductory concepts in cultural anthropology, from the fieldwork to the evolution of the art of being human.

**Includes:** challenges to apply anthropological concepts to everyday life for expanded learning.

### Becoming Human

Multi-media site to promote greater understanding of human evolution.

### Beyond Race: Cultural Influences on Human Social Life

This sociology text has been positively-reviewed. It covers introductory concepts in cultural sociology, from culture and meaning to cultural identity.

**Includes:** instructor resources, student resources, summaries, and real-world applications.

### Biological Anthropology (Libre Texts)

This text covers introductory biological anthropology concepts, including evolution theory, non-human primates, and human evolution.

**Includes:** examples.

### Critical Perspectives on Migration in the Twenty-First Century

This migration text has been positively-reviewed and has been successfully adopted by other faculty. It covers concepts in 21st-century migration, from human rights to the 2015 migrant crisis.

**Includes:** instructor resources, student resources, and summaries.

## Cultural Anthropology (American Anthropological Association)

This Anthropology textbook has been positively-reviewed by peers. It covers introductory concepts in Cultural Anthropology, from the development of Anthropological Ideas to the evolution of Health and Medicine.

**Includes:** section questions and glossary of terms.

## edX Online Anthropology Courses

Listing of open classes in anthropology

## Globalization and Labour in the Twenty First Century

This globalization text has been positively-reviewed. It covers introductory concepts in globalization and the human condition, from capitalism to labour in the twenty-first-century.

**Includes:** instructor resources, student resources, and summaries.

## The History of Our Tribe: Hominini

Author: Barbara Helm Welker

Description: Where did we come from? What were our ancestors like? Why do we differ from other animals? How do scientists trace and construct our evolutionary history? The History of Our Tribe: Hominini provides answers to these questions and more. The book explores the field of paleoanthropology past and present. Beginning over 65 million years ago, Welker traces the evolution of our species, the environments and selective forces that shaped our ancestors, their physical and cultural adaptations, and the people and places involved with their discovery and study. It is designed as a textbook for a course on Human Evolution but can also serve as an introductory text for relevant sections of courses in Biological or General Anthropology or general interest. It is both a comprehensive technical reference for relevant terms, theories, methods, and species and an overview of the people, places, and discoveries that have imbued paleoanthropology with such fascination, romance, and mystery.

## Introduction to Human Osteology

This anthropology text has been positively-reviewed. This text covers introductory human osteology concepts.

**Includes:** diagrams and glossary.

## Introduction to Sociology

Author: Heather Griffiths, Fayetteville State University, Nathan Keirns, Zane State College, Eric Strayer, Hartnell College, Susan Cody-Rydzewski, Georgia Perimeter College, Sally Vyain, Ivy Tech Community College, Gail Scaramuzzo, Lackawanna College, Jeff Bry, Minnesota State Community and Technical College at Moorhead, Faye Jones, Mississippi Gulf Coast Community College, Tommy Sadler, Union University

Description: Introduction to Sociology 2e adheres to the scope and sequence of a typical, one-semester introductory sociology course. It offers comprehensive coverage of core concepts, foundational scholars, and emerging theories. The textbook presents section reviews with rich questions, discussions that help students apply their knowledge, and features that draw learners into the discipline in meaningful ways. The second edition has been updated significantly to reflect the latest research and current, relevant examples.

## Introduction to Sociology – 2nd Canadian Edition

This sociology text has been positively-reviewed. It covers introductory concepts in sociology, from sociological research to government and politics.

**Includes:** instructor resources, student resources, summaries, and real-world applications.

## MERLOT: Anthropology

An online collection of Anthropology teaching and learning resources.

## MIT OpenCourseWare: Anthropology

## MIT OpenCourseWare: History

## OER Commons: Anthropology

Free courses, modules, materials.

## OpenStax (aka Connexions) Anthropology

Connexions is one of the most popular open education sites in the world. Its more than 17,000 learning objects or

modules in its repository and over 1000 collections (textbooks, journal articles, etc.) are used by over 2 million people per month.

## Organizational Behaviour

This lumen learning course on organizational behaviour is a great introductory resource. It covers concepts in organizational behaviour, from demographic and cultural diversity to power and politics.

**Includes:** videos, student resources, summaries, and diagrams.

## Perspectives: An Open Invitation to Cultural Anthropology

Author: Society for Anthropology in Community Colleges

Description: This textbook is a collection of chapters on the essential topics in cultural anthropology. Different from other introductory textbooks, this book is an edited volume with each chapter written by a different author. Each author has written from their experiences working as an anthropologist and that personal touch makes for an accessible introduction to cultural anthropology.

## Physical Anthropology

This anthropology text covers introductory concepts in physical anthropology, from anthropology and culture, social institutions, and globalization, modernization and development.

**Includes:** diagrams.

## Principles of Sociological Inquiry: Qualitative and Quantitative Methods

This sociology text has been positively-reviewed. It covers introductory concepts in sociological methods.

**Includes:** index, glossary, and exercises.

## Sociology: Understanding and Changing the Social World

This sociology text has been positively-reviewed. It covers introductory concepts in sociology, from government and politics to health, medicine, and society.

**Includes:** index, glossary, and exercises.

# Teaching Autoethnography: Personal Writing in the Classroom

Author: Melissa Tombro

Description: Teaching Autoethnography is dedicated to the practice of immersive ethnographic and autoethnographic writing that encourages authors to participate in the communities about which they write. This book draws not only on critical qualitative inquiry methods such as interview and observation, but also on theories and sensibilities from creative writing and performance studies, which encourage self-reflection and narrative composition. Concepts from qualitative inquiry studies, which examine everyday life, are combined with approaches to the creation of character and scene to help writers develop engaging narratives that examine chosen subcultures and the author's position in relation to her research subjects. The book brings together a brief history of first-person qualitative research and writing from the past forty years, examining the evolution of nonfiction and qualitative approaches in relation to the personal essay. A selection of recent student writing in the genre as well as reflective student essays on the experience of conducting research in the classroom is presented in the context of exercises for coursework and beyond. Also explored in detail are guidelines for interviewing and identifying subjects and techniques for creating informed sketches and images that engage the reader. This book provides approaches anyone can use to explore their communities and write about them first-hand. The methods presented can be used for a single assignment in a larger course or to guide an entire semester through many levels and varieties of informed personal writing.

## Together: The Science of Social Psychology

This sociology text has been positively-reviewed by peers. It covers introductory concepts in sociology, from the science of social psychology to organizational behaviour.

**Includes:** instructor resources, student resources, summaries, and real-world applications.

## Utah State: Cultural Anthropology

## Wikibooks: Cultural Anthropology

Includes editable, printable version.

## Wikimedia Commons

Over 14 million contributed media files — free to use. Use the Community Portal to learn more about uploading and using files



PART II  
FACULTY OF SCIENCE





# 15. Biology

## Allied Health Microbiology

**Author:** OpenStax

**Description:** The Microbiology OpenStax textbook has been modified to be a better fit for an Allied Health Microbiology class offered in a 10-week term (as opposed to a semester structure). Whole chapters have been removed, as well as individual sections within remaining chapters. Text portions with unwarranted detail have been modified to streamline the information being presented. In the chapters focusing on specific diseases, only select diseases have been highlighted, to reduce the overall amount of information being covered in the modified textbook. Any figures or tables accompanying the eliminated sections have been removed as well.

## Biochemistry Free For All

**Authors:** Kevin Ahern, Indira Rajagopal, and Taralyn Tan

**Description:** We are happy to welcome you to our second Open Educational Resource (OER) textbook, Biochemistry Free For All. Biochemistry is a relatively young science, but its rate of growth has been truly impressive. The rapid pace of discoveries, which shows no sign of slowing, is reflected in the steady increase in the size of biochemistry textbooks. Growing faster than the size of biochemistry books have been the skyrocketing costs of higher education and the even faster rising costs of college textbooks. These unfortunate realities have created a situation where the costs of going to college are beyond the means of increasing numbers of students.



With this in mind, KGA and IR created, in 2012, a free, electronic book for introductory biochemistry, Biochemistry Free and Easy. That book was met with extraordinary enthusiasm, with over 175,000 downloads from around the world and adoption for use for several courses across the country. At OSU, we use the book for a basic course, taught over one quarter. In 2013, Oregon State University rolled out a new open textbook initiative, in partnership with OSU Libraries, OSU Press and Open Oregon State, with the mission of partnering with faculty to create open, online educational resources. Our proposal to create a biochemistry book that could be used for courses needing greater depth and breadth of coverage was chosen as one of the first projects of the Open Textbook initiative. As a result, we were able to draw on the technical expertise of several multimedia specialists for our interactive learning modules, and to hire a talented group of students to make figures, where suitable open source illustrations were not available. We also enlisted our third author, Dr. Taralyn Tan, a former student, who designed and oversaw the creation of the interactive modules. As an OER, this book is free for anyone to use, modify, adapt, etc. for free educational purposes. It may not be used for profit-making, or where any fee is required for its use. We are providing all of the figures in this book free of cost to anyone wishing to use them for free educational purposes. Helping students understand and enjoy biochemistry (without going broke) is our primary motivation for writing this book. We have aimed to provide a more thorough coverage of topics than in Biochemistry Free and Easy, but we do not aim to provide an encyclopedic biochemistry tome covering content that no instructor would fully cover in a single course. Neither do we aim to be the “go to” source for information on biochemistry. This is not a reference work. Consequently, we have focused on core concepts with key information. Descriptions are kept brief and to the point. Between us, we have over forty years of teaching biochemistry, and our experience is that more information does not translate to better learning. However, this does not mean that students will be shortchanged in using this book. We have used the Foundational Concepts defined by the American Society for Biochemistry and Molecular Biology (ASBMB) and the associated learning goals as our guide in choosing and organizing the information presented. For immediate access, this book may be downloaded as an iPad version or in PDF format. All formats of the book (and Powerpoint files), along with other biochemistry OER materials, are found at the Biochemistry Free and Easy site.

## Biology

**Author:** Yael Avissar, Rhode Island College, Jung Choi, Georgia Institute of Technology, Jean DeSaix, University of North Carolina, Vladimir Jurukovski, Suffolk County Community College, Robert Wise, University of Wisconsin, Connie Rye, East Mississippi Community College

**Description:** Published by OpenStax College, Biology is designed for multi-semester biology courses for science majors. It is grounded on an evolutionary basis and includes features that highlight careers in the biological sciences and everyday applications of the concepts at hand. To meet the needs of today’s instructors and students, some content has been strategically condensed while maintaining the overall scope and coverage of traditional texts for this course. Instructors can customize the book, adapting it to the approach that works best in their classroom. Biology also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand—and apply—key concepts.

## Biology I & Biology II

These texts were developed through Lumen Learning to provide a solid biological foundation for non-science students.

**Includes:** instructor resources, student resources, applications, and summaries.

## Biology 2e

Biology 2e is an OpenStax biology textbook with all of the concepts covered in two terms of first year biology. It was written by biology professors from several American institutions and is faculty-reviewed.

**Includes:** instructor resources, slides, simulations, applications, summaries, exercises, and solutions.

## Biology for Majors I & Biology for Majors II

These texts were created through Lumen Learning to provide an expansive overview of introductory biology for science students. The broad and specific approaches within these texts provides academic freedom for instructors and provides the necessary information for students.

**Includes:** applications, instructor resources, exercises, assignments, and solutions.

## Biology Open Educational Resources

This UK site includes resources produced by students!

## Cell Biology, Genetics, Molecular Biology, Evolution and Ecology

This textbook has been successfully adopted. It should be noted that it was written in the context of Indian universities and has a dedicated section to Indian ecology; however, it is a high-quality resource that covers all of the necessary concepts.

**Includes:** exercises.

## Chemical Biology & Biochemistry Laboratory Using Genetic Code Expansion Manual

**Authors:** Ryan Mehl, Kari van Zee, and Kelsey Kean

**Description:** Throughout this manual, you will find asides, entitled “Deep Thoughts,” on a variety of different topics. These are intended to guide you to develop a deeper understanding of your project and of the techniques you are using as well as to provide some things to consider when designing your experiment, analyzing your results, and carrying out various steps of this laboratory. These suggestions are by no means exhaustive but are intended to help you think critically about what you are doing and guide your design and thought process.

# Concepts of Biology – First Canadian Edition

This textbook was designed as an introductory biology course for non-science students. It has been successfully adopted and it was written by professors of biology.

**Includes:** instructor resources, student resources, simulations, summaries, exercises, and solutions.

## Environmental Biology

**Author:** Matthew R. Fisher, Editor, Open Oregon

**Description:** Environmental Biology enables students to develop a nuanced understanding of today's most pressing environmental issues. This text helps students grasp the scientific foundation of these issues so that they can better understand the world around them and their impact upon it. This open textbook covers the most salient environmental issues, from a biological perspective. The text is designed for an introductory-level college science course. Topics include the fundamentals of ecology, biodiversity, pollution, climate change, food production, and human population growth.

## Foundations of Neuroscience

**Author:** Casey Henley

**Description:** *Foundations of Neuroscience* is aimed at undergraduate students new to the field of neuroscience. The first edition specifically targets students enrolled in Neurobiology at Michigan State University and primarily contains topics covered in that course. For example, only three sensory systems are discussed in this version of the text. Future editions will continue to expand the number of topics and concepts presented.

This OER is unique in its presentation of neuroscience content. The text is divided into short, easily digestible chapters that focus on one concept. Pairing the text with images, animations, and videos provides students with multiple ways of learning the content. The text is written with the undergraduate student that is new to neuroscience in mind. Neuroscience terminology is introduced in an easy-to-understand manner, and supporting content is clear and concise to minimize cognitive load not associated with understanding new material.

Each chapter ends with an interactive quiz for student self-evaluation of the content. Quiz questions provide feedback, so students can self-check their understanding at the end of each concept and receive immediate feedback about their learning.

## From Growing to Biology: Plants 1e

**Author:** Gokhan Hacisalihoglu

**Description:** Ready to find out how plants are grown and function? Take a fantastic voyage through plants. From Growing to Biology: Plants 1e brings the latest information for understanding of traditional and modern plant growing, form, and production. Topics covered in 30 chapters include concise and up-to-date 'big picture' infographics, student learning outcomes (SLOs), key vocabulary, assessment, as well as identification of 120 species, and more. Moreover, author Dr. G. Hacisalihoglu emphasizes on learning concepts, binding those concepts together with a visual approach.

to make learning faster and more memorable.

From Growing to Biology: Plants 1e is packed full of horticultural information that is ideal for both academia and industry growers. It is basic enough that if you are just getting started learning plants, you will be able to catch up. Always remember that practice makes permanent and keep going to take your learning plant bio to new levels.

## HHMI's BioInteractive

Video, lectures, animation, interactive exploration, interactive online labs, and more from the Howard Hughes Medical Institute.

## Human Biology

**Author:** Christine Miller

**Description:** This textbook is ideal for an introductory level Human Biology course. It is aligned with the British Columbia Adult Basic Education learning outcomes for Provincial Level Biology, which is the equivalent of Grade 12 Anatomy and Physiology. This textbook begins with an introduction to sciences and the scientific method, and then addresses the human body in increasing scale: from biological molecules, to cells and tissues, to organs and all eleven organ systems; with an overarching focus on health. The text employs clear writing, case studies for each chapter, interactive self-marking study activities, highlights of Indigenous knowledge and examples, pop-up glossary, and links to resources for extending learning.

## An Interactive Introduction to Organismal and Molecular Biology

**Author:** Andrea Bierema

**Description:** This “textbook” is interactive, meaning that although each chapter has text, they also have interactive HTML5 content, such as quizzes, simulations, interactive videos, and images with clickable hotspots. Students receive instant feedback when they complete the interactive content, and therefore, can learn and check their understanding all in one place. The first unit introduces students to the nature of science, including scientific controversies, and information literacy, including how to analyze literature and identify stakeholders. Unit 2 is organismal biology, including carbon cycling and population growth, and unit 3 is molecular biology with a focus on gene expression.

## Khan Academy

Biology

Boost your understanding of most biology topics you will study in high school or freshman college year.

# Microbiology

**Author:** Nina Parker, Shenandoah University , Mark Schneegurt, Wichita State University, Anh-Hue Thi Tu, Georgia Southwestern State University, Brian M. Forster, Saint Joseph's University, Philip Lister, Central New Mexico Community College

**Description:** Microbiology covers the scope and sequence requirements for a single-semester microbiology course for non-majors. The book presents the core concepts of microbiology with a focus on applications for careers in allied health. The pedagogical features of the text make the material interesting and accessible while maintaining the career-application focus and scientific rigor inherent in the subject matter. Microbiology's art program enhances students' understanding of concepts through clear and effective illustrations, diagrams, and photographs. Microbiology is produced through a collaborative publishing agreement between OpenStax and the American Society for Microbiology Press. The book aligns with the curriculum guidelines of the American Society for Microbiology.

# MIT OpenCourseWare

Biology

Undergraduate and graduate level course materials.

# A Mixed Course-Based Research Approach to Human Physiology

**Author:** Karri Haen Whitmer

**Description:** The Biology 256 Laboratory course was designed to provide students with hands-on access to modern techniques in human physiological analyses using the course-based research pedagogical approach. In this course, students will learn how to perform literature searches; generate research questions and hypotheses; design experiments; collect, analyze, visualize and interpret data; and present scientific findings to others. The Biol 256L curriculum offers a high-impact human physiology experience that fosters the critical thinking skills required to be a successful citizen in a modern world filled with misinformation.

# National Science Foundation

Biology

Projects, research, grant information, media, classroom resources, and much more.

# Neuroscience: Canadian 1st Edition Open Textbook

**Author:** Dr William Ju

**Editors:** Georgia Bains, Ingrid Barany, Maksym Shcherbina, and Summer Lee

**Description:** Neuroscience: Canadian 1st Edition Open Textbook is a comprehensive source that examines the nervous system, neurodegeneration, techniques in studying neuroscience and emerging topics in the field.

## Neuroscience: Canadian 2nd Edition

**Author:** Dr William Ju

**Editors:** Georgia Bains, Ingrid Barany, Maksym Shcherbina, and Summer Lee

**Description:** Neuroscience: Canadian 2nd Edition Open Textbook is a comprehensive source that examines the nervous system, neurodegeneration, techniques in studying neuroscience and emerging topics in the field.

## Ocean Portal

The science of the Ocean, from the Smithsonian National Museum of Natural History. “Our Ocean Portal Educators’ Corner provides you with activities, lessons and educational resources to bring the ocean to life for your students.”

## OER Commons: Biology

## OpenStax (aka Connexions) Science and Technology

Connexions is one of the most popular open education sites in the world. Its more than 17,000 learning objects or modules in its repository and over 1000 collections (textbooks, journal articles, etc.) are used by over 2 million people per month.

## Open Textbooks Library: Biology

## PhET: Biology

Interactive simulations in Biology from the University of Colorado at Boulder.

## PLOS: Open for Discovery

PLOS (Public Library of Science) is a nonprofit publisher and advocacy organization founded to accelerate progress in



science and medicine by leading a transformation in research communication. Journals and articles, all CC licensed.

## A Primer for Computational Biology

**Author:** Shawn T. O'Neil

**Description:** *A Primer for Computational Biology* aims to provide life scientists and students the skills necessary for research in a data-rich world. The text covers accessing and using remote servers via the command-line, writing programs and pipelines for data analysis, and provides useful vocabulary for interdisciplinary work.

## Quantitative Ecology: A New Unified Approach

**Authors:** Clarence Lehman, Shelby Loberg, and Adam Clark

**Description:** Quantitative Ecology introduces and discusses the principles of ecology from populations to ecosystems including human populations, disease, exotic organisms, habitat fragmentation, biodiversity and global dynamics. The book also reformulates and unifies ecological equations making them more accessible to the reader and easier to teach.

## Species-Habitat Associations: Spatial data, predictive models, and ecological insights

**Authors:** Jason Matthiopoulos, John Fieberg, and Geert Aarts

**Description:** This book represents the first milestone of a live project. Future editions of this book will see chapters on model transferability, data integration, exemplar analyses of survey and telemetry data, dedicated R functions, links to population modelling, occupancy modelling, as well as non-linear and mechanistic modelling. A copy of the book, which we plan to continuously update (with new versions in the future) can also be accessed in gitbook format at: <https://bookdown.org/jfieberg/SHABook/>.

## Yale Open Courses

Full courses available. 'All lectures were recorded in the Yale College classroom and are available in video, audio, and text transcript format. Registration is not required and no course credit is available

# 16. Chemistry and Biochemistry

## Atoms First / OpenStax

Authors: Paul Flowers, Edward J. Neth, William R. Robinson, Klaus Theopold, and Richard Langley

Description: *Chemistry: Atoms First 2e* is a peer-reviewed, openly licensed introductory textbook produced through a collaborative publishing partnership between OpenStax and the University of Connecticut and UConn Undergraduate Student Government Association. This text is an atoms-first adaptation of OpenStax *Chemistry 2e*. The intention of “atoms-first” involves a few basic principles: first, it introduces atomic and molecular structure much earlier than the traditional approach, and it threads these themes through subsequent chapters. This approach may be chosen as a way to delay the introduction of material such as stoichiometry that students traditionally find abstract and difficult, thereby allowing students time to acclimate their study skills to chemistry. Additionally, it gives students a basis for understanding the application of quantitative principles to the chemistry that underlies the entire course. It also aims to center the study of chemistry on the atomic foundation that many will expand upon in a later course covering organic chemistry, easing that transition when the time arrives.

The second edition has been revised to incorporate clearer, more current, and more dynamic explanations, while maintaining the same organization as the first edition. Substantial improvements have been made in the figures, illustrations, and example exercises that support the text narrative.

## The Basics of General, Organic, and Biological Chemistry

This peer-reviewed open textbook was developed to suit a one-semester General, Organic and Biological Chemistry course.

**Includes:** Test questions following examples, end-of-chapter exercises.

## Biochemistry 551 (Online Version) Lab Manual

Author: Lynne PROST

Description: Biochemistry 551 is an integrated lecture, lab and seminar course that covers biochemistry-centered theory and techniques. The course is designed for upper-level undergraduate students majoring in Biochemistry. Students learn how to apply a broad range of biochemical, genetic, and physical techniques to modern biochemical research. Students also learn how to analyze and interpret the primary scientific literature, develop an understanding of the communication of data, and connect biochemical techniques to basic research.

Lectures introduce concepts and theory that are subsequently explored in detail in experiments. The virtual labs are designed to provide experience with techniques that are used in modern biochemical research through interactive online activities. The curriculum incorporates a research project beginning with the PCR amplification and cloning of the *HCAII* gene, which codes for the enzyme human carbonic anhydrase II (HCAII). As the semester progresses, students explore how to overexpress, purify and assay wild type and mutant HCAII protein. Experiments covered include PCR, spectrophotometry, gel electrophoresis, protein overexpression and purification, enzyme assays and fluorescence

spectroscopy. Several times during the semester, at-home lab experiments are incorporated to provide hands-on experience to supplement student understanding of the virtual labs.

## Chemistry 109 Fall 2021

Authors: John Moore, Jia Zhou, and Etienne Garand

Description: This online learning system been created specifically to support you in Chemistry 109 at the University of Wisconsin-Madison. It is more than a textbook and includes more than chemistry. We hope that it helps you learn chemistry and learn how to succeed in this and other challenging courses.

## Chemistry: Atoms First

This OpenStax textbook was developed with chemistry professors and a pedagogical approach, with Chemistry OpenStax as the foundation. As the name suggests, this text uses an “atoms first” approach to the subject which involves the introduction of atomic and molecular structure at the beginning of the course material. This text has been successfully adopted.

**Includes:** instructor resources, exercises, solutions, simulations, and summaries.

## Chemistry: The Central Science (Map)

This LibreText resource follows the published Chemistry: The Central Science textbook by Brown et al. but is under a Creative Commons license.

**Includes:** exercises, solutions, summaries, and simulations.

## Chemistry: OpenStax

This text was the precursor to the Atoms First book. This text covers the same concepts but through a different approach. This resource has been successfully adopted and adapted.

**Includes:** instructor resources, student resources, applications, summaries, exercises, and solutions.

## CLUE: Chemistry, Life, the Universe and Everything

Authors: Melanie Cooper and Michael Klymkowsky

Description: Chemistry, Life the Universe and Everything (CLUE) is a transformed general chemistry curriculum, developed by an interdisciplinary team of a chemist and a molecular biologist, that aims to bring about evidence-

based change in general chemistry. General Chemistry is a gateway course for many students intending on careers in scientific, engineering, and health care-related disciplines. While there have been many attempts to improve the outcomes for these students, little has changed over the past 60 years. Recent transformation efforts have focused primarily on incorporating student engagement techniques into the course, rather than considering what it is that is important for students to learn. CLUE is different. CLUE was developed using a design research approach that focuses on scaffolded progressions around four core ideas: structure and properties, bonding and interactions, energy, and change and stability. The course emphasizes causal mechanistic reasoning in order to help students move beyond knowing that, to knowing how and knowing why chemical phenomena occur.

## Exploring the Physical World: Introductory Chemistry and Physics

Authors: N. Gergel-Hackett, Zachary Zintak, and Marin Higgins

Description: This is a physical science text intended for non-science majors that covers introductory chemistry and physics topics. Below are descriptions of the content found under different headings throughout the text, and how it is recommended that the reader approaches these sections.

**Check Your Learning** – Sections that begin with this subtitle are meant to gauge your understanding of the material. They usually include practice problems or comprehension questions, and it is highly recommended that you attempt to solve these without looking at the answer first.

**LINK TO LEARNING** – Sections that begin with this subtitle include links to simulations or websites that are included to apply and reinforce your knowledge of the topic. It is recommended that you follow directions (if given) on what to try within the simulations, but also that you investigate and explore the simulations on your own. Try to find concepts in the simulation that make more sense after reading about the physical or chemical science behind it.

Important Equations, Units, Concepts and Formulas can be found in the final section of the text, as well as their respective chapters.

## First Year General Chemistry

Author: Michael Mombourquette

Description: Think of learning Chemistry like learning a language. In language courses, some students will memorize vocabulary and grammar rules and will succeed to a middling grade. Others will take the language to heart, internalizing nuances and connections to the point that the memorized aspects are second nature and they will be able to go beyond what the prof has taught. These latter students will have the greatest success. The same holds in Chemistry. We want you to do more than just learn a few equations and how to use them. We want you to be able to answer questions in ways you've never seen before. We want you to be fluent in the language of chemistry.

You will find that topics are often strongly inter-related in this course. If you fail to learn a key concept early in the course, you will find it to be that much harder to grasp a dependent concept later on. Many students have done well in high school by cramming at the end of the year. In courses where you simply have to memorize relatively unrelated material. That method *may* work for you. In first-year university chemistry, you will face questions on your exams that force you to pull together concepts in ways you've never quite seen before in the course. Without a thorough understanding of why and how each concept works and how multiple concepts are connected, you'll never be able to pull together the necessary ideas on your exam and you will find yourself "drawing a blank" on your exams far more often than you think possible right now. In my experience, 'drawing a blank' is code for 'didn't practice this enough'.

# Foundations of Chemical and Biological Engineering I

Authors: Jonathan Verrett, Rosie Qiao, and Rana A. Barghout

Description: The goal of this textbook is to introduce you to the foundational topics of chemical engineering. This textbook will give you a good basic understanding of a number of chemical engineering concepts, which you can take with you as you progress in your engineering degree and career.

## General Chemistry – Lecture & Lab

Author: Dolores Aquino

Description: This course provides an opportunity for students to learn the core concepts of chemistry and understand how those concepts apply to their lives and the world around them, meeting the scope and sequence of most general chemistry courses.

## Inorganic Chemistry for Chemical Engineers

Authors: Vishakha Monga, Paul Flowers, Klaus Theopold, William R. Robinson, and Richard Langley

Description: This open access book has been specifically adapted for CHEM 250, an interdisciplinary inorganic chemistry course at UBC-V, for Chemical Engineering students. The main objective of this book is to introduce students to the basic principles of inorganic chemistry and link them with current applications relevant to a chemical engineer. It is a comprehensive online resource for 2nd year undergraduate students everywhere as it will be available under the creative commons license and will be widely available in OER catalogues.

## CHEM 1114 – Introduction to Chemistry

Authors: Shirley Wacowich-Sgarbi and Langara Chemistry Department

Description: CHEM 1114 – Introduction to Chemistry is designed for a one-semester introductory chemistry course. For many students, this course provides their first introduction to chemistry. As such, this textbook provides an important opportunity for students to learn some of the core concepts of chemistry and understand how those concepts apply to their lives and the world around them. The text has been developed to meet the scope and sequence of most introductory chemistry courses, including an initial emphasis on the skills required (chapter 1 and 2) for the laboratory portion of the course.

## Introductory Chemistry – First Canadian Edition

This text is an adaptation of David W. Ball's Introductory Chemistry open textbook that was developed by a chemistry

professor at Vancouver Island University as part of the B.C. Open Textbook Project. This text has been successfully adopted and includes over 20 additional sections.

**Includes:** instructor resources, exercises, solutions, examples, and summaries.

## Introductory Chemistry – 1st Canadian / NSCC ALP Edition

Authors: David W. Ball and Jessie A. Key

Description: The goal of this textbook is not to make you an expert. True expertise in any field is a years-long endeavor. Here I will survey some of the basic topics of chemistry. This survey should give you enough knowledge to appreciate the impact of chemistry in everyday life and, if necessary, prepare you for additional instruction in chemistry. Throughout each chapter, I present two features that reinforce the theme of the textbook—that chemistry is all around you. The first is a feature titled, appropriately, “Chemistry Is Everywhere.” “Chemistry Is Everywhere” focuses on the personal hygiene products that you may use every morning: toothpaste, soap, and shampoo, among others. These products are chemicals, aren’t they? Ever wonder about the chemical reactions that they undergo to give you clean and healthy teeth or shiny hair? I will explore some of these chemical reactions in future chapters. But this feature makes it clear that chemistry is, indeed, everywhere. The other feature focuses on chemistry that you likely indulge in every day: eating and drinking. In the “Food and Drink App,” I discuss how the chemistry of the chapter applies to things that you eat and drink every day. Carbonated beverages depend on the behavior of gases, foods contain acids and bases, and we actually eat certain rocks. (Can you guess which rocks without looking ahead?) Cooking, eating, drinking, and metabolism—we are involved with all these chemical processes all the time. These two features allow us to see the things we interact with every day in a new light—as chemistry.

## Introductory Chemistry – Lecture & Lab

Author: Jose Nunez

Description: This course provides an opportunity for students to learn the core concepts of chemistry and understand how those concepts apply to their lives and the world around them, meeting the scope and sequence of most general chemistry courses.

## Introductory Organic Chemistry

Author: Carol Higginbotham

Description: *Introductory Organic Chemistry* is intended for use as a text in a single-term organic chemistry course as part of a one-year Introductory Chemistry course series, also known as a General, Organic and Biological Chemistry (GOB) course series. The text was produced with the specific objective of making an openly-available text for the course CH105 Introduction to Chemistry 2: Organic Chemistry at Central Oregon Community College. The audience for this book is likely to include students majoring in fields outside of the Sciences but who need or want some specific knowledge of the subdiscipline of Organic Chemistry. This will include students in pre-health fields, but also possibly students interested in Natural Resources, Agriculture or Business. The objective is to provide students with an exposure to core ideas of the subject without deep involvement in synthesis problems or organic mechanisms. *Introduction*

to *Chemistry* is a derivative of the open text *Organic Chemistry with a Biological Emphasis*, by Timothy Soderberg, Associate Professor Emeritus at the University of Minnesota Morris. This text is cut back dramatically from what is offered by the Soderberg text, but includes sections of text and graphics drawn directly from that source.

## Introduction to Chemistry

Author: Carol Higginbotham

Description: Introduction to Chemistry is designed for a one-term introductory chemistry course. For many students, this course provides their first and what may be their only academic introduction to chemistry. As such, this textbook provides an important opportunity for students to learn some core concepts of chemistry and understand how those concepts apply to their lives and the world around them.

## MIT OpenCourseWare: Chemical Engineering

Undergraduate and graduate course materials.

## MIT OpenCourseWare: Chemistry

Undergraduate and graduate level course materials.

## OCLUE: Organic Chemistry, Life, the Universe & Everything

Authors: Melanie M. Cooper and Michael W. Klymkowsky

Description: The essence of organic chemistry is how carbon atoms interact with other atoms and groups of atoms to produce an astounding array of complex and interesting molecules. The basics of bonding and intermolecular interactions are introduced in the general chemistry version of CLUE (Chemistry, Life, the Universe & Everything), along with how the structure of a molecule affects its properties, how the energy changes associated with chemical and physical changes can be predicted and explained, and how chemical systems can be stabilized or perturbed by changing conditions. These four core ideas (structure-property relationships, bonding and interactions, energy, and stability, and change) are continued on into OCLUE and are deepened and expanded as we discover and explain ever more complex chemical systems.

## Organic Chemistry I

Author: Xin Liu

**Description:** An open textbook that is suitable for the first semester of Organic Chemistry. Basic concepts of the structures and reactivities of organic molecules are covered in this open textbook. Besides the fundamental discussions of organic acids-bases, stereochemistry, IR and NMR, this book also includes the topics of substitution and elimination reactions, radical substitution of alkanes, preparation and reactions of alkenes and alkynes.

## PhET: Chemistry

Interactive simulations in Chemistry from the University of Colorado at Boulder.

## Yale Open Courses

Full courses available. 'All lectures were recorded in the Yale College classroom and are available in video, audio, and text transcript format. Registration is not required and no course credit is available.'



# Sustainability: A Comprehensive Foundation

This text has been positively-reviewed and is intended for both a broad-based introductory class on sustainability and as a supplement to specialist courses with a dimension on sustainability in their areas of study. As sustainability is a multidisciplinary area of study, the text is the product of multiple authors drawn from the diverse faculty of the University of Illinois: each chapter is written by a recognized expert in the field.

# 18. Environmental Science

## Environmental Science: A Canadian Perspective

By Bill Freedman, Dalhousie University

### Environmental ScienceBites

**Editors:** Kylienne A. Clark, Travis R. Shaul, and Brian H. Lower

**Contributors:** Sydney R. Morrison, Sydney R. Morrison, Jaymes T. StClair, Jaymes T. StClair, Levi J. Cramer, Levi J. Cramer, Alyssa M. Jones, Alyssa M. Jones, Brittany L. Sulainis, Brittany L. Sulainis, Jeremie E. Beaverstock, Jeremie E. Beaverstock, Amanda L. Varcho, Amanda L. Varcho, Kelly E. Peterson, Kelly E. Peterson, Chayli T. Buenger, Chayli T. Buenger, Wyatt T. Susich, Wyatt T. Susich, Chris Ebersole, Chris Ebersole, Brandon S. Wator, Brandon S. Wator, John A. Zagar, John A. Zagar, Jace A. Ball, Jace A. Ball, Lee Seitz, Lee Seitz, Benjamin W. Schumann, Benjamin W. Schumann, Mason F. Ye, Mason F. Ye, Alyssa M. Zearley, Alyssa M. Zearley, Cain W. Crouse, Cain W. Crouse, Allyson E. Loparo, Allyson E. Loparo, Rika L. Bailey, Rika L. Bailey, Emily C. Mills, Emily C. Mills, Andrew T. Wood, Lydia F. Bednarski, Lydia F. Bednarski, Samantha K. Runser, and Samantha K. Runser

**Description:** This book was written by undergraduate students at The Ohio State University (OSU) who were enrolled in the class Introduction to Environmental Science. The chapters describe some of Earth's major environmental challenges and discuss ways that humans are using cutting-edge science and engineering to provide sustainable solutions to these problems. Topics are as diverse as the students, who represent virtually every department, school and college at OSU. The environmental issue that is described in each chapter is particularly important to the author, who hopes that their story will serve as inspiration to protect Earth for all life.

All of the chapters in this book were written by first-time authors. In writing these chapters, our students learned a great deal about the publication process. They learned: (1) How to find information from primary and secondary sources and critically evaluate topics, issues, results and conclusion. (2) How scientific research is conducted and how results and conclusions are reported to the public so that people can make more informed decisions in their own lives. (3) That the peer-review evaluation system is an integral part of the scientific process, which enables scientists to maintain high quality standards and provides credibility to research and scholarly works. And (4) that peer reviews are a necessary part of the writing process because it focuses attention on particular details and considers the input of an actual audience.

### Environmental ScienceBites Volume 2

**Editors:** Brian H. Lower, Travis R. Shaul, Kylienne A. Shaul, and Ella M. Weaver

**Contributors:** Ashley A. Neal, Brianna N. VanNoy, Christopher T. Hauer, Claire M. Beck, Delia A. Randolph, Hannah J. Kraus, Hannah L. Fein, Henry A. Miller-Davis, Jason Cochran, Jennifer L. Satterfield, Julia E. Kemerer, Kaitlyn E. Kelly, Katherine A. Clark, Katie A. Quinlin, Katie E. Fineran, Kristin J. Harpster, Kyleigh T. Godsey, Lauren E. Younkin, Leslie M. Beauchamp, Lindsey A. Krusling, Mara N. Nebraska, Melissa L. Dick, Michael S. Schaal, Mitchell J. Johnson, Nathan M. Watson, Paul Acheson, Rachel E. J. Dalke, Rebecca L. Sallade, Sabrina C. Mazyck, and Tiana L. Ahmed

**Description:** This book was written by undergraduate students who were enrolled in the course “Introduction to Environmental Science”, taught at The Ohio State University. All of the students featured in this book are first-time authors and represent nearly two-dozen departments within Ohio State.

This 2nd edition of ScienceBites is broken into five distinct chapters: (i) invasive species, (ii) human-wildlife conflict, (iii) pollution, (iv) climate change and (v) sustainability. Each chapter contains five articles and one poster, each authored by a unique undergraduate student, for a total of 30 contributing student authors. Each work describes an environmental challenge and explores ways that humans are using cutting-edge research to come up with solutions to these problems. Each author has chosen a topic that is of personal importance.

Our goal for this book is to highlight the creative work of our students and to publish a free resource that can be used by other students who are interested in learning more about environmental science. We hope that these articles serve as an inspiration to preserve and protect Earth for all life. We are very proud of the work of our student authors and hope that this book will serve as encouragement for others.

## Future Energy: Opportunities & Challenges

**Author:** Thomas W. Kerlin

**Description:** A revolution in energy production and use is upon us. Huge changes are starting to rumble through our lives. We cannot avoid these changes, but we can manage them if we approach them in an informed way. Our current dependence on fossil fuels for most of our energy must be reduced or eliminated because of resource depletion and the environmental effects of fossil fuel combustion.

This book offers no prescriptions for achieving a desirable energy future. Instead, it presents the scientific and technical information needed to evaluate our options for intelligent energy production and use. Everyone uses energy, and many are appropriately concerned about future energy cost, availability, and environmental impact. Some are content to rely on what the “experts” tell them. Others want to know enough about how energy systems work to be able to make their own assessments. Serving this group is the focus of this book.

In order to understand energy production and use, it is necessary to build on a foundation of indisputable facts. This requires some consideration of basic science, but nothing beyond that science which is taught in high schools. Science tells us what is possible and, probably more importantly, what is impossible. Science also provides the framework for obtaining quantitative evaluations of possibilities in energy production and use. Without a basis in science, and without the use of scientific principles to generate numerical assessments, statements about energy production and use must be viewed as uninformed opinion rather than established fact. It is expected that this book will be used in survey courses about energy in universities and colleges. The book also should serve interested citizens who want to learn about energy and energy professionals who want to learn about energy options outside their specialty. An effort was made to present the science and technology in a simple and intuitive way. When detailed information was considered necessary for readers who wish to see the basis for assertions in the main text, more detailed discussions appear in appendices.

Exercises are provided for most of the chapters. These are intended primarily for use in college and university courses. Each exercise has one of three purposes: to provide experience in using some of the quantitative assessment methods, to send the reader to current literature to learn about the status of the rapidly changing energy enterprise, and to stimulate the reader to formulate opinions and provide the rationale for those opinions.

## 19. General Science

### **Physical Methods in Chemistry and Nano Science**

This book is intended as a survey of research techniques used in modern chemistry, materials science, and nano science.

### **Think Complexity: Exploring Complexity Science with Python**

This book is about complexity science, data structures and algorithms, intermediate programming in Python, and the philosophy of science.

## 20. Geography, Planning & Environment

### British Columbia in a Global Context

Author: Geography Open Textbook Collective

Contributors: Arthur Green, Aviv Ettya, Siobhan McPhee, Britta Ricker, and Cristina Temenos

Description: Over the course of four days in June, 2014, five faculty members from across British Columbia supported by a facilitator, librarian, researcher, illustrator, programmer, and instructional designer created this book. This involved drawing on our own research, teaching, and experience and working with the team to put it all together into an online format; one which would be accessible to students and educators alike.

Beyond the unique way in which this book was created in a book-sprint process, there are other elements of this book that make it unique. First, it takes a holistic approach to first-year geography, incorporating elements of physical, human, and regional geography, as well as bringing in methods and perspectives from spatial information science.

Pedagogically, this book incorporates elements of service learning and suggested service learning activities, recognizing that the study of geography is deeply connected to the communities we live in. Many of the suggestions for service learning are illustrated through the use of case studies from across BC.

The book is aimed at a first-year or introductory geography student and would be suitable for a first-year geography course on BC.

### Collecting and Mapping Data

Author: Janet Silbernagel

Description: Whether checking camera traps in the rainforest, working with citizen scientists, or downloading the latest satellite imagery, we all work with conservation data, and much of it is mappable! Finding, accessing, and mapping various forms of spatial conservation data is our focus here. You will learn how to collect and import spatial features from the field, use web-based map tools to engage citizens, and incorporate the best available spatial data from public domain sources. These lessons will prepare you for further spatial analyses of the data, or for generating simple map and report documentation.

### Earth Science

This text includes introductions to concepts from level I earth science courses, from geology to water systems. It was developed through Lumen Learning and a professor of Geology and Earth Sciences from Santa Ana College.

**Includes:** exercises and summaries.

# Environmental Biology

Author: Matthew R. Fisher and Editor

Contributors: OpenStax, Kamala Doršner, Alexandra Geddes, Tom Theis, and Jonathan Tomkin

Description: This open textbook covers the most salient environmental issues, from a biological perspective. The text is designed for an introductory-level college science course. Topics include the fundamentals of ecology, biodiversity, pollution, climate change, food production, and human population growth.

**Includes:** instructor resources, student resources, and summaries.

# Environmental Issues

Authors: Andrew Frank

Contributors: OpenStax, Alexandra Geddes, Tom Theis, Jonathan Tomkin, Matthew R. Fisher, Andrew Frank, and Kamala Doršner

Description: This open textbook covers the most salient environmental issues, from both biological and social science perspectives. The text is designed for introductory-level university environmental science, environmental issues, or environmental politics courses. Topics include the fundamentals of ecology, biodiversity, pollution, climate change, food production, sustainable energy and human population growth as well as environmental justice and environmental communication.

# Environmental Science: A Canadian Perspective

This environmental science text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in environmental science, from ecosystems to sustainable development.

**Includes:** instructor resources, student resources, and summaries.

# Environmental Science

Author: Bill Freedman

Description: This textbook is intended to provide an introduction to environmental science and sustainability at Trent. The textbook is adapted from the well-known Canadian text *Environmental Science* by the late Bill Freedman, a professor at Dalhousie University. The book is about environmental issues that are particularly important in Canada, and the ways they are being dealt with by governments and society-at-large. This book was written from the ground-up to provide Canadian information and examples. This national context is integrated throughout the text, along with North American and global data that provide a broader perspective. Special Canadian Focus boxes illustrate important examples of environmental issues in our national context. At the same time, Global Focus boxes enhance the international context for learning about issues, while In Detail boxes examine particular topics in greater depth.

## Geographic Information System Basics

This geographic information systems text has been positively-reviewed. It covers introductory concepts in GIS, from augmented maps to vector files.

**Includes:** instructor resources, student resources, and summaries.

## Geosciences LibreTexts Library

A collection of open textbooks, assignments, and other educational resources on the subject of geosciences.

**Includes:** lab experiments, case studies, interactive applications and worksheets.

## Human Geography

Authors: Christine Rosenfeld and Nathan Burtch

Description:

Welcome to Human Geography! If you are interested in how humans interact with the environment and how human systems are geographically distributed over space, then you've found your place.

We hope that find this textbook useful and enjoyable; please dive in by clicking "Contents" to immerse yourself in all-things-human geography.

## Introduction to Geomatics

Author: Scott Bell

Description: This OPEN textbook was developed as a supplement to Geography 222.3 (GEOG 222), Introduction to Geomatics at the University of Saskatchewan. GEOG 222 is a required course for all Geography majors (B.A., B.Sc., B.A.Sc., and Planning), as well as the gateway geomatics course for a Specialization and Certificate in Geomatics. The content of this reader is a mix of original content (95% to 100% of the text and most of the images) created by Professor Scott Bell while other material comes from attributed sources (attribution is included at the beginning of a chapter or section, or for the note taking guide, on each slide or at the culmination of a series of slides).

## Introduction to Human Geography

This physical geography text has been positively-reviewed. It covers introductory concepts in human geography, from migration to agriculture.

**Includes:** instructor resources, student resources, and summaries.

# Introduction to Physical Geography

Author: R. Adam Dastrup and Susan Smythe

Description: Most individuals define **geography** as a field of study that deals with maps, yet this definition is only partially correct. A better definition of geography may be the study of natural and human-constructed phenomena relative to a spatial dimension.

The discipline of geography has a history that stretches over many centuries. Over this period, geography has evolved and developed into an essential form of human scholarship. Examining the historical evolution of geography as a discipline provides some essential insights concerning its character and methodology. These insights are also helpful in gaining a better understanding of the nature of physical geography.

## Laboratory Manual for Introduction to Physical Geography, First British Columbia Edition

Editor: Stuart MacKinnon

Authors: Stuart MacKinnon, Katie Burles, Terence Day, Fes de Scally, Nina Hewitt, Crystal Huscroft, Gillian Krezoski, Allison Lutz, Craig Nichol, Andrew Perkins, Todd Redding, Ian Saunders, Leonard Tang, and Chani Welch

Description: Physical geography lab exercises tend to be crafted for internal institutional use only. In light of the need to have online laboratory material for remote instruction, a group of geography instructors from across British Columbia (BC), Canada came together for this collaborative project with the goal of producing a cross-institutional open education resource (OER) laboratory manual for first-year post-secondary physical geography courses. The lab manual consists of 22 labs that cover an introduction to physical geography, weather and climate, biogeography, map and geospatial skills, hydrology, geomorphology, and landform identification. The majority of the labs have a BC focus; however, they are useable across Canada and further abroad. The majority of the labs have been developed so that they can be done in any order to increase instructor flexibility and promote adaptability to differing course structures and durations. Many of the labs have students using live data, or built-in flexibility with datasets for instructors in order to prevent the lab exercises becoming static over time. The lab manual is licenced under creative commons (refer to licensing information) so that the lab modules can be modified as needed by instructors to meet the learning outcomes of their students.

## Mapping, Society, and Technology

Author: Steven Manson

Description: Learn how to read, use, and create maps and along the way explore how maps reflect the relationship between society and technology. Mapping is an essential form of scientific and artistic inquiry as well as a trillion dollar business. People, companies, and governments use and misuse maps and map technology to tell stories, save lives, rig elections, and spy on you.



## Nature of Geographic Information

This world GIS text has been positively-reviewed. It covers introductory concepts in GIS, from data and information geography to integrating geographic data.

**Includes:** instructor resources, student resources, and summaries.

## People, Places, and Cultures

Authors: Raymon Huston and R. Adam Dastrup

## Physical Geography Lab Manual: The Atmosphere and Biosphere

Author: Michael Pidwirny

Description: This lab manual is intended as an experiential learning companion to introductory university textbooks covering the subject area known as physical geography. It contains exercises dealing with the atmosphere and biosphere. A second companion physical geography lab manual, with exercises dealing with the hydrosphere and lithosphere, is planned to be released in the summer of 2023.

The laboratory exercises in this manual have been designed to engage students with activities that promote analytical problem-solving, critical thinking, and active learning through the analysis and interpretation of data. Many questions access data from actual scientific sources on the **internet**, enhancing the hands-on laboratory experience for students. The exercises have been carefully designed to augment important theoretical topics usually found in the curriculum of a first-year university course in physical geography.

**Note on license:** Physical Geography Lab Manual: The Atmosphere and Biosphere by Michael Pidwirny is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License, except where otherwise noted.

## Physical Geography and Natural Disasters

Author: R. Adam Dastrup, MA, GISP

## Physical Geology

This textbook was written by an earth sciences professor at Thompson Rivers University in British Columbia, Canada. This was done in collaboration with academics from various post-secondary institutions across BC and the rest of Canada. It has been successfully adopted.

**Includes:** applications, chapter summaries, exercises, and solutions.

# Processing Multi-spectral Imagery with Agisoft MetaShape Pro

Author: Eric Saczuk

Description: A complete guide (including sample data set) to processing multi-spectral imagery using Agisoft MetaShape Pro with ground control points. Image alignment, generation of dense point clouds, digital surface and terrain models and orthomosaics is covered as well as the export of dense point clouds and orthomosaics to external software.

# Processing UAS Photogrammetric Images in Agisoft Photoscan Professional

Author: Eric Saczuk

Description: This manual guides you through the steps of processing photogrammetric images using Agisoft Photoscan Professional acquired by a DJI Phantom 3 Professional UAS to create map products including;

- sparse and dense point cloud
- 3-D mesh surface and textures
- digital surface model (DSM)
- true orthophoto mosaic
- 2-D & 3-D Google Earth layers

The following manual Parts provide guidance for each step of the process;

- Project Setup
- Generating 3-D Model
- Creating a DEM and Orthophoto
- Exporting Data

This manual follows from the image acquisition mission described in the manual ***Image Acquisition for 3-D Mapping with DJI Phantom 3 Pro.***

# Sustainability: A Comprehensive Foundation

This text has been positively-reviewed and is intended for both a broad-based introductory class on sustainability and as a supplement to specialist courses with a dimension on sustainability in their areas of study. As sustainability is a multidisciplinary area of study, the text is the product of multiple authors drawn from the diverse faculty of the University of Illinois: each chapter is written by a recognized expert in the field.

## ensc 181, Terrestrial Environments, Lane Community College

Editor: Alexandra Geddes

Contributors: Alexandra Geddes, Jonathan Tomkin, Kamala Doršner, Matthew R. Fisher, OpenStax, and Tom Theis

Description: This college-level open textbook covers the most salient environmental science, specifically focused on terrestrial environments. The text is designed for an introductory-level college science course. Topics include the fundamentals of ecology, biodiversity, pollution, climate change, food production, and human population growth.

## The Western World: Daily Readings on Geography

Authors: Joel Quam and Scott Campbell

Description: Two full-time Geography professors at College of DuPage have written a particular format of textbook for our course Geography of the Western World. One key feature of the textbook is that it is an open source textbook, online and free for our students (and potentially, for anyone). The other noteworthy feature of the textbook is its format as a series of essays on topical/regional geographic subjects. Given that the textbook is a free and open source textbook, there is no money to be made writing the book. My colleague and I wrote the textbook in order to contest the often exorbitant cost of regular textbooks and to create a base of knowledge that we want our students to have without the need of sifting through longer chapters. Read this and know this.

## World Regional Geography

Author: Caitlin Finlayson, University of Mary Washington

Description: World Regional Geography presents an overview of the discipline by introducing students to key themes and concepts in the discipline of geography through a study of the world's regions. This text approaches geography as

experts understand the discipline, focusing on connections and an in-depth understanding of core themes. This thematic approach, informed by pedagogical research, provides students with an introduction to thinking geographically. This text emphasizes depth over breadth by arranging each chapter around a central theme and then exploring that theme in detail as it applies to the particular region. In addition, while chapters are designed to stand alone and be rearranged or eliminated at the instructor's discretion, the theme of globalization and inequality unites all of the regions discussed. This core focus enables students to draw connections between regions and to better understand the interconnectedness of our world. This text was written with the backward course design model in mind and the content of each chapter was structured around these learning objectives. Because of this backward design focus, the length of each chapter is considerably shorter than most traditional textbooks. The intention is for the instructor to supplement the text with problems, case studies, and news articles and to use the text as a springboard for discussing deeper issues.

## World Regional Geography: People, Places and Globalization

This world geography text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in geography, from North American geography to African geography.

**Includes:** instructor resources, student resources, and summaries.

## 2I. Geology

### Analytical Methods in Geosciences

Authors: Elizabeth Johnson and Juhong Christie Liu

Description: There are no published textbooks on laboratory techniques in the geosciences at the undergraduate level. This project is creating learning modules on scientific analysis and analytical methods that will be delivered in a blended learning format.

There is a national impetus to incorporate research into the early undergraduate curriculum and to catalyze adoption of evidenced-based teaching practice in Science, Technology, Engineering, and Mathematics (STEM) education in 2-year colleges and at the freshman and sophomore levels in 4-year colleges and universities. This change is demonstrated by the emphasis on research practices and scientific skills in the new Next Generation Science Standards for K-12 as well as the upcoming work of the Board of Science Education project focusing on strengthening undergraduate students' research experiences in STEM.

Research experiences are an effective way to engage students in STEM fields, including the geosciences. As a response to the call for increased research experiences, it is anticipated that 2-year and 4-year colleges and universities will acquire scientific analytical equipment, or will work to provide analytical opportunities at other university and government facilities for student research projects and internships. STEM students engaging in undergraduate research will need to be able to use laboratory instrumentation as well as correctly evaluate data quality, determine analytical error, and interpret data produced by these instruments.

Evidence-based teaching practices with active learning strategies will enhance the likelihood of retaining students to pursue a STEM-related degree after taking the introductory STEM courses. Pedagogically effective, yet flexible, instructional materials focused on laboratory methods and analytical techniques are needed in order to support efforts to incorporate research into the undergraduate curriculum. These materials must be presented at a level appropriate for early undergraduates who are the focus of the national initiative for recruiting STEM students.

### A Brief Introduction to Geology and Geomorphology

Author: Nahgeib Miller

Description: As a child, I would go on walkabouts through any wild spaces I could find and I would marvel at the rocks supporting me as I climbed over them on my journey.

What drew me to the rocks were how they would catch the sunlight and reflect it; how there seemed to be different colours that made them up. I wondered what forces; what processes could create such awesome crystals in the rocks and what sort of history those crystals witnessed.

At that time, geology and geomorphology were foreign concepts to me and it took over 30 years of study and experience to achieve a full appreciation for those rocks I encountered on my adventures, and the crystals that made them up. My studies and vocational experience have taken me through seismology, gold research and exploration, mining inspection, construction aggregates, and academia.

There are many, including my environmental and civil engineering technology students, who do not have decades to commit to developing a working understanding of the Earth and the specific geological and geomorphological contexts they may find themselves working in. Therefore, this textbook is designed to provide a brief introduction to the concepts

of geology and geomorphology, with an Ontarian perspective. It serves as a good starting point for individuals who have neither prior experience nor knowledge in geology nor geomorphology.

In order to adequately explain concepts that unfold in four dimensions (3 dimensions with time as the fourth), an electronic format is used to leverage enhanced illustrations. These illustrations include traditional 2D figures; however, videos, animations, and interactive figures are also used to help create a deeper understanding.

## Digging into Canadian Soils

**Author:** Canadian Society of Soil Science

**Editors:** Maja Krzic, Fran Walley, Amanda Diochon, Maxime C. Paré, and Richard Farrell

**Description:** Written, reviewed and edited by members of the Canadian Society of Soil Science, ***Digging into Canadian Soils: An Introduction to Soil Science*** provides an introduction to the core disciplines of soil science (pedology, soil biology and microbiology, physics, chemistry, fertility and nutrient cycling, and management), and introduces the concepts and vocabulary needed by students just beginning their soil science journey. The textbook is appropriate for use in a number of disciplines, including environmental and agricultural sciences, as well as related geology, geography and natural resources engineering disciplines.

Chapters within the textbook are presented in three sections according to the content and level of the complexity. The first section of the book, ***Digging In***, introduces core disciplines in a series of chapters written by authors whose research expertise informs the chapter content. Supplementary materials that are specific to regions in Canada are presented in chapters within a second section, ***Digging Across Canada***. The third section, ***Digging Deeper***, provides in-depth overview of some topics beyond what is considered core soil science disciplinary material, and may be appropriate for upper level soil science or related discipline courses. The textbook includes an extensive glossary that is accessible via in-text links. Importantly, the textbook is intended also to introduce students to the Canadian System of Soil Classification by providing examples from across the length and breadth of the world's second largest country, and to the Canadian Society of Soil Science, whose members share a common passion for soil science and are keen to share and instill this passion with students across Canada.

## Geological Structures: a Practical Introduction

**Authors:** John Waldron and Morgan Snyder

**Description:** This manual is about structures that occur within the Earth's crust. Structures are the features that allow geologists to figure out how parts of the Earth have changed position, orientation, size and shape over time. This work requires careful observation and measurements of features at the surface of the Earth, and deductions about what's below the surface. The practical skills you will learn in this course form the foundation for much of what is known about the history of the Earth, and are important tools for exploring the subsurface. They are essential for Earth scientists of all kinds.

The course that this document supports is about *doing* structural geology. It's not possible to be a good geologist (or to pass the course) just by learning facts. You have to be able to solve problems. Do your lab work conscientiously and get as much as possible done during lab sessions when instructors are available to help you.

This manual consists of both readings and lab exercises, which alternate through the text. The readings are designed to be read and understood outside the lab sessions, whereas the labs contain specific instructions and questions to be completed. Before each lab, be sure you have covered the readings that come immediately before it.

Many problems in structural geology involve thinking in three dimensions. This is the largest challenge that you

will face in working with the material in this book. Different people use different strategies for thinking in 3D. Your instructors will sometimes be able to offer a range of strategies and techniques. Make use of their skills whenever you have difficulty.

This manual was written to support the course “EAS233 Geologic Structures” at the University of Alberta in Canada. The course is typically taught between January and April. During January and February it is too cold for effective geological fieldwork, so the outdoor lab (lab 9) takes place toward the end of the class. In a warmer climate, the data collection part of this lab could be done earlier in the course.

## Introduction to Oceanography

Author: Paul Webb

Description: *Introduction to Oceanography* is a textbook appropriate to an introductory-level university course in oceanography. The book covers the fundamental geological, chemical, physical and biological processes in the ocean, with an emphasis on the North Atlantic region.

## Introduction to Petrology

Authors: Elizabeth Johnson and Juhong Christie Liu

Description: **Petrology** is the branch of geology that studies rocks and the conditions under which they form. This Open Educational Resources (OER) textbook uses illustrations and examples of video and interactive diagrams to guide students' inquiries into learning the analysis of rock samples with a petrographic microscope.

## Introductory Physical Geology Laboratory Manual – First Canadian Edition (v.3 – Jan 2020)

Individual chapters of the overview and exercises sections from this lab manual can be downloaded from the links below. You can also read them online, scroll down on the front page of this online open textbook and select the chapter overview or exercises you would like to read.

**Includes:** Downloadable PDF of all chapters, PDF copies of individual chapters, exercises, practice exams

## Laboratory Manual for Introductory Geology

**Authors:** Bradley Deline, Randa Harris, Karen Tefend

**Description:** Introduction to Geology is a textbook designed to ease new students into the often complex topics of Geology and the study of our planet and its makeup. The book assists readers through the beginning topics and nomenclature of Geology to familiarize them with Geology's version of the scientific methods. Readers will learn the various uses of the scientific method in geological terms. These include the time tested steps of observation,

measurement, testing, and creating a hypothesis and ultimately various theories about diverse Geological fields. Readers will encounter a comprehensive yet straightforward style and flow as they journey through this text. They will comprehend the various spheres of Geology and begin to master Geological outcomes which are derived from a growing knowledge of the tools and subjects which this text covers in great detail. This collaborative text is the result of the partnership between Affordable Learning Georgia and the University of North Georgia Press. This particular text is written in collaboration by Drs Bradley Deline and Karen Tefend and Ms. Randa Harris with edits by Dr. Bonnie J. Robinson.

## Physical Geology, First University of Saskatchewan Edition

Physical Geology is a comprehensive introductory text on the physical aspects of geology, including rocks and minerals, plate tectonics, earthquakes, volcanoes, mass wasting, climate change, planetary geology and much more. It has a strong emphasis on examples from western Canada. It is adapted from “Physical Geology” written by Steven Earle for the BCcampus Open Textbook Program.

**Includes:** Review questions, downloadable PDF files for individual chapters.

## Physical Geology

Author: Steven Earle, Thompson Rivers University

Description: Physical Geology is a comprehensive introductory text on the physical aspects of geology, including rocks and minerals, plate tectonics, earthquakes, volcanoes, glaciation, groundwater, streams, coasts, mass wasting, climate change, planetary geology and much more. It has a strong emphasis on examples from western Canada, especially British Columbia, and also includes a chapter devoted to the geological history of western Canada. The book is a collaboration of faculty from Earth Science departments at Universities and Colleges across British Columbia and elsewhere.

## Physical Geology Laboratory

Author: Elizabeth Johnson

Description: The purpose of this “book” is to help students practice skills to master learning objectives for physical geology laboratory. I hope you will find these materials helpful; however, they are not a substitute for attending class or help sessions. Pictures do not tell the whole story for minerals and rocks! It is very important to use other observations such as feel, hardness, and luster, which can only be done effectively in person.

## Physical Geology Workbook

The Physical Geology Workbook is a companion workbook to the Physical Geology introductory textbook. It contains



learning outcomes, vocabulary, and review questions that students can use to enhance their learning experiences in 100-level university geology courses. Written by Joyce McBeth.

**Includes:** Vocabulary, flashcards, review questions

## A Practical Guide to Introductory Geology

Author: Siobhan McGoldrick

Description: A Practical Guide to Introductory Geology is a comprehensive laboratory manual covering the physical aspects of geology, including rocks and minerals, plate tectonics, streams, structural geology, and much more. This manual provides ample background information to assist students learning remotely during the COVID-19 pandemic. The text has a strong emphasis on examples from western Canada, especially Alberta and British Columbia, and includes a diverse set of exercises intended to accompany the GEOL 1101 curriculum at Mount Royal University. This laboratory manual is an adaptation of Physical Geology – 2nd Edition by Steven Earle.

## Rain or Shine

Author: Tyson Ochsner

Description: The purpose of this book is to serve as a multi-faceted learning resource for people who want or need to learn introductory concepts of soil physics. Soil physics is a scientific discipline focused on using the principles and techniques of physics to understand:

- the properties of the soil,
- the processes which occur in and on soils,
- and how those properties and processes were, are, or would be affected by changes in environment or management.

This book focuses particularly on the processes in the soil water balance and the surface energy balance and how those processes are influenced by soil physical properties.

## Soil and Water Conservation: An Annotated Bibliography

Editor: Colby Moorberg, Editor

Description: *Soil and Water Conservation: An Annotated Bibliography* highlights freely-available online content related to soil and water conservation. This textbook is designed for upper-level undergraduate and graduate courses on soil and water conservation, as well as conservation practitioners. The textbook is also focused on conservation within the US, due to the unique history and policies that influence conservation in the US. The first goal for this textbook is to create an up-to-date resource for soil and water conservation students and practitioners. The second goal is to familiarize students with credible, technical resources in soil and water conservation. The third goal is to reduce the cost and increase the accessibility of textbooks for students. Cited resources include extension bulletins, government reports, technical bulletins, and more. Annotations for each citation describe the resource, provide a short summary of

the resource and its contents, and include any additional contextual information when needed. This book is intended to be an extensive resource for conservation practices and information, but not an exhaustive resource. Thus, some conservation practices were omitted. If you have suggestions for topics, content, or resources to include in future editions of the book, please make your suggestions here.

## Soils Laboratory Manual

Authors: Colby Moorberg and David Crouse

Description: Thank you for your interest in using the *Soils Laboratory Manual* for your soil science course. If you are interested in ancillary materials developed for use with the *Soils Laboratory Manual*, then please apply for access to the *Soils Laboratory Manual Library*. The library includes many resources for instructors that have been shared by those who have adopted the laboratory manual for their courses. It includes institution-specific editions of the lab manual, instructor copies, assignments, and other ancillary and supporting materials. Instructors are granted read-only access to all files in the library, which allows them to view and download files, and to subsequently edit copies of those files for their own use. The read-only access also prevents unauthorized editing of other instructor's versions of the manual saved to the library. Instructors who develop their own editions of the manual are encouraged to share their editions and supporting materials to the community. We administer the library through Google Drive. Because of the sensitive nature of some course materials, access is limited to only instructors with proven credentials. To request access, please complete the following form: request instructor access to the *Soils Laboratory Manual Library* using this [Google Form](#). Once you have been approved, we will contact you and provide access to the Google Drive folder for the *Soils Laboratory Manual Library*.

## The Story of Earth: An Observational Guide

Authors: Daniel Hauptvogel and Jinny Sisson

Contributors: Carlos Andrade, Joshua Flores, Melissa Hansen, Ana Vielma, and Hannah Anderson

## 22. Mathematics, Calculus and Statistics

### Abstract Algebra: Theory and Applications

**Description:** Tom Judson's Abstract Algebra: Theory and Applications is an open source textbook designed to teach the principles and theory of abstract algebra to college juniors and seniors in a rigorous manner. Its strengths include a wide range of exercises, both computational and theoretical, plus many nontrivial applications. The 2020 Annual Edition is now available. Electronic editions have been updated.

First, there is no cost to acquire this text, and you are under no obligation whatsoever to compensate or donate to the author or publisher. So in this most basic sense, it is a free textbook. Therefore you can also make as many copies as you like, ensuring that the book will never go out-of-print. You may modify copies of the book for your own use – for example, you may wish to change to a preferred notation for certain objects or add a few new sections. There is a copyright on the book, and subsequently it is licensed with a GNU Free Documentation License (GFDL). It is this combination that allows the author to give you greater freedoms in how you use the text, thus liberating it from some of the antiquated notions of copyright that apply to books in physical form. The main caveat is that if you make modifications and then distribute a modified version, you are required to again apply the GFDL license to the result so that others may benefit from your modifications.

### Active Calculus Single Variable

**Description:** This textbook was written by math professors from an American university.

**Includes:** interactive exercises and solutions, a lab manual, and other instructor resources.

### Active Calculus Multivariable

**Description:** This textbook is meant to complement the Single Variable edition of Active Calculus.

**Includes:** exercises and solutions.

### Advanced Data Analysis from an Elementary Point of View

**Author:** Cosma Rohilla Shalizi

**Description:** This is a draft textbook on data analysis methods, intended for a one-semester course for advanced undergraduate students who have already taken classes in probability, mathematical statistics, and linear regression. It began as the lecture notes for 36-402 at Carnegie Mellon University.

Supplementary materials: These include the following

- Complete draft in PDF

- Directory of chapter-by-chapter R files for examples
- Directory of data sets used in examples

## Algebra and Trigonometry

**Author:** Jay Abramson, Arizona State University

**Description:** Published by OpenStax College, Algebra and Trigonometry provides a comprehensive and multi-layered exploration of algebraic principles. The text is suitable for a typical introductory Algebra & Trigonometry course, and was developed to be used flexibly. The modular approach and the richness of content ensures that the book meets the needs of a variety of programs. Algebra and Trigonometry guides and supports students with differing levels of preparation and experience with mathematics. Ideas are presented as clearly as possible, and progress to more complex understandings with considerable reinforcement along the way. A wealth of examples – usually several dozen per chapter – offer detailed, conceptual explanations, in order to build in students a strong, cumulative foundation in the material before asking them to apply what they’ve learned.

## A Gentle Introduction to the Art of Mathematics

**Author:** Joseph E. Fields

**Description:** This book is designed for the transition course between calculus and differential equations and the upper division mathematics courses with an emphasis on proof and abstraction. The book has been used by the author and several other faculty at Southern Connecticut State University. There are nine chapters and more than enough material for a semester course. Student reviews are favorable. It is written in an informal, conversational style with a large number of interesting examples and exercises, so that a student learns to write proofs while working on engaging problems.

**Supplementary materials:** Video lectures, exercise workbook and hints and solutions manual; latex source code

## APEX Calculus

**Description:** This text, or portions of it, has been adopted at a considerable number of American institutions to teach calculus, according to their website. These institutions include the Virginia Military Institute, where the author is an associate professor of mathematics.

**Includes:** interactive graphics, exercises and solutions.

## Applied Discrete Structures

**Authors:** Al Doerr, Ken Levasseur

**Description:** **Applied Discrete Structures** is a *free* open content textbook. You can essentially share it with anyone as long as you leave the Creative Commons license in place. See a more precise legal description below. This textbook

contains the content of a two semester course in discrete structures, which is typically a second-year course for students in computer science or mathematics, but it does not have a calculus prerequisite. The material for the first semester is in chapters 1-10 and includes logic, set theory, functions, relations, recursion, graphs, trees, and elementary combinatorics. The second semester material in chapters 11-16 deals with algebraic structures: binary operations, groups, matrix algebra, Boolean algebra, monoids and automata, rings and fields. The following are available for download:

- full pdf version Chapters 1-16, (8Mb)
- Part 1 – Fundamentals, Chapters 1-10, (5 Mb)
- Part 2 – Algebraic Structures, Chapters 11-16, (3.3 Mb)

The text is available in Version 3.7, May 2020. Source code for the current version is available at <https://github.com/klevasseur/ads>

One can view the textbook online at <http://faculty.uml.edu/klevasseur/ads/index-ads.html>

**Includes:** Exercises with short answers to odd problems, some concepts illustrated with Sage enabled web pages, blog page, Wiki, practice exams and videos.

## Applied Statistics with R

**Editors:** Alex Stepanov, David Unger, James Balamuta

**Contributors:** Daniel McQuillan, Mason Rubenstein, Yuhang Wang, Zhao Liu, Jinfeng Xiao, Somu Palaniappan, Michael Hung-Yiu Chan, Eloise Rosen, Kiomars Nassiri, Jeff Gerlach, Brandon Ching, Ray Fix, Tyler Kim, Yeongho Kim, Elmar Langholz, Thai Duy Cuong Nguyen, Junyoung Kim, Sezgin Kucukcoban, Tony Ma, Radu Manolescu, Dileep Pasumarthi, Sihun Wang, Joseph Wilson, Yingkui Lin, Andy Siddall, Nishant Balepur, Durga Krovi, Raj Krishnan, Ed Pureza, Siddharth Singh, Schillaci Mcinnis, Ivan Valdes Castillo.

**Description:** This book was originally (and currently) designed for use with **STAT 420**, *Methods of Applied Statistics*, at the University of Illinois at Urbana-Champaign. It may certainly be used elsewhere, but any references to “this course” in this book specifically refer to STAT 420.

This book is under active development. When possible, it would be best to always access the text online to be sure you are using the most up-to-date version. Also, the html version provides additional features such as changing text size, font, and colors. If you are in need of a local copy, a **pdf version** is continuously maintained, however, because a pdf uses pages, the formatting may not be as functional. (In other words, the author needs to go back and spend some time working on the pdf formatting.) The source code for the text is available from Github.

## Basic Analysis: Introduction to Real Analysis

**Description:** This free online textbook (OER more formally) is a course in undergraduate real analysis (somewhere it is called “advanced calculus”). The book is meant both for a basic course for students who do not necessarily wish to go to graduate school, but also as a more advanced course that also covers topics such as metric spaces and should prepare students for graduate study. A prerequisite for the course is a basic proof course. An advanced course could be two semesters long with some of the second-semester topics such as multivariable differential calculus, path integrals, and the multivariable integral using the second volume. There are more topics than can be covered in two semesters, and it can also be reading for beginning graduate students to refresh their analysis or fill in some of the holes. This text was

originally developed by Jiri Lebl in 2012 (Volume I). Both Volume I and II were updated in June 2020. The following are available for download:

- Volume I as pdf (Version 5.3, June 10th, 2020, 282 pages, 1.8 MB download)
- Volume II as pdf (Version 2.3, June 10th, 2020, 195 pages, 1.4 MB download)
- latex source code for both Volumes I & II from GitHub

**Includes:** Exercises with no solutions.

## Bayesian Data Analysis

**Authors:** Andrew Gelman, John Carlin, Hal Stern, David Dunson, Aki Vehtari, and Donald Rubin.

**Description:** This book is intended to have three roles and to serve three associated audiences: an introductory text on Bayesian inference starting from first principles, a graduate text on effective current approaches to Bayesian modeling and computation in statistics and related fields, and a handbook of Bayesian methods in applied statistics for general users of and researchers in applied statistics. Although introductory in its early sections, the book is definitely not elementary in the sense of a first text in statistics. The mathematics used in our book is basic probability and statistics, elementary calculus, and linear algebra. A review of probability notation is given in Chapter 1 along with a more detailed list of topics assumed to have been studied.

The practical orientation of the book means that the reader's previous experience in probability, statistics, and linear algebra should ideally have included strong computational components. To write an introductory text alone would leave many readers with only a taste of the conceptual elements but no guidance for venturing into genuine practical applications, beyond those where Bayesian methods agree essentially with standard non-Bayesian analyses. On the other hand, we feel it would be a mistake to present the advanced methods without first introducing the basic concepts from our data-analytic perspective. Furthermore, due to the nature of applied statistics, a text on current Bayesian methodology would be incomplete without a variety of worked examples drawn from real applications.

To avoid cluttering the main narrative, there are bibliographic notes at the end of each chapter and references at the end of the book. Examples of real statistical analyses appear throughout the book, and we hope thereby to give an applied flavor to the entire development. Indeed, given the conceptual simplicity of the Bayesian approach, it is only in the intricacy of specific applications that novelty arises. Non-Bayesian approaches dominated statistical theory and practice for most of the last century, but the last few decades have seen a reemergence of Bayesian methods. This has been driven more by the availability of new computational techniques than by what many would see as the theoretical and logical advantages of Bayesian thinking. In our treatment of Bayesian inference, we focus on practice rather than philosophy.

**Note:** This book is available for download and non-commercial purposes.

**Supplementary materials:** Video lectures, slides, chapter notes, code examples (R, Python, Matlab/Octave), software, data sets, solutions to some exercises

## Book of Proof

**Description:** This book is an introduction to the standard methods of proving mathematical theorems. It has been approved by the American Institute of Mathematics' Open Textbook Initiative. Also see the Mathematical Association of America Math DL review (of the 1st edition) and the Amazon reviews. An adoptions list is [here](#). This book was originally developed by Richard Hammack in 2018. Please note that the Creative Commons License for this text **does**

**not permit altering** of content for anything other than personal use. A pdf version of the book is available for download from the book site.

**Includes:** Syllabus, calendar, sample tests and workbook.

## Calculus

**Description:** Originally published through traditional means, this textbook is now available as an open educational resource. This text includes single and multivariable calculus and was written by a professor of mathematics at the Massachusetts Institute of Technology.

**Includes:** an instructor's manual, a student study guide with exercises and select solutions, and links to a calculus video series by the author.

## Calculus: Early Transcendentals

**Description:** Calculus: Early Transcendentals, originally by D. Guichard, has been redesigned by the Lyryx editorial team. Substantial portions of the content, examples, and diagrams have been redeveloped, with additional contributions provided by experienced and practicing instructors. This approachable textbook provides a comprehensive understanding of the necessary techniques and concepts of the typical Calculus course sequence, and is suitable for the standard Calculus I, II and III courses. The latex source can be requested from Lyryx Learning.

**Includes:** Exercises and answers, slides. Lyryx Learning also has some online homework available.

## Calculus for the Life Sciences: A Modelling Approach Volume 1

**Description:** This textbook was written by two professors at Iowa State University with the goal introducing students to scientific modeling. This course aims to teach students the necessary skills and concepts from a traditional physical sciences course, while explaining the applications of calculus to the life sciences.

**Includes:** exercises, solutions to select problems, and MATLAB exercises.

## Calculus for the Life Sciences: A Modeling Approach Volume 2

**Authors:** James L. Cornette and Ralph A. Ackerman

**Description:** Our writing is based on three premises. First, life sciences students are motivated by and respond well to actual data related to real life sciences problems. Second, the ultimate goal of calculus in the life sciences primarily involves modeling living systems with difference and differential equations. Understanding the concepts of derivative and integral are crucial, but the ability to compute a large array of derivatives and integrals is of secondary importance. Third, the depth of calculus for life sciences students should be comparable to that of the traditional physics and

engineering calculus course; else life sciences students will be short changed and their faculty will advise them to take the 'best' (engineering) course.

In our text, mathematical modeling and difference and differential equations lead, closely follow, and extend the elements of calculus. Chapter one introduces mathematical modeling in which students write descriptions of some observed processes and from these descriptions derive first order linear difference equations whose solutions can be compared with the observed data. In chapters in which the derivatives of algebraic, exponential, or trigonometric functions are defined, biologically motivated differential equations and their solutions are included. The chapter on partial derivatives includes a section on the diffusion partial differential equation. There are two chapters on non-linear difference equations and on systems of two difference equations and two chapters on differential equations and on systems of differential equation.

## Calculus: OpenStax Volumes 1-3

Volume 1 concepts: functions, limits, derivatives, and integration

Volume 2 concepts: integration, differential equations, sequences and series, and parametric equations and polar coordinates

Volume 3 concepts: parametric equations and polar coordinates, vectors, functions of several variables, multiple integration, and second-order differential equations

**Includes:** Exercises and answers. Volume 1 has been faculty-reviewed, adopted, is accessible, and has ancillary resources. Volume 2 has been adopted, has ancillary resources, and is accessible. Volume 3 is accessible and has ancillary resources. Adopt and adapt these volumes at the links above on Volumes 1, 2, and 3, respectively.

## Calculus Two

**Description:** Calculus Two is a Computer-Aided Problem-Solving Approach Using SageMath written by Charles Bergeron and other open source creators. This is a text for a second undergraduate Calculus course. This book includes applications from many disciplines, and integrates the use of the open-source computer algebra system SageMath throughout. This free online book should be usable as a stand-alone textbook or as a supplementary resource.

You can use, print, duplicate, share this book as much as you want. You can base your own book on it and reuse parts if you keep the license the same. If you plan to use it commercially (sell it for more than duplicating cost), then you need to contact me and we will work something out.

This work is based upon the open-source books *Community Calculus* by David Guichard et al. and *Mooculus* and *Mooculus: Sequences and Series* by Jim Fowler and Bart Snapp.

Major changes include:

- Creating a full chapter on linear algebra topics.
- Strengthening the presentation of topics that prepare students for a course in Differential Equations, including hyperbolic functions and complex numbers.
- Inserting instruction and exercises using the computer algebra system SageMath.
- Adding applications in healthcare, chemistry and pharmacy.

Further content was adapted from these open-source resources:



- *Linear Algebra* by Jim Hefferon.
- *Precalculus* by Carl Stitz and Jeff Zeager.

I am grateful to all authors listed on the Attributions page, and indeed all open-source creators, for making their materials available. Without this publishing model, I probably would not have been able to realize this project. What a nice way for us to *collaborate*! I am also grateful to the authors listed on the Further Reading page, for influencing my thinking on this subject, and its presentation.

The following are available for this resource:

1. Download the textbook as a single PDF file, Spring 2017 edition (typeset on March 6, 2017)
2. Progress packet (lists all learning activities for all class meeting times during the course)
3. Syllabus for MAT 211

**Includes:** Exercises with solutions to selected exercises, example solutions using Sagemath computations, syllabus, progress packet, videos.

## Combinatorics

**Author:** Joy Morris

**Description:** This free undergraduate text book provides an introduction to enumeration, graph theory, and design theory. It is aimed at upper-level undergraduate students and the exercises expect some mathematical sophistication, including a reasonable ability to construct proofs. The text is designed to be used in an undergraduate course, but could be suitable for independent study by a student with some mathematical background and understanding of proofs. It does not assume any background knowledge of combinatorics. This text is written by Joy Morris of the University of Lethbridge.

The book is being released online with a Creative Commons license (Attribution-NonCommercial-ShareAlike 2.0). Although not in final form, it has already been used as a textbook for several semesters by 2 different instructors at the University of Lethbridge. The following are available:

1. Download book in PDF format, June 2017 version (approximately 250 pages and 1.2 MB)
2. Latex source available by contacting the author: joy.morris@uleth.ca

**Includes:** Exercises with solutions to selected exercises.

## Community Calculus (Single, Multivariable)

**Description:** This online compilation of four calculus textbooks is frequently updated and has been used in courses. It has been positively reviewed by the Mathematical Association of America. It also covers early and late transcendentals.

**Includes:** exercises, solutions, and WeBWorK problem sets.

# Contemporary Calculus

**Description:** This textbook was created as part of the Washington State Colleges' Open Course Library Project, which received funding through the Gates Foundation. This text has been used by thousands of students within Washington State and was developed by a professor at Bellevue College.

**Includes:** exercises, solutions to odd-numbered problems, and other resources.

## Development Versions, Source Code with Revision Control

Source code is available in a git repository, hosted at GitHub, and authored with PreTeXt. Prior to the 2015 edition, the source code was LaTeX and was primarily hosted at bitbucket.org.

Periodically a current snapshot of the book as a PDF is available here. These are not archived, nor tagged in the source code repository. They simply accumulate fixes or additions made to annual official releases. If there is nothing listed here, then use the current Annual Edition.

The absolute most recent version is available as source code through a git repository at github.com, the specific address is <https://github.com/twjudson/aata>. Links below to recent source code archives come from github.com, so the “current version” links below are the most up-to-date version.

If you would like to participate in contributing to the book, you will want to use git. Then you can fork the repository on GitHub, or create a local copy of the source code by doing the following in a terminal window:

1. Set your working directory to a place where a new directory named aata can live.
2. Issue the command: `git clone https://github.com/twjudson/aata.git`

# Data Analysis with SAS: An Open Textbook

**Author:** Jerry Brunner

**Description:** This is the home page for *Data Analysis: An Open Textbook*. The text is free, and deliberately modeled on open source software. The source code is mostly LaTeX, and the compiled binary “program” is a PDF file. The pictures in the text are pdf files, included in the document using the LaTeX graphicx package. Most of them were produced with R. The R code appears as comment statements in the LaTeX source. At least one additional graphics file is in the open and modifiable SVG (Scalable Vector Graphics) format produced by the Open Office drawing program.

There are also (temporarily, I trust) three sections in that were produced using WriteNow, an obsolete and proprietary Mac word processing program. The pdfs of these parts (Section 5.9 on interactions in regression, Section 7.4 on nested designs and random effects, and Chapter 8 on selecting sample size) are brought directly into the document using the `\texttt{pdfpages}` package. I have translated the material from WriteNow to OpenOffice.org. The results are pretty rough, but the Openoffice.org documents are provided below in lieu of source code.

You are welcome to use this text under the conditions of the GNU Free Document License.

**Supplementary materials:** Latex source, graphics files,

# Differential Calculus for the Life Sciences

**Description:** This textbook was written by a math professor at the University of British Columbia and is currently used as a textbook for introductory calculus courses for life sciences undergraduates.

**Includes:** exercises and solutions to selected problems.

## Differential Equations

**Description:** A first course on differential equations, aimed at engineering students. The prerequisite for the course is the basic calculus sequence. This free online book (OER more formally) should be usable as a stand-alone textbook or as a companion to a course using another book such as Edwards and Penney, *Differential Equations and Boundary Value Problems: Computing and Modeling* or Boyce and DiPrima, *Elementary Differential Equations and Boundary Value Problems* (section correspondence to these two is given). This book was originally developed by Jiri Lebl in 2012. The current version was updated July 21st, 2020. The following are available for download:

- complete book as a pdf file (July 21st, 2020, version 6.1, 466 pages, approximately 4.1 MB download)
- Browse the web version of the book (for easier reading on the web). This version uses PreTeXt and so should be easier to browse and read.
- all figures in one big zip file
- complete latex source code on GitHub
- WebWork a homework set containing currently 474 problems

**Includes:** Exercises (740) with some solutions (247), homework exercises using the WebWork system.

## Differential Equations

**Description:** This is a differential equations book including Linear Algebra Topics And Computer-Aided Problem-Solving Using Maxima or SageMath by Charles Bergeron, Jiri Lebl, and other open-source creators.

This is a text for a first undergraduate Differential Equations course. It does not assume previous coverage of Linear Algebra. This book includes applications from many disciplines, and integrates the use of the open-source computer algebra system Maxima or SageMath throughout. This free online book should be usable as a stand-alone textbook or as a supplementary resource.

This work is heavily based upon the open-source book *Notes on Diffy Qs: Differential Equations for Engineers* by Jiri Lebl. That book has been selected as an Approved Textbook in the American Institute of Mathematics Open Textbook Initiative.

Major changes include:

- Stripping the chapters on PDEs and nonlinear systems.
- Creating a full chapter on linear algebra topics.
- Strengthening the presentation of review topics, including hyperbolic functions and complex numbers.
- Inserting instruction and exercises using the computer algebra system Maxima or SageMath.
- Adding applications in healthcare, chemistry and pharmacy.

Further content was adapted from these open-source resources:

- *Linear Algebra* by Jim Hefferon.
- *Community Calculus* by David Guichard et al.
- *Precalculus* by Carl Stitz and Jeff Zeager.
- *Elementary Differential Equations* by William F. Trench.

The following are available for this resource:

1. Download the textbook as a single PDF file Fall 2017 edition (typeset on July 6, 2017)
2. Download the LaTeX source folder as a zipped file (9.0 MB)

**Includes:** Syllabus, progress packet, easy guide to Sage for Differential Equations, example solutions using Maxima, videos

## Discover Linear Algebra

**Description:** This text is written by Jeremy Sylvestre of the University of Alberta.

*Discover Linear Algebra* is an open-access linear algebra textbook that uses a discovery-based approach to introduce students to this beautiful subject. The philosophy of this treatment is to allow the undeniable core ideas and patterns of linear algebra to reveal themselves to the student.

Each chapter begins with a set of *guided-discovery* activities suitable for use as in-class group activities, as pre-class preparatory explorations, or for self-study. The exposition in the remainder of each chapter reflects and expands upon these introductory explorations, beginning with an informal *Concepts* section, followed by a section of *Examples*, and ending with a more formal *Theory* section of theorems and proofs. Please see the book's preface (two-semester version; one-semester version) for a little more detail on the organization and pedagogical approach of the book.

*Discover Linear Algebra* is free as in “freedom” — released under the GNU Free Documentation License (GFDL), you are free to use, copy, redistribute, and/or modify this textbook. (Though that freedom comes with some responsibilities; see the full text of the GFDL, included as an appendix to the textbook.) If you wish to make use of this work under a different license, please contact the author using the contact info below. The following are available:

1. Discover Linear Algebra – Winter 2019 Edition: Two-semester version
2. Discover Linear Algebra: A First Course in Linear Algebra – Winter 2020 Edition: One-semester version
3. Github repository for the PreTeXt document source code: [github.com/jjrsylvestre/dla](https://github.com/jjrsylvestre/dla)
4. Author contact: Jeremy Sylvestre, University of Alberta, Augustana Campus, [jeremy.sylvestre@ualberta.ca](mailto:jeremy.sylvestre@ualberta.ca)

**Includes:** Guided discovery activities, HTML version.

## Discrete Mathematics: An Open Introduction

**Description:** *Discrete Mathematics: An Open Introduction* is a free, open source textbook appropriate for a first or second year undergraduate course for math majors, especially those who will go on to teach. Since Spring 2013, the book has been used as the primary textbook or a supplemental resource at more than 75 colleges and universities around the

world (see the partial adoptions list). The text is endorsed by the American Institute of Mathematics' Open Textbook Initiative and is well reviewed on the Open Textbook Library. The author of this text is Ocar Levin.

This 3rd edition brings many improvements, including nearly 100 new exercises, a new section on trees in the graph theory chapter, and improved exposition throughout. Previous editions will continue to be available indefinitely. A few times a year, the text is updated with a new "printing" to correct errors. See the errata list for more information.

**New for Fall 2019:** Online homework sets are available through Edfinity or as WeBWorK sets from the author. Additional exercises have been added since Spring 2020.

## Get the book

The entire book is available for free as an interactive online ebook. This should work well on all screen sizes, including smart phones. Hints and solutions to examples and exercises are hidden but easily revealed by clicking on their links. Some exercises also allow you to enter and check your work, so you can try multiple times without spoiling the answer.

For offline use, a free pdf version, suitable for reading on a tablet or computer, is available for download. This should be searchable and easy to navigate using embedded links. Hints and solutions (when available) can be accessed by clicking on the exercise number, and clicking on the number of the hint or solution will bring you back to the exercise.

If you prefer a physical copy, an inexpensive print version of the text is available on Amazon. This should be cheaper than printing the entire book and binding it yourself. Page numbers match the pdf version.

**Includes:** The following come with this text:

- 473 exercises, including 275 with solutions and another 109 with hints. Exercises range from easy to quite involved, with many problems suitable for homework.
- *Investigate!* activities throughout the text to support active, inquiry based learning.
- A full index and list of symbols.
- Consistent and helpful page layout and formatting (i.e., examples are easy to identify, important definitions and theorems in boxes, etc.).

## A First Course in Linear Algebra

**Description:** A First Course in Linear Algebra is an introductory textbook designed for university sophomores and juniors. Typically such a student will have taken calculus, but this is not a prerequisite. The book begins with systems of linear equations, then covers matrix algebra, before taking up finite-dimensional vector spaces in full generality. The final chapter covers matrix representations of linear transformations, through diagonalization, change of basis and Jordan canonical form. Along the way, determinants and eigenvalues get fair time. There is a comprehensive online edition and PDF versions are available to download for printing or on-screen viewing.

This textbook has more freedom than most (but see some exceptions). First, there is no cost to acquire this text, and you are under no obligation whatsoever to compensate or donate to the author or publisher. So in this most basic sense, it is a free textbook. Therefore you can also make as many copies as you like, ensuring that the book will never go out-of-print. You may modify copies of the book for your own use – for example, you may wish to change to a preferred notation for certain objects or add a few new sections. I have applied a copyright to the book, and subsequently licensed it with a GNU Free Documentation License (GFDL). It is this combination that allows me to give you greater freedoms in how you use the text, thus liberating it from some of the antiquated notions of copyright that apply to books in physical form. The main caveat is that if you make modifications and then distribute a modified version, you are required to again apply the GFDL license to the result so that others may benefit from your modifications.

## A First Course in Linear Algebra: Lyryx

**Description:** A First Course in Linear Algebra, originally by K. Kuttler, has been redesigned by the Lyryx editorial team as a first course for the general students who have an understanding of basic high school algebra and intend to be users of linear algebra methods in their profession, from business & economics to science students. This version was revised by the Lyryx editorial team in 2017.

**Includes:** Exercises with selected answers. Slides and question bank along with the source are available on request.

## First-Semester Abstract Algebra: A Structural Approach

**Author:** Jessica K. Sklar

**Description:** **A note on algebra:** At its most basic level, abstract algebra is the study of structures. Just as an architect may examine buildings or an anthropologist societal hierarchies, an algebraist explores the nature of sets equipped with binary operations that satisfy certain properties. While these structures may not seem at first to be very important, they are at the heart of most, if not all, mathematical endeavors. On an elemental level, they allow us to solve systems of equations; on a more global-level, they are behind some of our most important cryptographic systems. We even use them implicitly when telling time!

Our focus in this book is the study of algebraic structures called *groups*. Along the way, we will explore rigorous mathematical notions of similarity and difference: When can we consider two objects to be more or less “the same”? When are they fundamentally different? For instance, consider two houses that have exactly the same construction, but are painted different colors. Are they the same house? No. But viewed structurally (as opposed to aesthetically) they are the same. This means that if we know certain information about one of the houses (say, how far the bathroom is from the kitchen) we know the same information about the other house. However, knowing that the first house is painted yellow does not tell us anything about the second house’s color. We explore an analogous idea in mathematics, namely, the concept of *isomorphism*.

Throughout, we provide readers with many mathematical proofs, as well as specific examples demonstrating more general ideas.

## Forecasting: Principles and Practice

**Authors:** Robert J. Hyndman and George Athanasopoulos

**Description:** This textbook is intended to provide a comprehensive introduction to forecasting methods and to present enough information about each method for readers to be able to use them sensibly. We don’t attempt to give a thorough discussion of the theoretical details behind each method, although the references at the end of each chapter will fill in many of those details.

The book is written for three audiences: (1) people finding themselves doing forecasting in business when they may not have had any formal training in the area; (2) undergraduate students studying business; (3) MBA students doing a forecasting elective. We use it ourselves for masters students and third-year undergraduate students at Monash University, Australia.

For most sections, we only assume that readers are familiar with introductory statistics, and with high-school algebra. There are a couple of sections that also require knowledge of matrices, but these are flagged.

At the end of each chapter we provide a list of “further reading.” In general, these lists comprise suggested textbooks

that provide a more advanced or detailed treatment of the subject. Where there is no suitable textbook, we suggest journal articles that provide more information.

We use R throughout the book and we intend students to learn how to forecast with R. R is free and available on almost every operating system. It is a wonderful tool for all statistical analysis, not just for forecasting. See the Using R appendix for instructions on installing and using R.

## FREE: Federal Resources for Educational Excellence

**Description:** “More than 1,500 federally supported teaching and learning resources are included from dozens of federal agencies. New sites are added regularly.” Keep up with additions by subscribing to the RSS feed.

## Guide to Cultivating Complex Analysis

**Description:** The purpose of this book is to teach a one-semester graduate course in complex analysis for incoming graduate students. It was created to teach Math 5283 at Oklahoma State University. It is a natural first semester in a two semester sequence where the second semester could be several complex variables or perhaps harmonic analysis. It could perhaps be used for a more elementary two-semester sequence if the appendix (metric spaces, some basic analysis) is covered first, and all the optional bits of the main text are also covered. The text was originally developed by Jiri Lebl in 2020. The following are available for download:

- Download the book as pdf (Version 1.0, September 10th, 2020, 304 pages)
- Latex source code hosted on GitHub.

**Includes:** Exercises (600) in the text.

## Handbook of Biological Statistics

**Author:** John H. McDonald

**Description:** Welcome to the third edition of the *Handbook of Biological Statistics*! This online textbook evolved from a set of notes for my Biological Data Analysis class at the University of Delaware. My main goal in that class is to teach biology students how to choose the appropriate statistical test for a particular experiment, then apply that test and interpret the results. In my class and in this textbook, I spend relatively little time on the mathematical basis of the tests; for most biologists, statistics is just a useful tool, like a microscope, and knowing the detailed mathematical basis of a statistical test is as unimportant to most biologists as knowing which kinds of glass were used to make a microscope lens. Biologists in very statistics-intensive fields, such as ecology, epidemiology, and systematics, may find this handbook to be a bit superficial for their needs, just as a biologist using the latest techniques in 4-D, 3-photon confocal microscopy needs to know more about their microscope than someone who’s just counting the hairs on a fly’s back. But I hope that biologists in many fields will find this to be a useful introduction to statistics.

**Supplementary materials:** Spreadsheets, SAS code, R Companion for Handbook.

## Introduction to Data Science

**Author:** Ron Sarafian

**Description:** This book accompanies the course I give at Ben-Gurion University, named “Introduction to Data Science”. This is an introductory-level, hands-on focused course, designed for students with basic background in statistics and econometrics, and without programming experience. It introduces students to different tools needed for building a *data science pipeline*, including data processing, analysis, visualization and modeling. The course is taught in R environment.

Many of the contents in this book are taken from BGU’s “R” course, given at the department of Industrial Engineering and Management.

The chapters in this book are arranged (roughly) according to the order of classes throughout the semester. Students are encouraged to go through the book during the lectures, and after class.

## Introduction to Mathematics Analysis I

**Authors:** Beatriz Lafferriere, Gerardo Lafferriere, and Nguyen Mau Nam

**Description:** Our goal in this set of lecture notes is to provide students with a strong foundation in mathematical analysis. Such a foundation is crucial for future study of deeper topics of analysis. Students should be familiar with most of the concepts presented here after completing the calculus sequence. However, these concepts will be reinforced through rigorous proofs.

The lecture notes contain topics of real analysis usually covered in a 10-week course: the completeness axiom, sequences and convergence, continuity, and differentiation. The lecture notes also contain many well-selected exercises of various levels. Although these topics are written in a more abstract way compared with those available in some textbooks, teachers can choose to simplify them depending on the background of the students. For instance, rather than introducing the topology of the real line to students, related topological concepts can be replaced by more familiar concepts such as open and closed intervals. Some other topics such as lower and upper semicontinuity, differentiation of convex functions, and generalized differentiation of non-differentiable convex functions can be used as optional mathematical projects. In this way, the lecture notes are suitable for teaching students of different backgrounds.

The second edition includes a number of improvements based on recommendations from students and colleagues and on our own experience teaching the course over the last several years.

In this edition we streamlined the narrative in several sections, added more proofs, many examples worked out in detail, and numerous new exercises. In all we added over 50 examples in the main text and 100 exercises (counting parts).

**Supplementary materials:** video lectures

## Introductory Statistics

**Author:** Barbara Illowsky, De Anza College, Susan Dean, De Anza College

**Description:** Introductory Statistics follows the scope and sequence of a one-semester, introduction to statistics course and is geared toward students majoring in fields other than math or engineering. This text assumes students have been exposed to intermediate algebra, and it focuses on the applications of statistical knowledge rather than the theory behind it. The foundation of this textbook is Collaborative Statistics, by Barbara Illowsky and Susan Dean, which



has been widely adopted. Introductory Statistics includes innovations in art, terminology, and practical applications, all with a goal of increasing relevance and accessibility for students. We strove to make the discipline meaningful and memorable, so that students can draw a working knowledge from it that will enrich their future studies and help them make sense of the world around them. The text also includes Collaborative Exercises, integration with TI-83,83+,84+ Calculators, technology integration problems, and statistics labs.

## Introductory Statistics: Saylor

**Description:** This peer-reviewed resource introduces statistical concepts, including: descriptive statistics, basic concepts of probability, discrete random variables, continuous random variables, sampling distributions, estimation, testing hypotheses, two-sample problems, correlation and regression, and chi-square and f-tests.

**Includes:** exercises and answers.

## Khan Academy

**Description:** Arithmetic, Algebra, Geometry, Calculus, Statistics and much more! Khan Academy offers practice exercises, instructional videos, and a personalized learning dashboard that empower learners to study at their own pace in and outside of the classroom.

## Learning Statistics with jamovi

**Authors:** Danielle J. Navarro and David R. Foxcroft.

**Description:** Learning Statistics with jamovi covers the contents of an introductory statistics class, as typically taught to undergraduate psychology students. The book discusses how to get started in jamovi as well as giving an introduction to data manipulation. Descriptive statistics and graphing are followed by chapters on probability theory, sampling and estimation, and null hypothesis testing. The book covers the analysis of contingency tables, correlation, t-tests, regression, ANOVA and factor analysis.

Written in latex and published as a pdf file, for great design and easy access. The book is open source licensed and is free to download.

**Supplementary materials:** Data files, latex source downloadable from Github.

## Learning Statistics with R

Author: Danielle Navarro

Description: Back in the grimdark pre-Snapchat era of humanity (i.e. early 2011), I started teaching an introductory statistics class for psychology students offered at the University of Adelaide, using the R statistical package as the primary tool. I wrote my own lecture notes for the class, which have now expanded to the point of effectively being a book. The book is freely available, and as of version 0.6 it is released under a creative commons licence (CC BY-SA 4.0). The following are available:

- LSR version 0.6 (pdf)
- Data sets
- Source on GitHub

## Linear Algebra

**Author:** Jim Hefferon

**Description:** This textbook has been positively reviewed by four math professors from American universities and the Mathematical Association of America.

**Includes:** exercises, solutions, a lab manual, lecture slides, videos and latex source code.

## Linear Algebra

**Description:** A free linear algebra textbook and online resource written by David Cherney, Tom Denton, Rohit Thomas and Andrew Waldron. Edited by Katrina Glaeser and Travis Scrimshaw.

This “textbook” (+videos+WebWorks) is suitable for a sophomore level linear algebra course taught in about twenty-five lectures. It is designed both for engineering and science majors, but has enough abstraction to be useful for potential math majors. Our goal in writing it was to produce students who can perform computations with linear systems and also understand the concepts behind these computations. The text was last updated in 2016. The following are downloadable for this text:

- the entire book can be downloaded as a single pdf file of 1.4 MB and 410 pages. (Last update: August 24, 2016)
- The LaTeX source files can be downloaded as a single tarball. (Last update: January 25, 2019)
- The WebWork files can be downloaded as a single tarball. (Last update: August 24, 2016)

**Includes:** There are Youtube videos linked to content throughout the book, problems at the end of each chapter, online homework using the WebWork system.

## Linear Algebra with Applications

**Author:** Xinli Wang

**Description:** This open textbook is an adaptation of Linear Algebra with Applications by W. Keith Nicholson. The original book can be found and downloaded from Lyryx.com. Five topics are covered here: system of linear equations, matrix algebra, determinants and diagonalization, vector geometry and vector space. It's suitable for beginners who are interested in learning linear algebra. Readers will have the opportunity to work through H5P elements embedded in every chapter to check their understanding of core concepts on their own.

**Includes:** H5P elements throughout the resource

## Linear Algebra with Applications: Lyryx

**Author:** W. Keith Nicholson

**Description:** The first version of this textbook was published in 1986 as a traditional textbook. The current version from 2018 was published as an open educational resource for a traditional or advanced introduction to the topics within linear algebra.

**Includes:** instructor resources: solution manual to exercises and lecture slides.

## Math Explorer Activity Database

**Description:** From the Exploratorium in San Francisco choose online math activities.

## Matrix Algebra with Computational Applications

**Description:** Matrix Algebra with Computational Applications is a collection of Open Educational Resource (OER) materials designed to introduce students to the use of Linear Algebra to solve real world problems. These materials were developed specifically for students and instructors working in a “flipped classroom” model that emphasizes hands-on problem solving activities during class meetings, with students watching lectures and completing readings and assignments outside of the classroom. The materials are organized into a semester long course with “pre-class” and “in-class” assignments. The “pre-class” assignments include readings, video lectures and coding projects (in Python), which students are expected to complete before attending class. The in-class assignments consist of hands-on individual and group activities intended to be completed during class. These in-class activities are supervised by the instructors, who actively answer questions and help guide the students in achieving the learning goals for the course.

## Measure, Integration & Real Analysis

**Author:** Sheldon Axler

**Description:** This book seeks to provide students with a deep understanding of the definitions, examples, theorems, and proofs related to measure, integration, and real analysis. The content and level of this book fit well with the first-year graduate course on these topics at most American universities. This textbook features a reader-friendly style and format that will appeal to today’s students.

**Supplementary material:** Supplement for Measure, Integration & Real Analysis

## MIT OpenCourseWare: Mathematics

**Description:** Free course materials; Undergraduate and graduate level; supplemental resources

## Online Statistics Education

**Editor:** David M. Lane

**Contributors:** Georgette Baghdady, Evan Brott, Katie Bruton, Madeline Campbell, Patrick Connell, Tina Galante, Paul Giguere, Rudy Guerra, Daniel Hatfield, Mikki Hebl, Robert F. Houser, W. Sloane Hoyle, Jo Jardina, Andrew Kennedy, Jennifer E. Konick, Alyssa Koomas, David Lane, Joan Lu, Hanqi Luo, Daniel Osherson, Lauren Pemberton, Camille Peres, Anikó Sándor, David Scott, Alex Shabad, Zhihua Tang, Sebastian Thomas, Katherine Vasser, Heidi Ziemer, Emily Zitek.

**Description:** Online Statistics: An Interactive Multimedia Course of Study is a resource for learning and teaching introductory statistics. It contains material presented in textbook format and as video presentations. This resource features interactive demonstrations and simulations, case studies, and an analysis lab.

**Supplementary materials:** Instructor manual, PowerPoint slides, and additional questions.

## Open Course Library

**Description:** The Open Course Library is a collection of expertly developed educational materials – including textbooks, syllabi, course activities, readings, and assessments – in 81 high-enrollment college courses. All materials are shared under a Creative Commons (CC BY) license unless otherwise noted. Also available via OpenStax (CNX).

## OpenStax (aka Connexions) Mathematics and Statistics

**Description:** Connexions is one of the most popular open education sites in the world. Its more than 17,000 learning objects or modules in its repository and over 1000 collections (textbooks, journal articles, etc.) are used by over 2 million people per month.

## PhET: Math

**Description:** Interactive simulations in Math from the University of Colorado at Boulder.

## Probability and Statistics – The Science of Uncertainty, Second Edition

**Authors:** Michael J. Evans and Jeffrey S. Rosenthal

**Description:** This book is an introductory text on probability and statistics, targeting students who have studied one year of calculus at the university level and are seeking an introduction to probability and statistics with mathematical content. Where possible, we provide mathematical details, and it is expected that students are seeking to gain some mastery over these, as well as to learn how to conduct data analyses. All the usual methodologies covered in a typical introductory course are introduced, as well as some of the theory that serves as their justification.

The text can be used with or without a statistical computer package. It is our opinion that students should see the

importance of various computational techniques in applications, and the book attempts to do this. Accordingly, we feel that computational aspects of the subject, such as Monte Carlo, should be covered, even if a statistical package is not used. Almost any statistical package is suitable. A Computations appendix provides an introduction to the R language. This covers all aspects of the language needed to do the computations in the text. Furthermore, we have provided the R code for any of the more complicated computations. Students can use these examples as templates for problems that involve such computations, for example, using Gibbs sampling.

Also, we have provided, in a separate section of this appendix, Minitab code for those computations that are slightly involved, e.g., Gibbs sampling. No programming experience is required of students to do the problems. We have organized the exercises in the book into groups, as an aid to users. Exercises are suitable for all students and offer practice in applying the concepts discussed in a particular section. Problems require greater understanding, and a student can expect to spend more thinking time on these. If a problem is marked (MV), then it will require some facility with multivariable calculus beyond the first calculus course, although these problems are not necessarily hard. Challenges are problems that most students will find difficult; these are only for students who have no trouble with the Exercises and the Problems. There are also Computer Exercises and Computer Problems, where it is expected that students will make use of a statistical package in deriving solutions.

**Note:** We are pleased to now make the book available for free. If you are an instructor and would like a copy of the solutions manual please email one of the authors. The book is available as a single pdf file or by individual chapters.

*The book is copyright (c) by Michael J. Evans and Jeffrey S. Rosenthal. It may be copied and distributed without restriction, provided it is not altered, appropriate attribution is given and no money is charged.*

## Think Statistics: Probability and Statistics for Programmers

**Author:** Allen B. Downey

**Description:** *Think Stats* is an introduction to Probability and Statistics for Python programmers.

- *Think Stats* emphasizes simple techniques you can use to explore real data sets and answer interesting questions. The book presents a case study using data from the National Institutes of Health. Readers are encouraged to work on a project with real datasets.
- If you have basic skills in Python, you can use them to learn concepts in probability and statistics. *Think Stats* is based on a Python library for probability distributions (PMFs and CDFs). Many of the exercises use short programs to run experiments and help readers develop understanding.

This book is available under a Creative Commons license, which means that you are free to copy, distribute, and modify it, as long as you attribute the source and don't use it for commercial purposes.

Supplementary resources: Latex source, code examples and solutions from Github.

## Transition to Higher Mathematics: Structure and Proof

**Authors:** Bob A Dumas and John E McCarthy

**Description:** This book is written for students who have taken calculus and want to learn what “real mathematics” is. We hope you will find the material engaging and interesting, and that you will be encouraged to learn more advanced mathematics. This is the second edition of our text. It is intended for students who have taken a calculus course, and are interested in learning what higher mathematics is all about. It can be used as a textbook for an “Introduction to Proofs” course, or for self-study. Chapter 1: Preliminaries, Chapter 2: Relations, Chapter 3: Proofs, Chapter 4: Principles

of Induction, Chapter 5: Limits, Chapter 6: Cardinality, Chapter 7: Divisibility, Chapter 8: The Real Numbers, Chapter 9: Complex Numbers. The last 4 chapters can also be used as independent introductions to four topics in mathematics: Cardinality; Divisibility; Real Numbers; Complex Numbers.

## UBC Calculus Textbooks

**Description:** UBC has created its own sequence of open calculus texts to be used in the following courses:

1. CLP-1 Differential Calculus, also available online using PreTeXt.
2. CLP-2 Integral Calculus, also available online using PreTeXt.
3. CLP-3 Multivariable Calculus, also available online using PreTeXt.
4. CLP-4 Vector Calculus, also available online using PreTeXt.

The latex source from the first two of these texts has been made available from github (source for CLP-1, CLP-2, CLP-3 , CLP-4). Each of the texts also includes a problem book.

**Includes:** Problem book for each of the texts. Exercises and solutions included many of which were taken from old exams, midterm tests and quizzes.

## Understanding Linear Algebra

**Description:** This is an open access textbook written by David Austin.

An HTML version and PDF version are now available at no cost. Besides being freely available, David Austin intends to make the PreTeXt source code available on GitHub in the near future.

**Includes:** Activities for teaching Linear Algebra with downloadable latex source files, A blog for the text, embedded Sage calculations in HTML version

## Vector Calculus

**Description:** This text was written by Michael Corral in 2013. This is a text on elementary multivariable calculus, designed for students who have completed courses in single-variable calculus. The traditional topics are covered: basic vector algebra; lines, planes and surfaces; vector-valued functions; functions of 2 or 3 variables; partial derivatives; optimization; multiple integrals; line and surface integrals.

The book also includes discussion of numerical methods: Newton's method for optimization, and the Monte Carlo method for evaluating multiple integrals. There is a section dealing with applications to probability. Appendices include a proof of the right-hand rule for the cross product, and a short tutorial on using Gnuplot for graphing functions of 2 variables. The following are available for download:

- complete book can be downloaded – the latest version (2013-05-21)
- LaTeX source code is available from here
- Java programs and source code for Newton's algorithm (Ch. 2) and the Monte Carlo method (Ch. 3)
- Sage equivalents of the above Java programs (2012-02-13)

- Matlab/Octave equivalents of the above Java programs provided by Prof. Benson Muite (University of Michigan) in 2013-05-21.

**Includes:** Exercises with selected answers, some Java, Sage, Matlab/Octave programs illustrating specific concepts.

## 23. Physics and Astronomy

### Astronomy: OpenStax

This astronomy text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in astronomy, from astronomical instruments to the evolution of galaxies.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

### Calculus-based Physics I

Author: Jeffrey W. Schnick, Ph.D., Saint Anselm College

Description: Calculus-Based Physics is an introductory physics textbook designed for use in the two-semester introductory physics course typically taken by science and engineering students. This is the first of two textbooks for this course.

### Introductory Physics Resources

This book isn't purely a textbook. Sure, it's got information about physics, but it's not really meant to be read like a textbook. There are tons of physics textbooks out there and frankly most of the information we teach in this class hasn't changed in hundreds of years. The resource is written by Adria Updike from Roger Williams university.

You don't need to know any formal physics to get started with this course, but you *are* expected to have a strong math background (algebra, geometry, trigonometry, and some calculus) and will be expected to use those skills early and often in this course. Math is, after all, the language of physics!

In this manual, you'll find a quick overview of the material you need to know from each section we cover, additional resources to help you better understand the material, the problems we will work on as a group in class, problems from previous course exams, problem-solving tips and strategies, and equation sheets for your own exams. Each chapter covers a general topic in the course and will include links to videos and other resources to help you with the material itself and the required math background.

**Includes:** Links to Videos and other resources, H5P activities, class exercises, practice exam questions.

### MERLOT Physics Portal

An online collection of Physics teaching and learning resources.



## MIT OpenCourseWare: Physics

Undergraduate and graduate level course materials.

## OpenStax (aka Connexions) College Physics

“This 1300 page introductory, algebra-based, two-semester college physics book is grounded with real-world examples, illustrations, and explanations to help students grasp key, fundamental physics concepts.”

## Physics

This Lumen Learning covers all of the concepts of first-year physics with a balance of application and theory.

**Includes:** problem-solving guides, examples, videos, applications, problems, selected solutions, and summaries.

## Physics 132: What is an Electron? What is Light?

Compiled by Roger Hinrichs, Paul Peter Urone, Paul Flowers, Edward J. Neth, William R. Robinson, Klaus Theopold, Richard Langley, Julianne Zedalis, John Eggebrecht, and E.F. Redish.

A second semester introductory physics course for life sciences students that looks to deepen students' understanding of biology and chemistry through physics all through the lens of understanding two of the most fundamental particles in the Universe: electrons and photons. The book begins with exploring the quantum mechanical nature of these objects to expand on what students have learned in chemistry and then proceeds to geometric optics (using the human eye as a theme), electrostatics (using membrane potentials), circuits (using the neuron), and finally synthesizing everything in a unit exploring the meaning of “light is an electromagnetic wave.”

This book has been specifically designed for this course out of free-and-open resources such as the OpenStax College Physics textbook<sup>1</sup>, University of Maryland's UMD NEXUS Wikibook<sup>2</sup>, as well as other resources from around the internet. While the text has all the information you need, some sections are also available as videos on our course YouTube page. These sections will have the link at the beginning with the section below.

**Includes:** Videos.

1. <sup>3</sup>

2. <sup>4</sup>

3. [1]

4. [2]

## University Physics Volumes 1-3

Volume 1 concepts: mechanics, waves and acoustics

Volume 2 concepts: thermodynamics, electricity and magnetism

Volume 3 concepts: optics, modern physics

University Physics: OpenStax has been successfully adopted, was developed by professors of physics from American institutions and emphasizes the connection between application and theory.

**Includes:** instructor resources, student resources, examples, exercises, solutions, summaries, and simulations.

## Yale Open Courses

Full courses available. 'All lectures were recorded in the Yale College classroom and are available in video, audio, and text transcript format. Registration is not required and no course credit is available.'

PART III  
FACULTY OF EDUCATION



## 24. Art Education

### Arts Integration in Elementary Curriculum: 2nd Edition

Topics in this textbook include art integration, music integration, physical education / dance integration, and the theoretical foundations of arts integration in education.

**Includes:** PowerPoint Slides, activities.

### Music and the Child

The textbook explores a holistic, artistic, and integrated approach to understanding the developmental connections between music and children. It guides professionals to work through music, harnessing the processes that underlie music learning, and outlining developmentally appropriate methods to understand the role of music in children's lives through play, games, creativity, and movement.

**Includes:** activity and vocabulary.

## 25. Education

### Building Democracy for All

**Authors:** Robert W. Maloy & Torrey Trust

**Description:** Building Democracy for All is an interactive, multimodal, multicultural, open access e-book for teaching and learning key topics in United States Government and Civic Life. It focuses on the importance of community engagement and social responsibility among middle and high school students—core themes in the Massachusetts 8th Grade History & Social Science Curriculum Framework.

### Choosing & Using Sources: A Guide to Academic Research

**Author:** Teaching & Learning, University Librariesm Ohio State University

**Description:** This textbook provides a process for academic research and writing, from formulating your research question to selecting good information and using it effectively in your research assignments.

**Includes:** activities.

### Communication Training and Development

**Authors:** William Arnold and Lynne McClure

**Description:** We wrote this book to fill two big gaps—the practical application of training and development principles in the field of communication. and the practical application of communication principles in the field of training and development. This book is more than just “about” communication or training and development—it shows you how to do it.

To use this book to full advantage, the reader can think of places he or she has worked or groups to which he or she has belonged, and see how the points and skills described in the book would apply. The practical nature of this book makes it applicable to innumerable settings.

The book will benefit university juniors and seniors in communication, management, or adult education. It is a must for training and development classes, and an excellent supplement for management courses and adult education classes. Instructors may want to assign student teams to conduct actual needs assessments—described step-by-step in the book—in local companies and organizations. Or, students could be assigned to present actual workshops—also described in the book—to the class.

So, if you are looking for a history on the progression of the field of training and development, we suggest you consult some other books and articles highlighted in the bibliography. We decided a practical, easy-to-read book could make a greater contribution to the development of effective trainers. We hope you will agree with us.

### Conventions 101: A Functional Approach to Teaching (and Assessing!)

## Grammar and Punctuation

Author: Chauna Ramsey

**Description:** This is a collection of cumulative units of study for conventional errors common in student writing. It zeroes in on problems typically seen in writing of all types, from the eternal “there/they’re/their” struggle to correct colon use. Units are organized from most simple to most challenging.

**Includes:** examples, worksheets.

## Creating Online Learning Experiences

Editors: Matt Crosslin, Justin Dellinger, Rebecca Heiser, Katerina Riviou, and Brittany Usman

**Description:** This book looks at issues that comprise the online learning experience creation process. It is meant for for new and experienced designers alike, whether creating traditional online courses, open learning experiences, or anything in between.

## Democracy and Education

**Author:** John Dewey

**Description:** First published in 1916, this classic continues to influence contemporary educational thought. Considered one of the great American philosophers, Dewey grapples with the nature of knowledge and learning as well as formal education’s place, purpose, and process within a democratic society.

## Design for Learning: Principles, Processes, and Praxis

**Authors:** Jason K. McDonald & Richard E. West

**Description:** This book is divided into two major sections. The first, **Instructional Design Practice**, covers how instructional designers **understand, explore, create, and evaluate** situations requiring educational interventions and the products or systems used to support them. In this section, chapters address how we understand diverse learners and their needs; how to explore and frame the educational problems one is solving; how to analyze the context and tasks associated with the problems; how to iteratively generate decisions, prototypes, and solutions; and how to evaluate and understand the effectiveness of an instructional design.

The second part, **Instructional Design Knowledge**, covers the sources of **design knowledge**, a variety of **instructional design processes**, approaches for designing **instructional activities**, and the **relationships important for instructional design practice**. This section includes chapters addressing learning/instructional theory, design precedent, both systematic and agile design processes, and practical strategies for using technology wisely, managing projects, and creating instructional activities.

## Dissident Knowledge in Higher Education

**Edited by: James McNinch and Marc Spooner, University of Regina**

**Description:** This collection includes some of the leading authorities in the field, including Marie Battiste, Noam Chomsky, Yvonna S. Lincoln, and Linda Tuhiwai Smith. It is geared towards courses that focus on methodology, colonialism, Indigenous research and knowledge, and theories of change.

## The ELC: An Early Childhood Learning Community at Work

**Authors:** Heather Bridge, Lorraine Melita, and Patricia Roiger

**Description:** As authors, we chose the subject for this book because of what early childhood teacher candidates told us about their confusion between the theory they were taught in college methods classes, and, the teaching practices they often experienced during the Practicum field placement. We became interested in this subject because the teacher candidates were questioning, as good teacher candidates do, a troubling disconnect between early childhood theory and associated practice in classrooms. We were motivated to write this book because we wanted to share our model of professional development, designed to support both pre-service teacher candidates and, in-service educators together, during the Practicum field placement. Our lead author secured a grant to investigate these concerns and to implement a new professional development model designed to overcome them. The substance of this book reminds all of us, that in early childhood education, educators' change through professional development, for improved practice that benefits children's learning, is a constant.

The idea to write this book began a year after the grant ended. We were not quite done with all that had been accomplished and wanted others in the early childhood field to learn about our professional development model, which we know is still highly relevant today. It has taken us approximately seven years to complete the book. We overcame many challenges during writing, not the least of which was distance. The lead author now lives in the United Kingdom while the other two authors live in the United States. Technology was extremely helpful throughout the writing process. Skype was the best way for us to "see" each other regularly and to work out differences and correct inconsistencies.

## IDEAL Distance Education and Blended Learning Handbook, 7th Edition

**Authors:** Jen Vanek, Destiny Simpson, & Jeff Goumas

**Description:** This seventh edition of the Handbook is the third to be created under the stewardship of the EdTech Center at World Education, Inc. Though its structure mirrors that of the previous editions authored by Leslie Petty and Jere Johnston (published by Project IDEAL at the University of Michigan), the content within each chapter has been rewritten to reflect the technology and attendant instructional shifts required for effective learning well into the twenty-first century, most notably the importance of blended learning in adult education and how to conduct programming entirely remotely, if necessary.

The organization of the Handbook chapters reflects important programmatic considerations for setting up a distance education program or expanding options for blended learning. The guidance provided and reflection required in each chapter support the development of practical plans for distance and blended education implementation. The end goal for readers of the Handbook is crafting a distance or blended education program planning document.



## Facilitating online learning with the 5R's

Authors: Joanna Lake and Hayley Atkins

**Description:** After conducting research and exploring current resources, we realized that while Indigenous pedagogy is being embedded (albeit, slowly) into BC curriculum, the learning experiences are limited to face-to-face teaching.

We decided to further explore the potential of embedding Indigenous pedagogy into online learning experiences, and used Kirkness and Barnhardt's (1991) 4R's guidelines and Restoule's (2019) 5R's framework as a starting point for educators and those involved in facilitating online learning. We chose this framework purposefully, as it was researched and created by Indigenous scholars. As white settler-educators, we want to acknowledge that for us, answering the TRC's calls to action means we choose to deliver a curriculum that is not linear in nature. We used the 5R's as a guideline and took the principles that were previously applied to Indigenous students and their communities, and attempted to use them in our own classrooms with our diverse range of learners. The purpose of this book is to form connected learning communities especially while engaged in remote learning.

We want to encourage educators to begin the work, and to provide support to those engaging with the resources which will inform individual teaching practices.

## Foundations of Educational Technology

Author: Penny Thompson

**Description:** The current definition of Educational Technology, as defined by the Definition and Terminology Committee of the Association for Educational Communications and Technology (AECT) is "the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources" (Januszewski & Molenda, 2008, p. 1).

## Foundations of Learning and Instructional Design Technology

**Author:** Richard E. West

**Description:** This book received the 2018 AECT Outstanding Book Award!

"What is this field?" "Where have we come from as a discipline, and where are we going?" "What do I want to study?" These and other questions are typical for new students in the field of Learning and Instructional Design Technology. This textbook is designed to help answer these questions and provide the quickest route to understanding the history and current trends in the field. After surveying classic theories and writings, as well as more recent applications of theory and practice, students will be better prepared to chart their own course and careers within the discipline. This book is designed to support foundations courses common in departments, as well as seminars on current trends and issues.

## Guide to Teaching with Technology

**Description:** This guide is designed to help you plan, design, develop, and teach technology-enhanced courses and

programs. We have compiled recommendations and suggestions from our staff of educators and technology professionals as well as from faculty who have experienced the process. We have included guides that illustrate pedagogical design issues; tips on planning, developing, and writing course content; as well as planning and facilitating online interaction. We have also included a description of various technologies to assist you in the process.

We have designed this guide to provide an overview of the entire process, from planning to implementation. If you have any questions or concerns, or would like to discuss your unique course dynamics, feel free to call or email us at any time, at [edtech@brocku.ca](mailto:edtech@brocku.ca) or (905) 688-5550 ext 4734.

## Hybrid-Flexible Course Design

**Author:** Brian J. Beatty

**Description:** The book describes the fundamental principles of HyFlex design, explains a process for design and development, and discusses implementation factors that instructors, designers, students and administrators have experienced in a wide variety of higher education institutions; public and private, larger and small, research-intensive, comprehensive and community colleges. These factors include the drivers, the variations in implementation approaches and constraints, and the results (e.g., student success metrics, student satisfaction). A series of worksheets in Chapter 1.4 provides specific guidance that can be used by individuals or teams engaging in HyFlex design projects at their own institution. Case reports in Unit III from institutions and faculty who have successfully implemented HyFlex-style courses provide a rich set of real-world stories to draw insights for a reader's own design setting.

## The Information Literacy User's Guide: An Open, Online Textbook

**Authors:** Allison Hosier, Daryl Bullis, Deborah Bernnard, Greg Bobish, Irina Holden, Jenna Pitera (Hecker), Tor Loney and Trudi Jacobson

**Description:** This textbook introduces students to critical concepts of information literacy as defined for the information-infused and technology-rich environment in which they find themselves.

**Includes:** case studies, scenarios, exercises, interactive quizzes.

## Instructional Methods, Strategies and Technologies to Meet the Needs of All Learners

**Author:** Paula Lombardi

**Description: For students:** This eBook is designed to accompany your studies in **EDU 607-703: Instructional Methods, Strategies, and Technologies to Meet The Needs of All Learners** course, on your general special education teacher certification program track. It is an open resource, which means it was created for your use at no cost.

The text within this eBook are from open resources. I have made some edits to the text to make it more concise and closer to the everyday language of students in the US.

**Citing the book:** Please cite chapter content from the reference list at the end of each chapter and within the chapter as appropriate. If you are citing a linked resource, cite that resource in APA format.

Some of the resources within this book are "open access" materials, accessible free of charge online for your use, but

they are not openly licensed. This means you cannot edit and redistribute them as you can with the Creative Commons licensed content. These open access resources are the YouTube videos and some of the resources that are linked to within the book.

For instructors: you can use the Epub version of this ebook, and import it into your own PressBooks account and edit it there for your own use. Please be sure to include attribution, per the CC license below.

## Interactive Learning in the Online Classroom

**Author:** Erin Courville

**Description:** I created this resource to help students in INST610 learn instructional design principals and apply what they learned to their Instructional Design Project. This resource may be used for other purposes, as described below, and is licensed through Creative Commons.

## Introduction to College Research

**Authors:** Walter D. Butler, Aloha Sargent and Kelsey Smith

**Description:** The key to success in college research is to develop and hone your information literacy skills. These skills will prepare you to find and use information not only for college, but also in the workplace and your personal life. Having strong information literacy skills will make you a more thoughtful and effective consumer and creator of information, and will increase your awareness of and resilience toward the psychological, physiological, and sociological effects of living in a society overloaded with information.

## Introduction to Curriculum for Early Childhood Education

**Authors:** Jennifer Paris, Kristin Beeve, Clint Springer

**Description:** This textbook is an introduction to planning curriculum for young children.

**Includes:** reflection questions, planning form, sample classrooms.

## K-12 Blended Teaching: A Guide to Personalized Learning and Online Integration Volume 1

**Authors:** Charles R. Graham, Jered Borup, Cecil R. Short, & Leanna Archambault

**Description:** This book is your guide to blended teaching in K-12 settings. It was designed to help both pre-service and in-service teachers prepare their classes for blended teaching. Color and B&W print versions of the book can be obtained online at:

- PDF (Free)
- B&W Print (\$6.54)

- Color Print (\$31.28)
- ePub: coming

The figure of a building with four pillars represents the core organization of the book. This book begins by orienting you to the foundational dispositions and skills needed to support your blended teaching practice. Then you will be introduced to four key competencies for blended teaching represented by the pillars of (1) online integration, (2) data practices, (3) personalization, and (4) online interaction. The final chapter helps you bring all four competencies together as you implement blended teaching in your classroom. The chapters around these four pillars do not have to be read in order, though we have put them in the order that we think makes the most logical sense.

Definitions for words or phrases that are highlighted in blue can be found in the Glossary before the Appendices. Appendices contain additional source and resource information as well as examples of completed Blended Teaching Roadmaps for elementary and secondary school contexts.

Finally, the icons<sup>1</sup> found throughout the book will direct you to external features, in-chapter challenges, and badging features that will help your learning.

## The K-12 Educational Technology Handbook

**Authors:** Anne Ottenbreit-Leftwich & Royce Kimmons

**Description:** This textbook provides a set of high-quality resources to university educational technology courses. All chapters are written by professionals in the field, including university researchers, teacher educators, and classroom teachers.

The book in its entirety and each chapter can be freely accessed, downloaded, printed, and remixed. Professors of educational technology courses can select the chapters that will work best for them when creating course packets, and preservice and inservice teachers can use relevant chapters for trainings and professional development purposes.

## Learner and User Experience Research

**Editors:** Matthew Schmidt, Andrew A. Tawfik, Isa Jahnke, & Yvonne Earnshaw

**Description:** Researchers in the field of Learning/Instructional Design and Technology have been engaged in productive scholarly endeavors at the intersection of Learning Design, User Experience, Human-Computer Interaction, and associated disciplines for some time. This edited volume captures the collective voices of authors working in this area. This book focuses on explicating the ontological and epistemological underpinnings of user-centered design and user experience as applied in the field of Learning/Instructional Design and Technology with the goal of foregrounding the importance of learner experience as an emerging design paradigm for the field. This volume is comprised of 15 chapters and organized into three parts: (1) Methods and Paradigms (5 chapters), (2) Conceptual and Design Frameworks (6 chapters), and (3) LX Design-in-practice (4 chapters). This volume serves as a contribution to an emerging, transdisciplinary, and complex phenomenon that requires multiple literacies. LX is not only concerned with the effectiveness of designed learning interventions, but also with the interconnected and interdependent relationship between the learner- (or the teacher-/instructor-) as-user, the designed technology, novel pedagogical techniques or instructional strategies, and the learning context. The diversity and breadth of perspectives presented herein serve as a topographical sketch of the emerging focus area of learner experience and represent an opportunity to build upon this work in the future.

# Learning in the Digital Age

**Author:** Tataleni I. Asino

**Description:** This book is a work in progress; and will hopefully remain that way in perpetuity; where authors will come back and update their chapters and others will add more chapter. It is aimed to serve as a textbook for classes exploring the nature of learning in the digital age. The genesis of this book is a desire to use OERs in all my teachings, coupled with the realization that the resources that I was looking for were not available and as such I needed to contribute in creating them. This book is a minor attempt to contribute to the vast repository of Open Educational Resources.

## Learning Management Systems

**Author:** Daisyane Barreto, Amy Rottmann, & Salena Rabidoux

**Description:** This book explores main concepts and topics involved in the process of managing Learning Management Systems (LMS) in corporate or educational settings. Definitions, features and characteristics of LMSs are introduced to familiarize the reader with the content. Types of LMSs are also covered in order to assist current and prospective instructional designers to identify and select an optimal LMS solution for their organization. Additionally, key stakeholders as well as the usability of the LMS will be crucial in the adoption and maintenance of the software, thus, another important topic discussed in this book. Furthermore, processes such as LMS selection, implementation and evaluation are explored in this book to provide an overview of the steps to be taken before, during and after an LMS adoption.

## Mathematics for Elementary Teachers

**Author:** Michelle Manes

**Description:** This book aims to help readers understand elementary mathematics more deeply, gain facility with creating and using mathematical notation, develop a habit of looking for reasons and creating mathematical explanations, and become more comfortable exploring unfamiliar mathematical situations.

**Includes:** activities, examples, problem banks.

## Online Learning: A Student Perspective

**Authors:** Madicyn Anderson, Trevor Winchester, Aidan Burns, Rana Kilani, Collin Campbell, Steven Shilmoon, Sawyer King, Lakshdeep Singh, and Dave Cormier

**Description:** Online learning has proved to be a major shift in learning for many students. There have been aspects to virtual learning, good and bad, that students have experienced. Over the past 3 months, eight CO-OP students from the University of Windsor's Office of Open Learning have researched, collected data, and reflected on their experience of their online schooling. This eBook presents a student perspective of online courses and can be representative of a larger student population. Our goal is to provide insight to faculty on the impact of online learning on students. We

hope this can be used as a tool to improve the design of online classrooms and the students learning experience. Online classrooms should, at least in part, be designed in a way for students to learn and succeed. Through videos, interactive content, and text, we will discuss major concepts of the online learning experience such as grades and assessments, course delivery, and communication. We also include a student Q&A-style discussion about the myth and reality of online learning.

## Online Learning Toolbox

Author: Evrim Baran

Description: *Online Learning Toolbox* is a collection of seminal readings with commentary on different topics of online learning. Students taking the EDUC-507: Principles and Practices of Distance Education graduate course in Fall 2019 at Iowa State University contributed to the development of this open online source. This initiative is a product of the “open pedagogy” approach that I follow in designing the renewable assignments and projects in my courses. Open pedagogy is a participatory teaching approach in which students contribute to the development of the content they learn. As I was exploring the integration of open pedagogy activities into my graduate courses, I came across with the Open Education Reader, a collection of readings on open education, developed by Dr. David Wiley and his graduate students. This work inspired me to implement similar projects in other contexts (see the Learning Environments Design Reading Series and Aquatic Toxicology WikiBook).

## Open Pedagogy Approaches

**Authors:** Alexis Clifton and Kimberly Davies Hoffman

**Editors:** Alexis Clifton, Kimberly Davies Hoffman, Robert Berkman, Eileen Daly-Boas, Lev Earle, Joe Easterly, Moriana Garcia, Deborah Rossen-Knill, and Kristen Totleben

**Contributors:** Robin DeRosa, Stacy Katz, Jennifer Van Allen, Cynthia Mari Orozco, Caroline Sinkinson, Amanda McAndrew, Shanna Hollich, Jacob Moore, Dennis E. Schell, Dorinne E. Banks, Neringa Liutkaite, Mantra Roy, Joe Easterly, Bette London, Christian Beck, Lily J. Dubach, Sarah A. Norris, John Venecek, Mary Lee Cunill, Sheri Brown, Tia Esposito, Daniel Dotson, Anna Davis, Amanda L. Folk, Shanna Jaggars, Marcos D. Rivera, Kaity Prieto, Lindsey Gumb, Heather Miceli, Sarah Hutton, Lisa Di Valentino, Paul Musgrave, Amanda Koziura, Jennifer M. Starkey, Einav Rabinovitch-Fox, Joshua F. Beatty, Timothy C. Hartnett, Debra Kimok, John McMahon, Ashley Shea, Sean D. Visintainer, Stephanie Anckle, Kristen Weischedel, Carrie Baldwin-SoRelle, Jennifer M. Swann, Bryan James McGeary, Ashwini Ganeshan, Christopher S. Guder, Stephanie N. Lewis, Anne M. Brown, Amanda B. MacDonald, Laurie N. Taylor, Brian Keith, Susan J. Erickson, Denise G. Malloy, Sarah Siddiqui, Kimberly Davies Hoffman, Rose-Marie Chierici, and Amanda Spence

**Description:** In April 2018, Open Pedagogy champion Robin DeRosa introduced faculty, librarians, and graduate students at the University of Rochester to two different concepts—open educational resources and open pedagogy. Open educational resources or OER are free online educational content licensed to allow users “permission to retain, reuse, revise, remix, and redistribute the material.” Open pedagogy or OP is classically defined as an instructional approach that engages students in using, reusing, revising, remixing and redistributing open content. Throughout her presentation, DeRosa emphasized the critical interdependency between resource affordability and effective education for all. She shared compelling statistics on the rising cost of textbooks and noted that affordability issues have increasingly discouraged many from attaining a college degree. She further introduced OER and OP as the foundation for fostering student agency and for shifting their identity as knowledge consumers to knowledge creators. This vision held particular meaning for one librarian in the audience, a librarian who had personally witnessed students taking the

lead in their coursework and creating meaningful, impactful, long-lasting learning. Looking around the room at DeRosa's talk, the librarian thought, "How can we inspire instructors to engage in open pedagogical practices?" "How do we impress upon them that the library is a natural partner toward this end?" and "How can we work together to explore this new territory of learning, paving a new path of seamless collaboration?"

And so began the idea for this book. Guided by a vision of collaboration and furthering OER and OP efforts, the editorial board includes both librarians and faculty, specifically, seven UR librarians, one faculty member (the Director of UR's Writing, Speaking and Argument Program, WSAP), and an OER specialist from the neighboring State University of New York (SUNY) Geneseo. Importantly, the anthology was envisioned locally as a professional development tool that might generate ideas and new course designs at the University of Rochester while equipping the editorial board with the skills to assist UR instructors with the future design of OER and OP. More generally, the anthology was anticipated to be widely shared and inspire ideas of OER and OP, designed collaboratively by faculty, library staff, and in many cases, students. In the spirit of open, the editorial board decided that the book should not be published primarily in print, but rather in collaboration with the Rebus Community through the use of Pressbooks in order to allow unrestricted access to ideas and information. The authors have licensed their work through Creative Commons, making the entire resource an OER.

## Qualitative Inquiry in Daily Life

**Author:** David Dwayne Williams

**Description:** This book is meant to teach researchers, evaluators, and practitioners such as educators how to use qualitative inquiry in daily life. Although this book may make the most sense if it is read in sequence, feel free to navigate to any chapter or appendix at any time.

## The Roles and Responsibilities of the Special Educator

**Author:** Paula Lombardi

**Description:** The book is designed to accompany an introductory level general special education course: **The Dynamic Role of the Special Educator**. Many of the chapters in this book have been adapted from the The Parent Information and Resources comprehensive web pages.

In the original text the words "you" were used to speak directly to parents. The details of the material throughout the website and now this book, are relevant to most education professionals who are working with children with disabilities and their families. The text has been modified to focus on the role of the special educator. Additional text may be added throughout the eBook, by the author and collaborating educators, to clarify and expand on the content and tie it to course topics and assignments.

As you read through this eBook you will see many references to the Individuals with Disabilities Education Act "IDEA". In the U.S., the Individuals with Disabilities Education Act (IDEA) is a **special education law** that mandates regulation for students with disabilities in order to protect their rights as students and the rights of their parents. Sections of the law are coded and searchable.

# Sharing our Knowledge: Best Practices for Supporting English Language Learners in Schools

Nadia Prokopchuk, Collection Editor

Description: At the end of a term, the instructor informs students that their final papers may be considered for inclusion in an OER essay collection. Essay selection has no bearing on student marks as this is done after course completion. Students must give permission for their papers to be published prior to inclusion in the collection. The overall goal of the OER collection is to provide *PreK-12 educators* (classroom teachers, administrators, EAL coordinators, language consultants, specialists, and others) with a source of current best practices and research. An added advantage is that the collection provides *pre-service teachers* with insights into the cultures and languages represented in schools today, as preparation for their future employment.

## Teaching and Learning in Adulthood

Author: Tracy Smith

Description: What does the future hold for the field of education? Technology is going to play a big factor in education moving forward. Bryan Alexander is a futurist, educator, speaker, and writer who has written many articles on education. A new way of teaching is beginning to catch on in both higher education and primary and secondary schools. Studies are beginning to show that students learn best through engagement, cooperation, autonomy, group discussion, and other non-traditional ways of learning. Technology is playing a big role in this change in the way we teach and learn. Rather than the teacher be the only expert in the class and disseminating information to the students, the teacher is supporting students who are driving the learning experience.

## Teaching in a Digital Age

Author: A.W. (Tony) Bates

Description: The book examines the underlying principles that guide effective teaching in an age when all of us, and in particular the students we are teaching, are using technology. A framework for making decisions about your teaching is provided, while understanding that every subject is different, and every instructor has something unique and special to bring to their teaching. The book enables teachers and instructors to help students develop the knowledge and skills they will need in a digital age: not so much the IT skills, but the thinking and attitudes to learning that will bring them success.

**Includes:** scenarios, activities.

## Teaching Math for Emergent Bilinguals: Building on Culture, Language, and Identity

Authors: Ji-Yeong I and Ricardo Martinez

Description: This book is designed for pre-service/in-service teachers and others who will work or work with K-12



students who have linguistically and culturally diverse backgrounds, especially students of other languages (English language learners/Emergent bilingual/multilingual).

## Teaching with Digital Tools and Apps

**Author:** Torrey Trust

**Description:** This eBook highlights the key steps and considerations for finding, evaluating, and teaching with digital tools and apps.

## Teaching With Rich Media

**Author:** Steve Covello

**Description:** This book was created as a response to emerging discussions with online faculty and program directors about what is possible in teaching and learning online beyond using just text-based instructional media.

The context of these discussions has been within my collaborative work as the Rich Media Specialist and Senior Instructional Designer at Granite State College since 2011. I have worked in the design, development, and formative revision of fully online courses in undergraduate and graduate degree programs and in facilitating faculty professional development programs. I have also taught fully online courses for General Education, Program level, and Capstone undergraduate courses since 2012.

I recognized in my own teaching and in my instructional design discussions with faculty that there was an opportunity to promote a vision of what we do as online educators that separates us from the conventions of face-to-face (F2F) education. We teach differently than F2F instructors, encounter different challenges, and draw upon different skills to achieve our educational goals. Teaching online isn't an offshoot of F2F teaching—it is an entirely different species of teaching.

## Textiles and Tapestries

**Editors:** Christi U. Edge, Abby Cameron-Standerford, & Bethney Bergh

**Description:** *Textiles and Tapestries* presents thought-provoking research that explores the intricate and complex weavings of teaching and learning. It reflects a compelling mixture of traditional and contemporary methodology, collaborations within and beyond teacher education, and allows space for considering the implications of current worldwide social, political, and systemic tensions. Importantly, it highlights the central role of self-study in creating insights and understandings of practice for transforming teaching and for generating new knowledge.

Contributions from established and novice academic researchers, teacher practitioners, and graduate students provide opportunities to learn with and from the voices of dynamic and diverse self-study researchers. Section one focuses on the process of exploring and making meaning from weaving inquiry, teaching, and learning from studying practices through self-study. Section two illuminates the act of making new meaning, creating the tapestries and textiles of knowing by attending to the tools and crafting in studying teaching and professional practices. Section three focuses on the formation of new tapestries of understanding as authors share the implication of their findings through self-study.

This book presents new methods, frameworks, collaborations, and understandings of practice that will be useful for teacher educators, graduate students, and self-study of practice researchers.

## Understanding and Supporting Learners with Disabilities

**Author:** Paula Lombardi

**Description:** This book was developed to support the Granite State College introductory courses EDU 617 and 717, Students with Disabilities. Chapters 1-11 are developed to align with the disability summary assignments. Each of these concise chapters explains the corresponding section of the disability summary template. This eBook is a work in progress and will evolve as high quality open resources become available.

Chapters 12-23 provide an introduction to each of the 13 IDEA disabilities. Some chapters are more comprehensive than others, depending on the availability of open resources. These disability specific chapters are a good resource for anyone who needs a review or a deeper understanding of these disabilities and how to support these students in the classroom with research based learning strategies.

## Unleashing the Power of Learner Agency

**Authors:** Stewart Hase & Lisa Marie Blaschke

**Description:** This is the third book about heutagogy or self-determined learning since its inception in 2000. Authors from thirteen different countries describe their experiences of using the approach in a variety of contexts such as art, school education, higher education, digital learning, work, green education, personal learning, online learning, elementary learning, and research education. The book is designed for the practitioner by focussing on how to apply heutagogy within their own area of interest. The context of the book is learner agency, which we think should be the guiding principle underpinning education and preparing citizens to cope with the twenty-first century. Included is a chapter providing an in-depth and updated description of the theories and practice of self-determined learning for those wanting a more thorough background.

## Web Design Basics for Educators

**Author:** Torrey Trust

**Description:** With free web design tools like Google Sites, Wix, Weebly, and WordPress, you can create a class website, digital portfolio, blog, online course or tutorial, or another type of educational site with relative ease. However, there's more to designing a website than just putting together some text and multimedia on a page. If you want to create an educational website that enriches and amplifies learning, then this is the book for you! This book will help you learn how to build an educational website that is accessible, visually appealing, easy-to-navigate, easy-to-scan, and increases learning of the site content. The book features five chapters that cover the fundamental skills and knowledge you need for developing a website that educates, inspires, motivates, and/or empowers readers.

PART IV

# FACULTY OF KINESIOLOGY AND HEALTH STUDIES



## 26. Applied Human and Social Sciences

### Addiction: Drugs, Brains, and Behavior – The Science of Addiction

This addiction text has been editor-reviewed. It covers introductory concepts in addiction, from drug misuse to treatment and recovery.

**Includes:** instructor resources, student resources, and summaries.

### The Evolution of Aging 3rd Edition

This aging text has been positively-reviewed. It covers introductory concepts in human aging, from evolution to anti-aging research.

**Includes:** instructor resources, student resources, and summaries.

### Principles of Social Psychology

This social work text has been positively-reviewed. It covers introductory concepts in social psychology.

**Includes:** index, glossary, and exercises.

### A Quick Guide to Quantitative Research in the Social Sciences

This textbook serves as an easy-to-use guide for anyone who needs some quick and simple advice on quantitative aspects of research in social sciences, covering subjects such as education, sociology, business, nursing.

### Sociology: Understanding and Changing the Social World

This sociology text has been positively-reviewed. It covers introductory concepts in sociology, from government and politics to health, medicine, and society.

**Includes:** index, glossary, and exercises.

# 27. Health, Kinesiology and Applied Physiology

## Anatomical Basis of Injury

Author: Layci Harrison

Description: Anatomical Basis of Injury is adapted from Anatomy and Physiology by OpenStax. Anatomy and Physiology is licensed under a Creative Commons Attribution 4.0 International (CC BY) license, which means that you can distribute, remix, and build upon the content, as long as you provide attribution to OpenStax and its content contributors.

For Anatomical Basis of Injury, several chapters of the original text were removed, and some were re-ordered, but no other changes to the content were made. The BCcampus version of Anatomy and Physiology was used to create Anatomical Basis of Injury by cloning their Pressbooks-hosted copy.

## Anatomy & Physiology: OpenStax

This text was a collaboration among many anatomy and physiology professors and was developed using pedagogical practices. This textbook has been successfully adopted, adapted, and has an average 4.9/5 professor rating.

**Includes:** instructor resources, case studies, student resources, simulations, exercises, solutions, and critical thinking questions.

## Anatomy and Physiology (OpenStax)

Anatomy and Physiology is a dynamic textbook for the two-semester human anatomy and physiology course for life science and allied health majors. The book is organized by body system and covers standard scope and sequence requirements. Its lucid text, strategically constructed art, career features, and links to external learning tools address the critical teaching and learning challenges in the course. The web-based version of Anatomy and Physiology also features links to surgical videos, histology, and interactive diagrams.

## Biomechanics of Human Movement

Author: Karine Hamm

Description: This open access textbook was developed as an introductory resource to introduce basic concepts related to human biomechanics. It was edited and developed for students from Douglas College enrolled in Biomechanics (SPSC 1151). This book is best viewed online using the pressbooks format however, multiple formats (e.g., pdf, epub, mobi) are also made available.

## Body Physics: Motion to Metabolism

This text covers introductory biophysics concepts, including body forces, body heat, and body composition measurement.

**Includes:** summaries, exercises, solutions, applications, and examples.

## Clinical Examination of the Musculoskeletal System

Authors: Richard Lebert and Kelly Ould

Description: This is an Open Educational Resource (OER) for commonly used orthopedic tests and outcome measurements. This resource is a living document that will be periodically updated to ensure current best practices are in place. In addition, it will be monitored and updated throughout the life cycle, based off Paul Hibbits Learning & Technology Development Process Model and it will be updated and systematically edited for clarity and flow.

## Human Nutrition

This nutrition text has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in nutrition, from carbohydrates to trace minerals.

**Includes:** instructor resources, student resources, and summaries.

## A Mixed Course-Based Research Approach to Human Physiology

Author: Karri Haen Whitmer

Book Description: The Biology 256 Laboratory course was designed to provide students with hands-on access to modern techniques in human physiological analyses using the course-based research pedagogical approach. In this course, students will learn how to perform literature searches; generate research questions and hypotheses; design experiments; collect, analyze, visualize and interpret data; and present scientific findings to others. The Biol 256L curriculum offers a high-impact human physiology experience that fosters the critical thinking skills required to be a successful citizen in a modern world filled with misinformation.

## NUTR251 Nutrition Through the Life Cycle

Author: Sabine Zemleni

Description: This book is designed to accompany NUTR251 Nutrition Through the Life Cycle. The course follows the

introductory *Human Nutrition and Metabolism* course. During the introductory course students studied the corner posts of nutrition knowledge, nutrients and their food sources, recommended amounts, digestion, absorption and their metabolism. Students were also introduced to the interaction between eating and chronic diseases. Nutrition Through the Lifecycle will build on this knowledge and expand it.

**Note on license:** NUTR251 Nutrition Through the Life Cycle Copyright © by Sabine Zemleni. All Rights Reserved.

## Wellness

Author: Pepe Aragon

Description: Provides a study of fitness and wellness and their relationship to a healthy lifestyle. Defines fitness and wellness, evaluates the student's level of fitness and wellness, and motivates the student to incorporate physical fitness and wellness into daily living



PART V  
FACULTY OF NURSING



## 28. Nursing

### A Long Goodbye: Ed and Mary's Journey with Lewy Body Dementia

**Editors:** Adele Baldwin; Stephen Anderson; Michael Inskip; Kellie Johns; David Lindsay; Bronwyn Mathiesen; and Marie Bodak

**Description:** This book, built around Ed's journal, chronicles Ed's experiences as a carer following his wife Mary's diagnosis with Lewy body dementia. Students and experienced health professionals are rarely afforded such an insight into how their words and actions are interpreted by, and impact upon patients, families and friends. Ed's Story provides information and education resources related to dementia care. Although specifically focusing on Lewy body dementia, the resources are transferable to caring for people with any type of dementia. The freely available resources are suitable for use by students in the health professions, educators, formal and informal carers.

### Anatomy and Physiology (OpenStax)

**Description:** Anatomy and Physiology is a dynamic textbook for the two-semester human anatomy and physiology course for life science and allied health majors. The book is organized by body system and covers standard scope and sequence requirements. Its lucid text, strategically constructed art, career features, and links to external learning tools address the critical teaching and learning challenges in the course. The web-based version of Anatomy and Physiology also features links to surgical videos, histology, and interactive diagrams.

### Building a Medical Terminology Foundation

**Description:** Welcome to **Building a Medical Terminology Foundation**. Medical terminology is a language that is used in health care settings. Medical terms are built from Greek and Latin word parts and in addition include , acronymns , eponyms and modern-day language terms.

Learning a new language can be a daunting task. In this resource, we offer a method for breaking down medical words that takes that daunting task and makes it manageable. What is required from you is a commitment to memorizing the word parts, learning the rules, and identifying the rebels. Once you meet that commitment we will show you how to apply the rules to the word parts you have memorized. As you memorize the language components of medical terminology it is important to support that learning with the context of anatomy and physiology. Consider where in the body the medical term is referencing and then how it works within the body. This will build a medical terminology foundation that you can continue to grow in your future health-care courses.

## **Comprehensive Midwifery: The role of the midwife in health care practice, education, and research**

Description: The re-emergence of midwifery as a primary health care profession is one of the great stories of Canadian health care systems, but this story has been largely undocumented. This invaluable interactive e-book details the history and philosophy of midwifery, how current midwifery theory and policies are developed, and the role of education and research in advancing the field. We include a special focus on the social determinants of women's health throughout Canada and the world, the principle of health care as a human right, and the principles and scope of midwifery practice. A must-read for Canadian student midwives and others interested in midwifery.

## **Clinical Procedures for Safer Patient Care – Thompson Rivers University Edition**

Description: This open educational resource (OER) was developed to ensure best practice and quality care based on the latest evidence, and to address inconsistencies in how clinical health care skills are taught and practised in the clinical setting. The checklist approach, used in this textbook, aims to provide standardized processes for clinical skills and to help nursing schools and clinical practice partners keep procedural practice current. Each skill/procedure is covered in a chapter that has learning outcomes, a brief overview of the relevant theory, checklists of steps for procedures with the rationale behind each step of the process, and a summary of key takeaways. All checklists, tables and videos are listed and hyperlinked in the appendices.

## **Cultural Resources for Community Nursing**

Description: Canada, the United States, and European nations are presently facing a migration crisis of a magnitude that has not been seen since the massive population displacements of the post-World War II era (Fleras, 2015). Due to the effects of globalization, economic policies, financial constraints, and forced migrations due to environmental or armed conflicts, nurses are providing health care to very diverse and sometimes vulnerable populations such as refugees and asylum seekers (Racine & Lu, 2015). On the other hand, globalization also brings increased ethnic and cultural diversity within health care organizations, which affects the way nurses deliver care and how they interact with nurses coming from other countries. More than ever, nurses must be culturally competent and culturally safe in their everyday practice regardless of the health settings in which they work. Similarly, nurse managers need to understand their roles in supporting cultural competency and safety at both the individual and the organizational level. Cultural competency and cultural safety are key skills for nurses to acquire and sustain. The Canadian Nurses Association, the Canadian Association of Schools of Nursing, the American Nurses Association, the American Organization of Nurse Executives, and the US Office of Minority Health are among the major regulatory nursing bodies and organizations that recognize the moral and ethical duty of nurses to advocate for and provide culturally competent care.

## Documentation in Nursing: 1st Canadian Edition

**Description:** This open access textbook is intended to guide best practices of documentation in the nursing profession. This resource is designed for students in undergraduate nursing programs, and addresses principles of documentation, legislation associated with documentation, methods and systems of documentation, and key trends in the future of documentation. Incorporated into this resource is legislation and practice standards specific to the province of Ontario, Canada.

## Fundamentals of Anatomy and Physiology

**Authors:** Anna Chruścik, Kate Kauter, Louisa Windus, and Eliza Whiteside

**Description:** The University of Southern Queensland (USQ) is committed to advancing the use of open textbooks in higher education. This textbook is a tool to support first year anatomy and physiology courses taught in Australia, aiming to provide students with an increased access to free, high-quality learning materials.

The material in this textbook is largely based on OpenStax's Anatomy & Physiology textbook, however, has been modified for Australian course curriculum.

## Health Case Studies

**Description:** Health Case Studies is composed of eight separate health case studies that align with the open textbooks Clinical Procedures for Safer Patient Care and Anatomy and Physiology: OpenStax. Each case study includes the patient narrative or story that models the best practice (at the time of publishing) in healthcare settings. Associated with each case is a set of specific learning objectives to support learning and facilitate educational strategies and evaluation. The case studies can be used online in a learning management system, in a classroom discussion, in a printed course pack or as part of a textbook created by the instructor. This flexibility is intentional and allows the educator to choose how best to convey the concepts presented in each case to the learner. Because these case studies were primarily developed for an electronic healthcare system, they are based predominantly in an acute healthcare setting. Educators can augment each case study to include primary healthcare settings, outpatient clinics, assisted living environments, and other contexts as relevant.

## Introduction to Communication in Nursing

**Description:** This open access textbook is intended to guide best practices in communication in the context of the nursing profession. The resource addresses communication theory, therapeutic communication and interviewing, and interprofessional communication as it relates to nursing. This resource is designed for students in undergraduate nursing programs. The project is supported and funded by the Ryerson University Faculty of Community Services Publication Grant.

## Leadership and Influencing Change in Nursing

Description: Leadership and Influencing Change in Nursing is designed for a single-semester introduction to the professional nurse's leadership role as both a care provider and a formal leader. An assortment of authors with diverse nursing leadership roles across Saskatchewan and Canada have contributed to this textbook. These diverse voices are focused on providing student nurses with the foundational tools, techniques, and knowledge required to empower them to meet the leadership challenges found within the incessantly changing Canadian health care environment.

## Nursing Care at the End of Life: What Every Clinician Should Know

Description: Nursing Care at the End of Life: What Every Clinician Should Know should be an essential component of basic educational preparation for the professional registered nurse student. Recent studies show that only one in four nurses feel confident in caring for dying patients and their families and less than 2% of overall content in nursing textbooks is related to end-of-life care, despite the tremendous growth in palliative and end-of-life care programs across the country. The purpose of this textbook is to provide an indepth look at death and dying in this country, including the vital role of the nurse in assisting patients and families along the journey towards the end of life. There is an emphasis throughout the book on the simple, yet understated value of effective interpersonal communication between the patient and clinician. The text provides a basic foundation of understanding death and dying, including a brief historical examination of some main conceptual models associated with how patients cope with impending loss. An overview of illness trajectories and models of care, such as hospice and palliative care are discussed. Lastly, the latest evidence-based approaches for pain and symptom management, ethical concerns, cultural considerations, care at the time of death, and grief/bereavement are examined. The goal of this text is to foster the necessary skills for nurses to provide compassionate care to individuals who are nearing the end of life and their families. Every chapter contains a "What You Should Know" section which highlights and reinforces foundational concepts.

## Nursing Fundamentals

Description: This Nursing Fundamentals textbook is an open educational resource with CC-BY licensing developed for entry-level nursing students. Content is based on the Wisconsin Technical College System (WTCS) statewide nursing curriculum for the Nursing Fundamentals course (543-101), the 2019 NCLEX-RN Test Plan, the 2020 NCLEX-PN Test Plan, and the Wisconsin Nurse Practice Act.

This book introduces the entry-level nursing student to the scope of nursing practice, various communication techniques, and caring for diverse patients. The nursing process is used as a framework for providing patient care based on the following nursing concepts: safety, oxygenation, comfort, spiritual well-being, grief and loss, sleep and rest, mobility, nutrition, fluid and electrolyte imbalance, and elimination. Care for patients with integumentary disorders and cognitive or sensory impairments is also discussed. Learning activities have been incorporated into each chapter to encourage students to use critical thinking while applying content to patient care situations.

The Open Resources for Nursing (Open RN) project is supported by a \$2.5 million grant from the Department of Education. This book is available for free online and can also be downloaded in multiple formats for offline use. The online version is required for interaction with adaptive learning activities included in each chapter. Affordable print versions may also be purchased from XanEdu in college bookstores and on Amazon.

## Nursing Pharmacology

Description: This open access Nursing Pharmacology textbook is designed for entry-level undergraduate nursing students. It explains basic concepts of pharmacology and describes common medication classes. This book is not intended to be used as a drug reference book, but direct links are provided to DailyMed, which provides trustworthy information about marketed drugs in the United States.

This textbook is aligned with the Wisconsin Technical College System (WTCS) statewide nursing curriculum for the Nursing Pharmacology course (543-103). The project is supported by a \$2.5 million Open Resources for Nursing (Open RN) grant from the Department of Education and is licensed under a Creative Commons Attribution 4.0 International License.

## Nursing Skills

Description: This open access *Nursing Skills* textbook includes physical assessments routinely performed by entry-level registered nurses and basic nursing skills performed by licensed practical nurses. It is based on the Wisconsin Technical College System (WTCS) statewide nursing curriculum for the Nursing Skills course (543-102), the 2019 NCLEX-RN Test Plan, the 2020 NCLEX-PN Test Plan, and the Wisconsin Nurse Practice Act. Learning activities are included to encourage the student to engage in critical thinking and apply the nursing process while analyzing assessment findings.

The project is supported by a \$2.5 million Open Resources for Nursing (Open RN) grant from the Department of Education and is licensed under CC-BY 4.0 creative commons license. This free book is available online and can also be downloaded in multiple formats for offline use. The online version is required for interaction with the adaptive learning activities included in each chapter.

## Perspectives on Bias in Medicine

Description: This book will allow the medical learner to identify and acknowledge bias in the medical setting through the eyes of patients, medical professionals, and content experts who discuss their experiences with this subject. Learners will use self-assessment via the Implicit Bias Test created by Harvard University's Project Implicit, and reflection through knowledge checks, to solidify learning. It is written in dedication to our future medical professionals and patients we care for with the hopes of cultivating compassion through self-knowledge and awareness.

## The Scholarship of Writing in Nursing Education: 1st Canadian Edition

Description: This open access textbook is intended to guide best practices in the journey of scholarly writing in the context of the nursing profession. This resource is designed for students in undergraduate nursing programs and may also be useful for students in other health-related post-secondary programs, graduate students, and healthcare providers.

## Vaccine Practice for Health Professionals: 1st Canadian Edition

Description: Vaccinations save lives. The success of vaccines means people have forgotten the consequences of diseases like polio, tetanus, and measles. A growing number of parents are questioning the safety of vaccines over what vaccines protect their children against. This Open Educational Resource will provide healthcare professionals and students some background on the issues of vaccine hesitancy and how to talk with vaccine hesitant clients.

It has been a privilege to contribute to a free and open online resource that is accessible to all nursing students and other health professionals. Toronto Public Health is grateful for this joint collaboration with eCampusOntario and educators across Ontario to enhance the capacity for new health professionals to rebuild and sustain public trust in vaccines.

## Vital Sign Measurement Across the Lifespan – 2nd Canadian Edition

Description: The purpose of this textbook is to help learners develop best practices in **vital sign measurement**. Using a multi-media and interactive approach, it will provide opportunities to read about, observe, practice, and test vital sign measurement. Boxes with helpful tips are provided throughout the chapters:

- **Technique Tips** provide helpful information about measurement techniques, and
- **Points to Consider** highlight key points to consider about vital sign measurements and findings.

A **Chapter Summary** and **Printable Flashcards** highlighting techniques for each vital sign measurement are provided at the end of each chapter. These printable flashcards are all located together in the textbook's conclusion chapter.

Learners can review the full textbook or advance to sections that they have identified as areas to work on. The textbook has a self-directed format and provides an interactive and engaging way for learners to develop competence in the measurement of vital signs while integrating knowledge about anatomy and physiology.

Learners will develop knowledge about various vital signs including **temperature, pulse, respiration, blood pressure, and oxygen saturation**. Measurement of vital signs is a foundational, psychomotor skill for healthcare providers and students in post-secondary health-related programs. These measurements provide information about a person's overall state of health and more specifically about their cardiovascular and respiratory status. These measurements can also reveal changes in a client's vital signs over time and changes in their overall state of health. Proficiency in vital sign measurement is essential to client safety, care, and management. Measurements can influence clinical decision-making related to therapeutic interventions.



PART VI  
FACULTY OF SOCIAL WORK



## 29. Social Work

### **Accountability and Repairing Relationships: Training and Facilitation Guide**

Description: A workshop and facilitation guide to support B.C. post-secondary institutions to prevent and respond to sexual violence and misconduct. *Accountability and Repairing Relationships* is a series of four 90-minute workshops for individuals who have been informed that they have caused harm in the context of sexual violence. Designed for one-on-one or small group facilitation, learners are guided through information and reflection activities that help them recognize the harm they have caused, learn how to be accountable, and develop the skills needed to build better relationships and support a safe and healthy campus. (The slide deck that accompanies this resource can be downloaded from the Introduction).

### **Active Bystander Intervention: Training and Facilitation Guide**

Description: A workshop and facilitation guide to support B.C. post-secondary institutions to prevent and respond to sexual violence and misconduct. *Active Bystander Intervention* is a 90 minute workshop for all members of the campus community: students, faculty, administrators, and staff.

This training helps learners acquire the knowledge and skills needed to recognize and intervene in an incident of sexual violence as well as discuss strategies for creating a safer campus community. Uses the 4D's (Direct, Distract, Delegate, Delay) Active Bystander Intervention Model. (The slide deck that accompanies this resource can be downloaded from the Introduction).

### **The Cause and Consequence of Human Trafficking: Human Rights Violations**

Authors: Jacquelyn C.A. Meshelemiah and Raven E. Lynch

Description: This book, *The Cause and Consequence of Human Trafficking: Human Rights Violations*, is a call for education and action. The authors of this book are both social workers who are passionate about justice, human rights, and anti-trafficking work. We have written this book in an effort to educate the reader about human trafficking and human rights violations from multiple lenses.

The sections contain chapters that include an abstract, learning objectives, key words, definitions, content on a specific aspect of trafficking, images, interactive quiz items, a case study, a summary and supplemental learning materials. Each chapter is intended to educate the reader, engage the reader and equip you with the tools (information, steps, etc.) to do something. "Doing something" will look different from person to person, but this book is a call to action. We all can do something. As you read through this book, you will start to realize what you are able to do.

## Consent & Sexual Violence: Training and Facilitation Guide

Description: A workshop and facilitation guide to support B.C. post-secondary institutions to prevent and respond to sexual violence and misconduct. *Consent & Sexual Violence* is a 90 minute workshop for all members of the campus community: students, faculty, administrators, and staff. This training explores different understandings of consent, including the legal definition. Learners have the opportunity to develop skills related to asking for and giving consent in all relationships as well as discuss strategies for creating a “culture of consent” in campus communities. (The slide deck that accompanies this resource can be downloaded from the Introduction).

## Contemporary Families: An Equity Lens

Description: This openly licensed text approaches contemporary families from an equity lens. It was created by a Human Development and Family Services (HDFS) faculty member and 12 HDFS students at Linn-Benton Community College (LBCC), using an open pedagogy approach. It asks two questions relevant to the Difference, Power, and Discrimination outcomes at LBCC: “What do families need?” and “How do society and institutions support or get in the way of families getting what they need?” This book includes remixed content. Please note that some sections may have more restrictive licenses, and some all rights reserved content is included under fair use. More specific information can be found under Licenses and Attributions at the bottom of each section.

## Domestic Violence in Immigrant Communities: Case Studies

Description: “Domestic Violence in Immigrant Communities: Case Studies” is a freely accessible eCampus Ontario Pressbook containing case studies of immigrant women experiencing domestic violence to be used as educational materials. The book highlights the complexity of domestic violence cases in immigrant communities and the different legal processes that these women encounter in seeking justice and the challenges they face in relation to re-establishing their own lives and the lives of their children. The book contains questions for reflection; a description of legal processes involved in DV cases, and a glossary of the terms used throughout the case studies.

## Foundations of Addiction Studies

Description:

Addiction is a concept that has been around for hundreds of years, but we still struggle to define and understand the word. When the American Psychiatric Association (APA) released a new diagnostic manual (DSM-5) in 2013, they incorporated the term addiction, which did not appear in previous versions of the influential text. However, the APA also acknowledged that the term can be stigmatizing and that its definition is uncertain. As we move into the next era of understanding about addiction, we need to continue refining our knowledge of this deadly disease.

In this book, we want to bring to life the core concepts at the heart of addiction. You may have friends or family members struggling with an addiction, or you yourself may have problems with addiction. You might be interested in

working to help people in recovery, or you are simply curious to know more about this issue. Whatever the case, this book will introduce key terminology and research help you define, discuss, diagnose, and deal with this problem.

The material is organized so that each chapter focuses on a different theme related to addiction. Within each chapter are multiple sub-parts where you will find an introductory reading, a video, an article, an activity, questions for discussion, and a short quiz. Some sections also include slide presentations for you to view.

## Foundations of Social Work Research

Description: This textbook was created to provide an introduction to research methods for BSW and MSW students, with particular emphasis on research and practice relevant to students at the University of Texas at Arlington. It provides an introduction to social work students to help evaluate research for evidence-based practice and design social work research projects. It can be used with its companion, A Guidebook for Social Work Literature Reviews and Research Questions by Rebecca L. Mauldin and Matthew DeCarlo, or as a stand-alone textbook.

## Graduate research methods in social work

Description: This textbook is part of the Open Social Work project. Open Social Work is dedicated to spreading open education, open access, and the practices that support them in social work education and research. Other social work open textbooks as well as resources for faculty who want to engage in open education are available at [www.opensocialwork.org](http://www.opensocialwork.org)

## Guidebook for Social Work Literature Reviews and Research Questions

Description: This short guidebook provides information about selecting a research topic and research questions, searching for literature, reading and understanding scholarly writing, and writing a literature review to synthesize what is known and what remains to be learned about a social problem. For students who appreciate the availability of resources on the internet, it also provides links to additional materials. It can be used with its companion textbook, Foundations of Social Work Research by Rebecca L. Mauldin and Matthew DeCarlo, or as a stand-alone guide.

## Human Behavior and the Social Environment I

Description: That's what we are here to find out – **Human Behavior and the Social Environment (HBSE)** – How do they connect? How does it shape us? Why do we think and feel the way we do? This will be explored throughout this course by examining human behavior throughout life stage developments and our interactions with the social environment. This course will explore theoretical perspectives in Social Work to help provide a foundation for organizing thoughts about client needs and issues they are seeking supports for. Theories will then be connected to important developmental, social, and cultural issues that present throughout each stage of life to create an overall picture of a client's experience and how we can use this information to have a better understanding of how people we work with

are influenced and why. Knowledge of typical development in each stage of life will also inform the Social Worker if any other supports, resources, or services may be needed.

## **Human Behavior and the Social Environment II**

Description: These materials will help students and instructors alike explore human behavior and how it is shaped and impacted by both traditional and non-traditional paradigms. This text will also support the reader in having a deeper understanding of how the environment, in all of its complexity, can affect individuals, families, groups, and communities.

It is my hope that the information contained in this book will help you, as a future social worker, approach client systems with empathy, understanding, and a compassionate curiosity that allows for comprehensive assessment, individualized approaches to treatment, and continuity of care.

## **Immigrant and Refugee Families, 2nd Edition**

Description: As a whole, the book offers an important overview of transitions, challenges, and strengths of immigrant and refugee families as they adjust to a new country and culture. Each chapter utilizes a family systems perspective to synthesize relevant research and practice, concluding with directions for future research, policy, and/or practice. A “future directions” section offers suggestions for research as well as strategies that professionals can consider as they serve immigrant families. All chapters include a case study to help readers grapple with the realities of the immigration process for families. Discussion questions provide opportunities for critical thinking and deeper conversation about the issues that affect immigrant families.

This textbook was written with several audiences in mind. It is designed for students taking university classes in human sciences, social work, social policy, public health, and mental health, as well as for non-profit sector organizations, government agencies, and faith communities that serve immigrant and refugees. Students and community professionals alike can use this text to develop understanding of specific challenges facing immigrant and refugee families. Although the focus is primarily on the United States as the destination country, we believe that the research explored in this book can inform work with immigrant and refugee families who resettle in countries around the world. Regardless of geographic location, we hope to underscore how important it is for all of us to be engaged in research and practice with immigrant and refugee families.

This textbook is unique in its focus on families in context. Each immigrant family's path is influenced by many situational and interrelated factors including: 1) individual health and motivation, 2) family values, traditions, cohesion, and conflict, and 3) systemic policies that influence immigrant admission and access to social benefits. The text is organized into three sections – Context, Family Dynamics Related to Stress, and Family Adaptation and Resilience.

## **Intercultural Learning**

Description: The ability to recognise and understand your own cultural context is a prerequisite to understanding and interacting with people from different cultural backgrounds. An intercultural learning approach encourages us to develop an understanding of culture and cultural difference, through reflecting on our own context and experience.

## Introduction to Social Work at Ferris State University

Description: This book was written by MSW students as their final project for their Capstone class. Students were each assigned a chapter of the book to write to show that they had achieved competency as a Master's level social worker. Chapters were assigned based on student interest and experience in certain areas of the field.

The 2017 MSW class was excited to be able to contribute to the learning of their peers by writing this book! The book was written to the specifications of the SCWK 110 instructors at Ferris State University in the summer of 2017.

The use of an Open Source textbook aligns well with our social work ethics and standards. By utilizing this format instead of a printed textbook, we are able to reduce the costs of attending this particular class for students. We hope that other universities will utilize our textbook! Please feel free to edit this book for your needs, but give credit to the original authors.

## Lifespan development: A Psychological perspective 2nd Edition

Description: This textbook introduces the idea of lifespan development from a psychological perspective.

## Parenting and Family Diversity Issues

Author: Diana Lang

Description: This book has been created for students and all individuals who work with children and families (e.g., educators, parents, caregivers, direct support workers, etc.) in diverse contexts. It is imperative to understand how and what factors may influence child outcomes across the lifespan. Therefore, key concepts related to parenting, child-rearing, care-giving, and parenting education are outlined in this textbook to provide historical, theoretical, and practical perspectives across vast settings and developmental domains.

## Scientific Inquiry in Social Work

Description: As an introductory textbook for social work students studying research methods, this book guides students through the process of creating a research project. Students will learn how to discover a researchable topic that is interesting to them, examine scholarly literature, formulate a proper research question, design a quantitative or qualitative study to answer their question, carry out the design, interpret quantitative or qualitative results, and disseminate their findings to a variety of audiences. Examples are drawn from the author's practice and research experience, as well as topical articles from the literature. The textbook is aligned with the Council on Social Work Education's 2015 Educational Policy and Accreditation Standards. Students and faculty can download copies of this textbook using the links provided in the front matter. As an open textbook, users are free to retain copies, redistribute copies (non-commercially), revise the contents, remix it with other works, and reuse for any purpose.

**Includes:** instructor resources, student resources, summaries, and real-world applications.

## Social Problems: Continuity and Change

Description: *Social Problems: Continuity and Change* is a realistic but motivating look at the many issues that are facing our society today. As this book's subtitle, Continuity and Change, implies, social problems are persistent, but they have also improved in the past and can be improved in the present and future, provided that our nation has the wisdom and will to address them.

## Supporting Survivors: Training and Facilitation Guide

Description: A workshop and facilitation guide to support B.C. post-secondary institutions to prevent and respond to sexual violence and misconduct. *Supporting Survivors* is a 90 minute workshop for all members of the campus community: students, faculty, administrators, and staff. This training helps learners respond supportively and effectively to disclosures of sexual violence. It includes a discussion of available supports and resources, the differences between disclosing and reporting, and opportunities to practice skills for responding to disclosures. Uses the Listen, Believe, Support model. (The slide deck that accompanies this resource can be downloaded from the Introduction).

## Theories and Biological Basis of Addiction

Author: Audrey Begun

Description: Welcome to the online coursebook for our Theories and Biological Basis of Addiction course. The material is designed to be read interactively or after downloading; while the embedded interactive exercises require internet connectivity, each can also be downloaded for offline work. These exercises are presented to help you test and apply what you are reading, challenge yourself, prepare for quizzes, and have a little fun along the way. The list of key terms at the end explains text **highlighted in bold italics** throughout the book—in the interactive mode you can click on a highlighted word to jump to its explanation in the key terms section. Use the back arrow to return to where you were reading.

Message to Instructors: A number of the chapters in this Open Educational Resource require you to locate and make available links to specified library or online resources. These are identified throughout the coursebook. In the Appendix, you will find a course syllabus template related to the course for which this OER was originally developed.

## Theories and Biological Basis of Substance Misuse, Part 1

Author: Audrey Begun

Description: Theories and Biological Basis of Substance Misuse Part 1 (2019) is an OER coursebook applying a biopsychosocial lens for educating an interdisciplinary professional workforce to identify, understand, and address problems related to substance use, substance misuse, and substance use disorders. These materials were developed using a variety of published sources and online materials (NIH, NIAAA, NIDA, SAMHSA, WHO) and the Routledge Handbook of Social Work and Addictive Behavior (2020), edited by A.L. Begun and M.M. Murray. A total of 6 modules are presented in this Part 1 coursebook; an additional 7 modules specific to different types of substances, co-occurring



problems, prescription and over-the-counter substance misuse, and pharmacotherapy strategies appear in *Theories and Biological Basis of Substance Misuse Part 2* (2020). Each module begins with a brief introduction of the topic and list of reading objectives and concludes with a Module Summary, a linked “Key Terms” section, and full reference citations list. Content for each module is organized into a set of chapters, some of which involve linking to outside reading resources, and various “Stop and Think” interactive activities. The coursebook can be used interactively in the online environment, or can be downloaded as pdf files but the learning activities will no longer be interactive. The coursebook contents are relevant for social work, psychology, sociology, criminal justice, medicine/nursing/allied health, education, and other professional or disciplinary education purposes. An example course syllabus for use in social work education is presented as an Appendix. Modules presented in *Theories and Biological Basis of Substance Misuse Part 1* include: Module 1—Introduction; Module 2—Key Definitions, Diagnostic Criteria, Classification of Substances, & Trending Topics; Module 3—Biological Models and Substance Misuse, Pharmacokinetics & Psychopharmacology Principles; Module 4—Psychological Models of Substance Misuse; Module 5—Social Context & Physical Environment Models of Substance Misuse; Module 6—Theory Integration, Transtheoretical Model, and Vulnerability/Risk/Resilience/Protective Factors in Substance Misuse.



PART VII

# FACULTY OF MEDIA ART AND PERFORMANCE



## 30. Art History

### **Guide to Ancient Aegean Art**

This book from Smarthistory covers the Ancient Aegean, including Cycladic, Minoan, and Mycenaean art.

### **Guide to Ancient Egyptian Art**

This book from Smarthistory covers ancient Egyptian art.

### **Guide to Ancient Etruscan Art**

This book from Smarthistory covers ancient Etruscan art.

### **Guide to Ancient Greek Art**

This book from Smarthistory covers ancient Greek art.

### **Guide to Ancient Near Eastern Art**

This book from Smarthistory covers Sumerian, Akkadian, Neo-Sumerian / Ur III, Babylonian, Assyrian and Persian art.

### **Guide to Ancient Roman Art**

This book from Smarthistory covers ancient Roman art.

## Introduction to Art: Design, Context, and Meaning

The textbook is a comprehensive introduction to the world of Art. It includes over 400 high-quality images illustrating the history of art, its technical applications, and its many uses.

**Includes:** questions and key terms.

## Open Art Histories

“Open Art Histories (OAH) is a platform for art, art history, visual art, communication, and museum studies teachers and instructors in Canada. Open to anyone who uses visual and material culture in their pedagogical practices, OAH offers a dynamic and collaborative space for Open Education Resources (OERs), and serves as a virtual community and repository for art and art history instructors at all stages of their academic and professional careers.”

## A Quick and Dirty Guide to Art, Music, and Culture

An open textbook by The Ohio State University that discusses art and music in the context of popular culture. It is meant to work with the open course *Art and Music Since 1945*.

**Includes:** assignments, supplementary course materials.

## 31. Creative Arts Therapies

### HANDS in Autism Art Expo 2020

Author: HANDS in Autism

Description: Introducing the 10th Annual HANDS in Autism® Art Expo!

While the prevalence of autism spectrum disorder (ASD) continues to rise, needs related to community awareness still exist. Given the range of strengths, challenges, and needs that exist for individuals with ASD, the education and awareness of caregivers, teachers, providers, peers, and community members who support such individuals may be considered a primary form of intervention with ASD. Interactive experiences, such as this expo, provide an opportunity to highlight the strengths of individuals with ASD while promoting a more accepting, engaging, and supportive community for these individuals.

It is our hope that this expo will provide you with a glimpse into the minds of individuals with ASD. With social interaction being a primary area of challenge, communication through art provides an excellent means for expression. As a mother of one of the artists said, ***“Kids on the spectrum don’t need to be “cured”. They aren’t sick, they are just wired differently and if given a chance, they will amaze you.”***



### Handbook of Social and Clinical Psychology: The Health Perspective

This handbook explores the boundary line separating social and clinical psychology. It serves as a comprehensive resource book for theorists, researchers, and scholars working at the interface of social and clinical psychology.

## 32. Design and Computation Arts

### **Graphic Design and Print Production Fundamentals**

The textbook is written by a group of select experts with a focus on different aspects of the design process, from creation to production – addresses the many steps of creating and then producing physical, printed, or other imaged products that people interact with on a daily basis.

### **Tutorials of Visual Graphic Communication Programs for Interior Design**

Author: Yongyeon Cho

Book Description: This book is for the beginning level of both architecture and interior design students who learn computer graphic communication software. The author developed multiple tutorials to teach three computer graphic applications, AutoCAD, Revit, and Enscape. AutoCAD is an essential computer drafting software which is 2D drawing software. Revit is a Building Information Modeling software, which is 3D based modeling software. Lastly, Enscape is a real-time rendering, animation, and virtual reality plug-in for users' 4D experiences.



## 33. Film (Mel Hoppenheim School of Cinema)

### 360 Essentials: A Beginner's Guide to Immersive Video Storytelling

Authors: Joshua Cameron, Gary Gould, and Adrian Ma

Description: Have you ever found yourself looking at an amazing photograph that truly takes your breath away and wished you could just step inside for a moment? Or have you ever been watching an interesting video but wanted to know what was on the other side of the lens?

We definitely have. And by we, we mean the team that have put together this handbook you're reading right now. Collectively, we are Dr. Gary Gould (PhD in Film and Television), journalism professor Adrian Ma, designer and researcher Joshua Cameron, and project assistants Adam Chen and Stephanie Liu. Hi! Nice to meet you.

We are multimedia instructors, researchers and content producers based at Ryerson University in Toronto. We couldn't help but notice that interest in 360 video and virtual reality has really skyrocketed in recent years and some amazing content is being created. We have been exploring and experimenting with 360-degree video, photography and spatial audio recording, and figuring out how these elements can be used to create incredible, immersive experiences. From capturing special events that give you the best seat in the house to producing virtual reality documentaries that make you feel like you're actually there, creating 360 video and virtual reality (VR) content can be an exciting and uniquely engaging form of storytelling.

There are so many potential applications for 360 video and VR, including for journalism and documentary content, exciting marketing content, engaging educational experiences or just to simply capture the world around you. And thanks to rapid innovations in technology, creating this stuff is easier and cheaper than you may think.

Our objective with this resource is to walk you through the essential steps in creating compelling and engaging 360 video experiences. While some prior experience with photography or videography can help, the technology available now gives anybody the ability to produce this type of amazing content.

### The Birth of a Nation: The Cinematic Past in the Present

Author: Michael T. Martin

Description: More than one hundred years since it premiered on cinema screens, D. W. Griffith's controversial photoplay, *The Birth of a Nation*, continues to influence American film production and to have relevance for race relations in the United States. While lauded at the time of its release for its visual and narrative innovations and a box office hit with film audiences, it provoked African American protest in 1915 for racially offensive content. In this collection of essays, contributors explore Griffith's film as text, artifact, and cultural legacy and place it into both the historical and transnational contexts of the first half of the 1900s and its resonances with current events in America, such as #BlackLivesMatter, #HollywoodSoWhite, and #OscarsSoWhite movements. Through studies of the film's reception, formal innovations in visual storytelling, and comparisons with contemporary movies, this work challenges the idea the United States has moved beyond racial problems and highlights the role of film and representation in the continued struggle for equality.

## Exploring Movie Construction and Production

Description: Exploring Movie Construction and Production contains eight chapters of the major areas of film construction and production. The discussion covers theme, genre, narrative structure, character portrayal, story, plot, directing style, cinematography, and editing. Important terminology is defined and types of analysis are discussed and demonstrated. An extended example of how a movie description reflects the setting, narrative structure, or directing style is used throughout the book to illustrate building blocks of each theme. This approach to film instruction and analysis has proved beneficial to increasing students' learning, while enhancing the creativity and critical thinking of the student.

## Exploring Movie Construction and Production: What's so Exciting about Movies?

This open textbook contains eight chapters of the major areas of film construction and production, including: theme; genre; narrative structure; character portrayal; story; plot; directing style; cinematography; and editing.

**Includes:** instructor resources, production and cinematography assignments.

## Moving Pictures: An Introduction to Cinema

This textbook is an introduction to the art and science of moving pictures. It explores the tools and techniques of mise-en-scene, narrative form, cinematography, editing, sound and acting, how each has contributed to the evolution of cinematic language, and how that evolution implicates critical issues of representation in mass media.

## 34. General Art Resources

### Art and Visual Culture: Prehistory to Renaissance

Author: Alena Buis

### Art History I

Author: Associate Professor Emeritus Bruce Schwabach

Description: History of Art Survey course covering from prehistoric art to the Italian Renaissance.

### Art History II

Author: Associate Professor Emeritus Bruce Schwabach

### The Creative Process

Authors: ART480 Art Honors Fall 2020

Description: This chapbook is result of the collective efforts of nineteen students in ART480: Art Honors at the University of Washington Seattle. In the fall of 2020, each of these students is beginning senior year, and with that a journey of artistic transformation. This journey takes each individual on an exploration of their own artistic *modus operandi*. Throughout the quarter, these young artists are thinking with heightened scrutiny about the creative process in visual arts, and doing so from a position of self-reflection.

This fall is also a painful and complicated time during a globally raging corona virus pandemic that has stretched resources and patience, forced us off campus, out of the studios of the art building and into a permanent position of waiting. So much of our personal interactions has become confined to the computer screen, while our societies are coming to a reckoning with intertwined legacies of colonialism, slavery, and systemic racism. This fall is also the near-conclusion of a drawn-out national election that has severely challenged the democratic state, while signs of an impending climate catastrophe continue to press forward unchecked, irreversibly destroying our natural environment.

This is the backdrop for a class full of visual artists to have a conversation about why we make, how we work, and how the creative process unfolds. What makes each of us get up in the morning and push forward with generating new images, objects, and experiences. Yes, for ourselves, but also, and most importantly, for others. What inspires us, what excites us, and how to begin understanding one's creative habits deeper. For 11 weeks, we would come together in class as a community to discuss, to share, to make, to talk with artist guests, and to ask difficult questions from ourselves. As a record of these dialogues, as an artifact of the ongoing self-exploration, each student created a chapter for this chapbook by journaling their way through the quarter, using past and current artwork examples, while also candidly

reflecting on personal inspirations, studio habits, and on the individual challenges and rewards of engaging with art making.

The sum of these first person accounts is a wholesome picture of the contemporary art making process, in all its conviction and its uncertainty. In all of its sacred solitude, but also in its very communal nature. No matter if one is just starting out, or has been on this professional path for decades. We can't help but to be part of the moment, and we contribute to this moment by sharing not only what we made, but also what we are thinking.

## Free Architecture Courses from MIT

## FREE: Federal Resources for Educational Excellence

"The Federal Registry for Educational Excellence (FREE) makes it easier to find digital teaching and learning resources created and maintained by the federal government and public and private organizations." Keep up with additions by subscribing to the RSS feed.

## Introduction to Art Concepts

Author: Ed Fosmire, Santa Ana College

Description: This is a community course developed by an Achieving the Dream grantee. They have either curated or created a collection of faculty resources for this course. Since the resources are openly licensed, you may use them as is or adapt them to your needs.

## Make Work Use Art

Authors: HON211 UW 2021

Description: Twenty students from a wide variety of majors, including the sciences, humanities, health and medicine, as well as engineering, architecture, and design comprised our vibrant and engaged learning community. We started the quarter by imaginary visits to two important art schools, the German Bauhaus (1919-1933) and the Black Mountain College, located near Asheville, North Carolina (1933-1957). The students co-created participatory collaborative exercises based on the experiential learning principles developed by and practiced at these schools.

Throughout the course, we considered *craft* and *art* not as nouns, but as verbs, related the practiced maker's hand to the process aided by technological tools, and focused on the language of the materials, and the personal, cultural, historical narratives that they help to reveal. We contemplated how individual threads hold the fabric together and transform that, and how individual narratives coalesce into larger histories that signify and hold together communities.

We strived to explore and understand both the historical past and the innovative present and future by specifically focusing on needlework (sewing, embroidery, and quilts) during the 1920 and '30s (women suffrage movement), the 1970s and '80s (second wave of feminism, LGBTQ rights and HIV/AIDS crisis), and in the present. We also considered how new technologies, such as parametric design and 3D printing, introduce new paradigms for solving problems, designing,

producing, and using objects. Of course, the effect of technology was inescapable for us in the class too, as it was for billions around the world during this global pandemic.

We made two projects. One, using needlework techniques and textile processes to tell a personal story of *Waiting*, and a second one, using Computer Aided Design (CAD) to create a *Time Capsule* which would be opened one hundred years from now. Throughout the quarter, the students researched a Bauhaus or Black Mountain College artist they had picked with the goal of reflecting on the artist's work, biography, creative process, and ideas about making by drawing parallels to those of their own.

## OER Commons: Art

Free courses, modules, materials.

## OpenStax-CNX (aka Connexions) Art History

Connexions is one of the most popular open education sites in the world. Its more than 17,000 learning objects or modules in its repository and over 1000 collections (textbooks, journal articles, etc.) are used by over 2 million people per month.

## Visual Arts OERs by Grade Level

From the "Maine Alliance for Arts Education". The mission of the Maine Alliance for Arts Education is to promote and encourage education in all of the arts for all Maine students.

## 35. Music

### Fundamentals, Function, and Form

Author: Andre Mount

Description: This text provides readers with a comprehensive study of the theory and analysis of tonal Western art music. Author Andre Mount begins by building a strong foundation in the understanding of rhythm, meter, and pitch as well as the notational conventions associated with each. From there, he guides the reader through an exploration of polyphony—the simultaneous sounding of multiple independent melodies—and an increasingly rich array of different sonorities that grow out of this practice. The book culminates with a discussion of musical form, engaging with artistic works in their entirety by considering the interaction of harmonic and thematic elements, but also such other musical dimensions as rhythm, meter, texture, and expression.

### Music and the Child

Author: Natalie Sarrazin

Description: Children are inherently musical. They respond to music and learn through music. Music expresses children's identity and heritage, teaches them to belong to a culture, and develops their cognitive well-being and inner self worth. As professional instructors, childcare workers, or students looking forward to a career working with children, we should continuously search for ways to tap into children's natural reservoir of enthusiasm for singing, moving and experimenting with instruments. But how, you might ask? What music is appropriate for the children I'm working with? How can music help inspire a well-rounded child? How do I reach and teach children musically? Most importantly perhaps, how can I incorporate music into a curriculum that marginalizes the arts? This book explores a holistic, artistic, and integrated approach to understanding the developmental connections between music and children. This book guides professionals to work through music, harnessing the processes that underlie music learning, and outlining developmentally appropriate methods to understand the role of music in children's lives through play, games, creativity, and movement. Additionally, the book explores ways of applying music-making to benefit the whole child, i.e., socially, emotionally, physically, cognitively, and linguistically.

### Music Appreciation

Author: Armin Harrison

Description: Welcome to MUSI 1306, Music Appreciation. I think you've made a smart choice to spend some weeks studying some of the greatest music ever written. Consider for a moment how quickly a hit pop song passes from fashionable to forgotten. Those of us that have been out of high school or college more years than we care to remember have certainly had the experience of hearing a favorite anthem of our youth and thinking, "Oh yeah, that song! I'd forgotten that one." Think about that: the song was totally loved, then completely forgotten within a matter of just a few years. Then consider that many of the composers that we will study have been dead for over two hundred years, and yet their music has never been forgotten and never stopped being performed and loved. That, quite simply, is amazing.

# Music Appreciation: A Thematic Approach (Complete Course)

## Overview:

This course is designed to teach not only historical facts about music but also to encourage deeper listening to music from a variety of sources. The course is a guided journey of listening, reading, and discussion (oral and written) of music, with corresponding recommended listening and assignments for deeper understanding. An emphasis of this design is to place music within the framework of how music is experienced instead of in a chronological sequence. To that end, the modules include a unit on the music of the Civil Rights movement, with optional material on music for social justice in contemporary America, and the musical contributions of musicians from Alabama. Instructors are encouraged to modify the materials to serve the needs of the students or audience they are serving.

## Music: Its Language, History and Culture

The chapters in this book contain definitions and explanations of musical terms and concepts, short essays on subjects related to music as a creative performing art, biographical sketches of major figures in music, and historical and cultural background information on music from different periods and places.

**Includes:** instructor and student resources.

## Open Music Theory

*Open Music Theory* is an open-source, interactive, online textbook for college-level music theory courses.

**Includes:** interactive, music-notation modules.

## Resonances: Engaging Music in Its Cultural Context

*Resonances: Engaging Music in Its Cultural Context* offers a fresh curriculum for the college-level music appreciation course. The musical examples are drawn from classical, popular, and folk traditions from around the globe. These examples are organized into thematic chapters, each of which explores a particular way in which human beings use music. Topics include storytelling, political expression, spirituality, dance, domestic entertainment, and more. The chapters and examples can be taught in any order, making *Resonances* a flexible resource that can be adapted to your teaching or learning needs. This textbook is accompanied by a complete set of PowerPoint slides and learning objectives.

## A Quick and Dirty Guide to Art, Music, and Culture

Author: Clayton Funk

Description: This is a guidebook to a web resource of Artist and Musician biographies (<http://aaep1600.osu.edu>). We

discuss art and music in the context of popular culture, so chances are you will see relationships between art and music and what you are learning and the way you live, to connect them to your own experience.

## Sight-Reading for Guitar: The Keep Going Method Book and Video Series

The textbook teaches guitar players from all musical backgrounds to understand, read and play modern staff notation in real time. The series contains 20 units that start at the beginner level and progress to the intermediate/advanced level.

**Includes:** videos, practice.

## Understanding Basic Music Theory

This complements courses that cover the bare essentials of music theory.

## Understanding Music: Past and Present

*Understanding Music: Past and Present* is a peer-reviewed open Music Appreciation textbook co-authored by music faculty across Georgia. The text covers the fundamentals of music and the physics of sound, an exploration of music from the Middle Ages to the present day, and a final chapter on popular music in the United States.

**Includes:** audio/video clips, glossary.

## Voice Class

Author: Rollo Fisher, Monroe Community College



# 36. Photography

## Digital Photography for Graphic Communications

The textbook serves as a reference for a one-semester course in digital photography for graphic communications.

## 37. Theatre

### An American Playgoer at Home

Author: Joseph Donohue

Description: *An American Playgoer at Home* serves as a companion volume to *An American Playgoer in London*. It captures the author's theatregoing on his home territory in Northampton and Amherst, Massachusetts, in Hartford, Connecticut, in New York City, and in other places in the USA and in Canada as well. As a companion volume it covers approximately the same period of roughly four decades, from the early 1970s into the second decade of the new century. Almost all of the reviews are of live theatre; a few are of films that have an important dramatic quality or are a film version of an existing play, as in the instance of O'Neill's *The Iceman Cometh*.

### An American Playgoer in London

Author: Joseph Donohue

Description: In June 1970 I first conceived the idea of setting down in a notebook my experiences of theatregoing. It turned out to be a life-long habit. As the years went on, I became an experienced planner of theatre visits over a two- or three- or four-week sojourn in London, or occasionally over an entire semester or year. I found it possible to see three plays on a single Saturday, with brisk taxi rides well coordinated to deliver me in time for each opening curtain. I learned how best to purchase tickets, some arranged by telephone and credit card before leaving home in Massachusetts, others obtained by timely visits or phone calls to box offices — arrangements informed by the current weekly issue of the tourist's invaluable companion, *What's On*. Afternoons and evenings were often spent in theatre auditoriums, while late nights were spent back in the Endell Street flat writing up the play or plays seen that day and sometimes catching up with that welcome task during the first hour of the next day in the peaceful ambiance of the reading room of the new British Library in Euston. It was a challenge and a pleasure to play both ends against the middle in this way, leading the double life of a theatre scholar and playgoer.

The documentary offspring of those days and months, years and decades, are the reviews gathered together here. They include, in later years, reviews of screenings of National Theatre and other London productions filmed live and broadcast to local cinema audiences around the world, including the Amherst (Massachusetts) Cinema, just a few miles from my home. They form a concrete personal history of something like one hundred and twenty-five afternoons and evenings spent in the exhilarating confines of West End and fringe theatres — a history progressively compiled usually within an hour of returning from the performance, when I would sit down to capture the particulars of my experience while the memory was fresh and unmediated.

### La France Sauvée ou le Tyran Détrôné: A Dramaturgical Casebook

Author: Olympe de Gouges

Description:

This digital humanities project is an example of a digital dramaturgical casebook for the play, *La France Sauvée, ou le*

*Tyran Détrôné (France Preserved, or the Tyrant Dethroned, 1792).* The dramaturgical casebook includes a master copy of the script as well as contextual/historical research pertaining to the playwright, characters in the play, and costume and set design. There is also a bibliography of sources. The purpose of the project is to provide a model for the kind of engagement drama faculty and students can have with a text in the digital realm either as part of a class or a production.

## An Introduction to Technical Theatre


The textbook provides a comprehensive overview of technical theatre, including terminology and general practices.

## Miles Gloriosus, or The Braggart Captain

Author: T. Maccius Plautus

Editor: Henry Thomas Riley

Translator: Henry Thomas Riley

Description: The Comedies of Plautus. **Miles Gloriosus, or The Braggart Captain.** Henry Thomas Riley. London. G. Bell and Sons. 1912. The underlying work is in the Public Domain in Canada and the United States. Digitized by Perseus Digital Library, Tufts University. Moved to Pressbooks by Ryerson Library.  This work is licensed by Tufts University under a Creative Commons Attribution-ShareAlike 3.0 United States License.

Tufts University electronic edition notes: This work The Comedies of Plautus. Henry Thomas Riley. London. G. Bell and Sons. 1912.NSF, NEH: Digital Libraries Initiative, Phase 2 provided support for entering this text. This text was converted to electronic form by professional data entry and has been proofread to a medium level of accuracy.

An XML version of this text is available for download, with the additional restriction that you offer Perseus any modifications you make. Perseus provides credit for all accepted changes, storing new additions in a versioning system.

## Phaedra: A Tragedy

Author: Jean Racine

Description: Here is yet another tragedy, the subject of which is taken from Euripides. Although I have followed a somewhat different route from that of this author in the conduct of the action, I have not stopped enriching my play with all that seemed to me most brilliant in his. When I owed him only the sole idea of Phèdre's character, I could say that I owe him what I have perhaps put most reasonable on the stage. I am not surprised that this character had such a happy success in Euripides' time, and that it has still succeeded so well in our century, since it has all the qualities that Aristotle asks for in the hero of tragedy, and which are calculated to excite compassion and terror. Indeed, Phèdre is neither entirely guilty, nor entirely innocent: she is committed, by her destiny and by the anger of the gods, in an illegitimate passion of which she was the first to abhor: she made all her efforts to overcome it: she preferred to let herself die than

to declare it to no one; and when she is forced to discover it, she speaks of it with a confusion which shows clearly that her crime is rather a punishment from the gods than a movement of her will.

## Romeo and Juliet

Editor: Rebecca Olson

Contributors: Amanda Armas, Elizabeth Babbs, Tessa Barone, Justin Bennett, Regan Breeden, Sydney Caleen, Grace Chappell, Kierstyn Cooper, Devin Curtis, Madison Dempsey, Mary Driskell, Dominique Duenas, Alessandra Ferriso, Megan Figlewicz, Serena Giunchigliani, Andrea Goicochea, Sarah Gram, Jessie Heine, Ethan Heusser, Aleah Hobbs, Bradley Hogle, Emily Kirchhofer, Garrett Kitamura, Bryn Landrus, Joseph Laver, Lindsey LeMay, Jessica Linde-Goodfellow, Aiden Littau, Jac Longstreth, Eric MacDougall, Michelle Miller, Mayra Reyes Cortes, Macey Richert, Marin Rosenquist, David Russo, Rachana Son, Sydney Sullivan, Samuel Sutherland, Nicholas Svoboda, Ruth Sylvester, Rebecca Thompson, Jalen Todd, Erin Vieira, Rebekah Villanti, Maya Walbridge, Caitlin Walsh, Benjamin Watts, and Jeffrey Williams

Description: In an effort funded through Open Oregon State and with support from Oregon State's School of Writing, Literature, and Film, a group of 20 students, led by Dr. Rebecca Olson, crafted this edition of *Romeo and Juliet* with the vision that it be easily read and accessed by high school students everywhere. As a group, we decided upon a set of guiding principles, which included an effort to modernize spellings that are no longer in use, encourage your interaction with the text, and support the Shakespeare-related Common Core educational goals. Above all, we hope that this edition will allow you, the reader, to move through the text with little need to stop and look up an unfamiliar word, or to try and figure out what in the world a "Lanthorne" is (it's an old-fashioned word for "lantern." Could you imagine using that word for a lantern? Neither could we, so we changed it).

To put all this together, we created a set of guidelines to get us started. We decided which text versions of the play to use as primary sources and we settled on using one Quarto and the First Folio. We decided that we wanted to include some very important things like footnotes—necessary to clarify some words and concepts, but often intimidating and numerous—but we determined that we'd keep them brief and use them only when necessary. We also decided on some more mundane things, like the font we wanted, which is clean and easily readable instead of that nasty Times New Roman. What ever happened to Times Old Roman anyway? We made countless other decisions at the outset of this project, and after establishing these ground rules we separated into editing groups, each focusing on a particular act within the play.

When the groups had completed their edited acts, we met again as a large group to review all the work together. It was at this time that we discovered how differently each editing group had approached our individual edited acts and scenes, while still following the same set of established guidelines. Should we use bold for the character names? How much white space should we include? Should there be one space after a line of dialogue, or two? How far should we indent the stage directions? What is the impact of these seemingly trivial questions on the experience of the reader? The team set out to analyze these and many other questions. Our deliberations were lengthy, and at times unexpectedly heated. We learned much about ourselves (and about our apparent passion for uniform margins and un-bolded character names).

## Tartuffe or the Hypocrite

Author: Jean Baptiste Poquelin Molière

Translator: Curtis Hidden Page

Description: Jean Baptiste Poquelin, better known by his stage name of Molière, stands without a rival at the head of French comedy. Born at Paris in January, 1622, where his father held a position in the royal household, he was educated

at the Jesuit College de Clermont, and for some time studied law, which he soon abandoned for the stage. His life was spent in Paris and in the provinces, acting, directing performances, managing theaters, and writing plays. He had his share of applause from the king and from the public; but the satire in his comedies made him many enemies, and he was the object of the most venomous attacks and the most impossible slanders. Nor did he find much solace at home; for he married unfortunately, and the unhappiness that followed increased the bitterness that public hostility had brought into his life. On February 17, 1673, while acting in “La Malade Imaginaire,” the last of his masterpieces, he was seized with illness and died a few hours later.

The first of the greater works of Molière was “Les Précieuses Ridicules,” produced in 1659. In this brilliant piece Molière lifted French comedy to a new level and gave it a new purpose—the satirizing of contemporary manners and affectations by frank portrayal and criticism. In the great plays that followed, “The School for Husbands” and “The School for Wives,” “The Misanthrope” and “The Hypocrite” (Tartuffe), “The Miser” and “The Hypochondriac,” “The Learned Ladies,” “The Doctor in Spite of Himself,” “The Citizen Turned Gentleman,” and many others, he exposed mercilessly one after another the vices and foibles of the day.

His characteristic qualities are nowhere better exhibited than in “Tartuffe.” Compared with such characterization as Shakespeare’s, Molière’s method of portraying life may seem to be lacking in complexity; but it is precisely the simplicity with which creations like Tartuffe embody the weakness or vice they represent that has given them their place as universally recognized types of human nature.

## Theater Appreciation

Author: Nanci Love, Bay College

Description: This is a community course developed by an Achieving the Dream grantee. They have either curated or created a collection of faculty resources for this course. Since the resources are openly licensed, you may use them as is or adapt them to your needs.

## Theatrical Worlds

This is an introductory textbook for theatre and theoretical production.

## Transforming Stories, Driving Change

Authors: Helene Vosters, Catherine Graham, Chris Sinding, Jennie Vengris, Adam Perry, Melanie Skene, and Elysée Nouvet

Description: Can theatre bring new voices into public debate? Facilitating theatre workshops with community members who experience social marginalization is an art that, when done well, feels more like magic. But even the best facilitators are not magicians. With this workbook we pull back the curtain on the magic by taking readers behind the scenes of the Hamilton-based research and performance initiative *Transforming Stories, Driving Change* (TSDC.) Since 2015, TSDC teams have worked alongside community partners and performer-advocates to make plays designed to draw attention to the voices and visions of people whose opinions are not often represented in discussions of the future of the

City. Through our performances, we have tried to contribute to building the movements that can make public leaders more accountable to people who are affected by their decisions. Five years and four plays later, we offer this workbook as a practical guide to TSDC's creative approach.

**Note on License:** Transforming Stories, Driving Change by Helene Vosters, Catherine Graham, Chris Sinding is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License, except where otherwise noted.

PART VIII

# FACULTY OF ENGINEERING AND APPLIED SCIENCE





# 38. Biosystems Engineering

## Introduction to Biosystems Engineering

**“Introduction to Biosystems Engineering** can be used as a customizable text for university-level introductory courses in Biosystems Engineering. Written by an international team of authors, the book is divided into six sections aligned with technical communities within Biosystems Engineering: Energy Systems; Information Technology, Sensors, and Control Systems; Machinery Systems; Natural Resources and Environmental Systems; Plant, Animal, and Facility Systems; and Processing Systems. Within the sections, individual chapters focus on discrete topics that can be covered in one week of class. Each chapter contains the expected learning outcomes, key concepts, applications of the concepts, and worked examples.” Introduction to Biosystems Engineering is Virginia Tech’s first book from the Open Education Network Publishing Cooperative (formerly Open Textbook Network Publishing Cooperative).

<https://open.umn.edu/otn/publishing>

# BSc Optics

Authors: Sander Konijnenberg, Aurèle J.L. Adam and H. Paul Urbach

Description: This book treats optics at the level of students in the later stage of their bachelor or the beginning of their master. It is assumed that the student is familiar with Maxwell's equations. Although the book takes account of the fact that optics is part of electromagnetism, special emphasis is put on the usefulness of approximate models of optics, their hierarchy and limits of validity. Approximate models such as geometrical optics and paraxial geometrical optics are treated extensively

and applied to image formation by the human eye, the microscope and the telescope.

Polarisation states and how to manipulate them are studied using Jones vectors and Jones matrices. In the context of interference, the coherence of light is explained thoroughly. To understand fundamental limits of resolution which cannot be explained by geometrical optics, diffraction theory is applied to imaging. The angular spectrum method and evanescent waves are used to understand the inherent loss of information about subwavelength features during the propagation of light. The book ends with a study of the working principle of the laser.

# Building Information –

# Representation and Management: Fundamentals and Principles

Author: Alexander Koutamanis

Description: The book presents a coherent theory of building information, focusing on its representation and management in the digital era. It addresses issues such as the information explosion and the structure of analogue building representations to propose a parsimonious approach to the deployment and utilization of symbolic digital technologies like BIM.

# Building Maintenance & Construction: Tools and Maintenance Tasks

This textbook introduces and develops knowledge of basic building maintenance tools and materials, applied skills and techniques, industry health and safety standards, and preventive maintenance and troubleshooting practices required by employers for entry-level positions in the building trades and facilities maintenance fields.

# Coastal Dynamics

Authors: Judith Bosboom and Marcel J.F. Stive

Description: This textbook on Coastal Dynamics focuses on the interrelation between physical wave, flow and sediment transport phenomena and the resulting morphodynamics of a wide variety of coastal systems. The textbook is unique in that it explicitly connects the dynamics of open coasts and tidal basins; not only is the interaction between open coasts and tidal basins of basic importance for the evolution of most coastal systems, but describing the similarities between their physical processes is highly instructive as well. This textbook emphasizes these similarities to the benefit of understanding shared processes such as nonlinearities in flow and sediment transport. Some prior knowledge with respect to the dynamics of flow, waves and sediment transport is recommended.

# The Delft Sand, Clay & Rock Cutting Model

Author: Sape A. Miedema

Description: In dredging, trenching, (deep sea) mining, drilling, tunnel boring and many other applications, sand, clay or rock has to be excavated. This book gives an overview of cutting theories. It starts with a generic model, which is valid for all types of soil (sand, clay and rock) after which the specifics of dry sand, water saturated sand, clay, atmospheric rock and hyperbaric rock are covered. For each soil type small blade angles and large blade angles, resulting in a wedge in front of the blade, are discussed. For each case considered, the equations/

model for the cutting forces, power and specific energy are given. The models are verified with laboratory research, mainly at the Delft University of Technology, but also with data from literature.

# Slurry Transport: Fundamentals, A Historical Overview & The Delft Head Loss & Limit Deposit



# Velocity Framework 2nd Edition

Author: Sape A. Miedema

Description: In dredging, trenching, (deep sea) mining, drilling, tunnel boring and many other applications, sand, clay or rock has to be excavated. The book covers horizontal transport of settling slurries (Newtonian slurries). Non-settling (non-Newtonian) slurries are not covered.

## Sustainability: A

# Comprehensive Foundation

This text has been positively-reviewed and is intended for both a broad-based introductory class on sustainability and as a supplement to specialist courses with a dimension on sustainability in their areas of study. As sustainability is a multidisciplinary area of study, the text is the product of multiple authors drawn from the diverse faculty of the University of Illinois: each chapter is written by a recognized expert in the field.

## Traffic Flow Theory: An introduction with exercises

Author: Victor L. Knoop

Description: Traffic processes cause several problems in the world. Traffic delay, pollution are some of it. They can be solved with the right road design or traffic management (control) measure. Before implementing these designs of measures, though, their effect could be tested. To this end, knowledge of traffic flow theory is needed.

## 40. Chemical and Materials Engineering

### Applied Strength of Materials for Engineering Technology [PDF]

This algebra-based text is designed specifically for Engineering Technology students, using both SI and US Customary units. All example problems are fully worked out with unit conversions. Updated each semester using student comments, with an average of 80 changes per edition.

### Phase Relations

This open textbook provides an overview of the central role that phase behavior plays in the petroleum extraction processes. Readers should be able to describe, in concrete terms, how knowledge of fluid phase behaviour impacts specific aspects of the process design and/or operations.

**Includes:** diagrams, problem sets.

### Strength of Materials Supplement for Power Engineering

This work complements the Applied Strength of Materials for Engineering Technology by Barry Dupen and is used in teaching Strength of Materials to Power Engineering students at the British Columbia Institute of Technology.

# 4I. Computing Science and Software Engineering

## Agent-Based Evolutionary Game Dynamics

**Authors:** Luis R. Izquierdo, Segismundo S. Izquierdo, and William H. Sandholm

**Description:** This book is a guide to implement simple agent-based evolutionary models using NetLogo.

All the models we implement are agent-based, i.e. individual agents and their interactions are explicitly represented in the models. To formalise agents' interactions we use the basic framework of Evolutionary Game Theory.

NetLogo is a multi-agent programmable modeling environment used by hundreds of thousands of students, teachers and researchers all around the globe. No coding experience is necessary to fully understand the contents of this book.

## Book of Proof

Approved by the American Institute of Mathematics and adopted widely by other universities, this textbook is an introduction to the standard methods of proving mathematical theorems.

**Includes:** instructor resources, workbook.

*May suit:* COMP 232.

## Blueprints: Creating, Describing, and Implementing Designs for Larger-Scale Software Projects – version 2.3

**Author:** Stephen Davies

**Description:** Blueprints is a concise yet comprehensive coverage of Object-Oriented Analysis and Design concepts, suitable for a second programming course in Computer Science. It introduces and teaches application development in a command-line environment, and assumes basic expertise with the Java programming language.

Includes: LaTeX source code

## A Brief Introduction to Engineering Computation with MATLAB

Specifically designed for students with no programming experience, the strategic goal of the course and book is to provide learners with an appreciation for the role computation plays in solving engineering problems.

**Includes:** study guide, problem sets.

# Computer Networks: A Systems Approach

**Authors:** Larry Peterson and Bruce Davie

**Description:** Suppose you want to build a computer network, one that has the potential to grow to global proportions and to support applications as diverse as teleconferencing, video on demand, electronic commerce, distributed computing, and digital libraries. What available technologies would serve as the underlying building blocks, and what kind of software architecture would you design to integrate these building blocks into an effective communication service? Answering this question is the overriding goal of this book—to describe the available building materials and then to show how they can be used to construct a network from the ground up.

**Includes:** Source text

## Computer Science I – Version 1.3.7

**Author:** Chris Bourke

**Description:** This textbook covers the traditional introductory Computer Science I topics but takes a unique approach. Topics are covered in a language-agnostic manner in the first part with supplemental parts that cover the same concepts in a specific language. The current version covers C, Java, and PHP. This textbook has been used in several Computer Science I sections over multiple years at the University of Nebraska-Lincoln

**Includes:** Download complete Latex source code.

## Computer Science 20 – Saskatoon

Through its text and videos, this resource provides an interactive experience on learning to write and execute Python code. In addition to simply executing code, there is a unique feature called *code lens* that allows control of the flow of execution in order to gain a better understanding of how the program works.

**Includes:** videos, quizzes, exercises.

## The Crystal Ball Instruction Manual – version 1.1 Volume One: Introduction to Data Science

**Author:** Stephen Davies

**Description:** A perfect introduction to the exploding field of Data Science for the curious, first-time student. The author brings his trademark conversational tone to the important pillars of the discipline: exploratory data analysis, choices for structuring data, causality, machine learning principles, and introductory Python programming using open-source Jupyter Notebooks. This engaging read will allow any dedicated learner to build the skills necessary to contribute to the Data Science revolution, regardless of background.

**Includes:** LaTeX source code

## Database Design

An introductory textbook that covers database systems and database design concepts.

**Includes:** end-of-chapter exercises, sample ERD exercises, SQL lab with solution.

May suit: COMP 353.

## Defend Dissent

**Author:** Glencora Borradaile

**Description:** *Defend Dissent* is an introduction to cryptography paired with the social impacts of surveillance and the protective potential of encryption, with a focus on US social movements. Each chapter ends with a story that brings social context to the material—from surveillance used against contemporary US protests to the African National Congress’s use of partially manual encryption in fighting apartheid in South Africa in the 80s.

This book can be read linearly, or you can pick and choose what you would like to learn about. Each chapter is prefaced with what you should read first (for background) and concludes with what you might want to read next.

## Delftse Foundations of Computation

The textbook is designed for an introductory course in theoretical computer science. It includes topics from propositional and predicate logic, proof techniques, set theory and the theory of computation, along with practical applications to computer science.

May suit: COMP 335.

## The Discipline of Organizing: 4th Professional Edition

**Author:** Robert J. Glushko

**Description:** We organize things, we organize information, we organize information about things, and we organize information about information. But even though “organizing” is a fundamental and ubiquitous challenge, when we compare these activities their contrasts are more apparent than their commonalities. We propose to unify many perspectives about organizing with the concept of an Organizing System, defined as an intentionally arranged collection of resources and the interactions they support. Every Organizing System involves a collection of resources, a choice of properties or principles used to describe and arrange resources, and ways of supporting interactions with resources. By comparing and contrasting how these activities take place in different contexts and domains, we can identify patterns of organizing. We can create a discipline of organizing in a disciplined way.

The 4<sup>th</sup> edition builds a bridge between organizing and data science. It reframes descriptive statistics as organizing techniques, expands the treatment of classification to include computational methods, and incorporates many new examples of data-driven resource selection, organization, maintenance, and personalization. It introduces a new “data science” category of discipline-specific content, both in the chapter text and in endnotes, marked with [DS] in editions that contain endnotes.

## Discrete Mathematics: An Open Introduction

Approved by the American Institute of Mathematics, this textbook grew out of a discrete mathematics course at the University of Northern Colorado.

Includes: questions, answers, instructor resources upon request.

May suit: COEN 231.

## Eloquent JavaScript: A Modern Introduction to Programming

This book covers the principles of programming and introduces JavaScript. It is written by a programming language enthusiast.

**Includes:** Code sandbox and exercise solutions.

May suit: SOEN 287.

## Foundations of Computation

The textbook is designed for a one-semester course in theoretical computer science.

May suit: COMP 335.

## Introduction to Computer Graphics

**Author:** David J. Eck

**Description:** *Introduction to Computer Graphics* is a free, on-line textbook covering the fundamentals of computer graphics and computer graphics programming. This book is meant for use as a textbook in a one-semester course that would typically be taken by undergraduate computer science majors in their third or fourth year of college.

Includes: Source code files, copy of book website

## An Introduction to Computer Networks – Second Edition

**Author:** Peter Lars Dorda

**Description:** *An Introduction to Computer Networks* is a free and open general-purpose computer-networking textbook, complete with diagrams and exercises. It covers the LAN, internetworking and transport layers, focusing primarily on TCP/IP. Particular attention is paid to congestion; other special topics include queuing, real-time traffic, network management, security and the ns simulator.

The book is suitable as the primary text for an undergraduate or introductory graduate course in computer networking, as a supplemental text for a wide variety of network-related courses, and as a reference work.

## Introduction to Probability

The textbook is intended for use in a standard one-term course, in which both discrete and continuous probability is covered.

Includes: exercises and solutions.

May suit: COMP 233.

## Introduction to Probability, Statistics and Random Processes

This textbook is intended for undergraduate and first-year graduate-level courses in probability, statistics, and random processes.

**Includes:** exercises, solutions, code.

May suit: COMP 233.

## Introduction to Programming Using Java, Eighth Edition

**Author:** David J. Eck

**Description:** Welcome to the Eighth Edition of Introduction to Programming Using Java, a free, on-line textbook on introductory programming, which uses Java as the language of instruction. This book is directed mainly towards beginning programmers, although it might also be useful for experienced programmers who want to learn something about Java. It is not meant to provide complete coverage of the Java language.

The eighth edition requires Java 8 or later, and it uses JavaFX for GUI programming. Version 8.1 is a small update of Version 8.0. This version briefly covers some of the new features in Java 11 and makes it clearer how to use this book with Java 11 and later.

**Includes:** Source code, exercise solutions, Source files for the book

## Java, Java, Java: Object-Oriented Problem Solving

**Authors:** Ralph Morelli, Ralph Walde

**Description:** We have designed this third edition of Java, Java, Java to be suitable for a typical Introduction to Computer Science (CS1) course or for a slightly more advanced Java as a Second Language course. This edition retains the “objects first” approach to programming and problem solving that was characteristic of the first two editions. Throughout the text we emphasize careful coverage of Java language features, introductory programming concepts, and object-oriented design principles.

The third edition retains many of the features of the first two editions, including:

- Early Introduction of Objects
- Emphasis on Object Oriented Design (OOD)
- Unified Modeling Language (UML) Diagrams
- Self-study Exercises with Answers



- Programming, Debugging, and Design Tips.
- From the Java Library Sections
- Object-Oriented Design Sections
- End-of-Chapter Exercises
- Companion Web Site, with Power Points and other Resources

The In the Laboratory sections from the first two editions have been moved onto the book's Companion Web Site.

**Includes:** self-study exercises with answers, end-of-chapter exercises, and a companion website with instructor resources upon request

## Mathematical Reasoning: Writing and Proof

This textbook is designed for the first course in a mathematics curriculum that introduces students to the processes of constructing and writing proofs. It focuses on the formal development of mathematics.

**Includes:** questions, answers, instructor resources upon request.

*May suit:* COMP 232.

## The Missing Link: An Introduction to Web Development and Programming

This textbook provides the developer with an understanding of the various elements of web development by focusing on the concepts and fundamentals through the examples within, providing a foundation that allows easier transition to other languages and a better understanding of how to approach their work.

**Includes:** questions, discussions, solutions.

*May suit:* SOEN 287.

## A Person-Centered Guide to Demystifying Technology

**Editor:** Martin Wolske

**Contributors:** Betty Bayer, Henry Grob, Sara Rasmussen, Dinesh Rathi, Stephanie Shallcross, and Vandana Singh

**Description:** Digital technologies old and new are not objects that can be packed inside a box. They are a seamless, indivisible combination of people, organizations, policies, economies, histories, cultures, knowledge, and material things that are continuously shaped and reshaped. Every one of us innovates-in-use our everyday technologies, we just do not always know it. Not only are we shaped by the networked information tools in our midst, but we shape them and thereby shape others. For us to advance individual agency across diverse community knowledge and cultural wealth within the fabric of communities, we need to nurture our cognitive, socio-emotional, information, and progressive community engagement skills along with, and sometimes in advance of, our technical skills which then serve as just-in-time in-fill learning. This is the call placed by Rev. Dr. Martin Luther King, Jr. – to rapidly shift from a ‘thing-oriented’ society to a ‘person-oriented’ society. In support of this shift, each session of the book begins first with a social chapter with background knowledge probe, conceptual introductions, and a lesson plan for the session. A technical chapter follows with technical introductions and hands-on activities, and a concluding wrap up and comprehension check.

The technical of the Orange Unit especially focuses on electronics and physical computer components; the Blue Unit highlights software through a series of introductory programming activities, with possibilities for alternate pathways for those who bring in some existing programming experience; the Rainbow Unit then brings the hardware and software together into networked systems, concluding with a final design adventure. The general learning outcome objectives of this book are to help readers: • Develop a clear hands-on working understanding of the physical and software layers of computers and networks; • Evolve a more holistic and nuanced understanding of the sociotechnical artifacts we use as a daily part of our professional lives; • Develop a critical approach to sociotechnical artifacts to counter systemic injustices related to race, class/caste, gender, and other cultural dynamics; and • Advance community agency in appropriating technology to achieve our individual and community development goals through a reconsidered digital literacy learning and practice.

## Programming Fundamentals – A Modular Structured Approach, 2nd Edition

This is the second edition to Programming Fundamentals – A Modular Structured Approach using C++. The goal is to make it programming-language neutral, so that it may serve as an introductory programming textbook for students using any of a variety of programming languages, including C++, C#, Java, JavaScript, Python, and Swift.

**Includes:** pseudocode, flowcharts, and example code in C++, C#, Java, JavaScript, Python, and Swift.

*May suit:* COMP 348

## Programming Fundamentals – A Modular Structured Approach using C++

This reviewed open textbook covers content normally found in an introductory C++ programming course, including decisions, loops, functions, arrays and file I/O.

**Includes:** instructor and student resources.

*May suit:* COMP 348

## Programming Languages: Application and Interpretation

Written by a computer science professor at Brown University, this textbook takes a non-linear approach to the subject matter.

**Includes:** exercises and activities.

*May suit:* COMP 348

## Python for Everybody: Exploring Data Using Python 3

**Author:** Charles Severance

**Description:** I never seemed to find the perfect data-oriented Python book for my course, so I set out to write just such a book. Luckily at a faculty meeting three weeks before I was about to start my new book from scratch over the

holiday break, Dr. Atul Prakash showed me the *Think Python* book which he had used to teach his Python course that semester. It is a well-written Computer Science text with a focus on short, direct explanations and ease of learning. The overall book structure has been changed to get to doing data analysis problems as quickly as possible and have a series of running examples and exercises about data analysis from the very beginning.

Chapters 2–10 are similar to the *Think Python* book, but there have been major changes. Number-oriented examples and exercises have been replaced with data-oriented exercises. Topics are presented in the order needed to build increasingly sophisticated data analysis solutions. Some topics like `try` and `except` are pulled forward and presented as part of the chapter on conditionals. Functions are given very light treatment until they are needed to handle program complexity rather than introduced as an early lesson in abstraction. Nearly all user-defined functions have been removed from the example code and exercises outside of Chapter 4. The word “recursion”<sup>1</sup> does not appear in the book at all.

In chapters 1 and 11–16, all of the material is brand new, focusing on real-world uses and simple examples of Python for data analysis including regular expressions for searching and parsing, automating tasks on your computer, retrieving data across the network, scraping web pages for data, object-oriented programming, using web services, parsing XML and JSON data, creating and using databases using Structured Query Language, and visualizing data.

The ultimate goal of all of these changes is a shift from a Computer Science to an Informatics focus is to only include topics into a first technology class that can be useful even if one chooses not to become a professional programmer.

Includes: YouTube Playlist, Audio lectures, lectures slides and handouts, sample code, lessons

## Squeak by Example

**Authors:** Andrew P. Black, Stéphane Ducasse, Oscar Nierstrasz, Damien Pollet.

**Description:** Squeak is a modern open-source development environment for the classic Smalltalk-80 programming language. Despite being the first purely object-oriented language and environment, Smalltalk is in many ways still far ahead of its successors in promoting a vision of an environment where everything is an object, and anything can change at run-time.

Squeak by Example, intended for both students and developers, will guide you gently through the Squeak language and environment by means of a series of examples and exercises. The book helps you get started with A Quick Tour of Squeak and guides you through A First Application. The Smalltalk language is introduced in three chapters on Syntax in a Nutshell, Understanding Message Syntax and The Smalltalk Object Model.

Development with Squeak is covered in The Squeak Programming Environment and SUnit. Several of the key classes are presented in chapters on Basic Classes, Collections, Streams and Morphic.

The first edition of the book concludes with chapters on Classes and Metaclasses and Frequently Asked Questions.

**Includes:** LaTeX source code

## A Tale of Two Systems

**Authors:** René Reitsma and Kevin Krueger

**Description:** This text is meant as a case study and companion text to many Systems Analysis & Design textbooks used in undergraduate Management Information Systems (MIS), Business Information Systems (BIS) and Computer Information Systems (CIS) programs. The US counts about 1,300 (undergraduate + graduate) such programs (Mandiwalla et al., 2016). These texts typically contain short descriptions of technologies which give students some sense of what these technologies are used for, but do not provide much context or reflection on why these technologies might or

might not be applied and what such applications actually amount to in real life. As a consequence, students, having worked their way through these textbooks and associated courses will have had little exposure to the reasoning which must take place when making choices between these technologies and to what goes into combining them into working and successful system architectures. It is our hope that this *Tale of Two Systems* (pun very much intended) will help mitigate this problem a little.

## Think Data Structures

**Author:** Allen B. Downey

**Description:** Data structures and algorithms are among the most important inventions of the last 50 years, and they are fundamental tools software engineers need to know. But in my opinion, most of the books on these topics are too theoretical, too big, and too bottom-up:

- Too theoretical: Mathematical analysis of algorithms is based on simplifying assumptions that limit its usefulness in practice. Many presentations of this topic gloss over the simplifications and focus on the math. In this book I present the most practical subset of this material and eliminate the rest.
- Too big: Most books on these topics are at least 500 pages, and some are more than 1000. By focusing on the topics I think are most useful for software engineers, I kept this book under 250 pages.
- Too bottom-up: Many data structures books focus on how data structures work (the implementations), with less about how to use them (the interfaces). In this book, I go “top down”, starting with the interfaces. Readers learn to use the structures in the Java Collections Framework before getting into the details of how they work.

Finally, many present this material out of context and without motivation: it’s just one damn data structure after another!

I try to alleviate the boredom by organizing the topics around an application—web search—that uses data structures extensively, and is an interesting and important topic in its own right.

This application also motivates some topics that are not usually covered in an introductory data structures class, including persistent data structures, with Redis, and streaming algorithms.

I have made difficult decisions about what to leave out, but I have made some compromises. I include a few topics that most readers will never use, but that they might be expected to know, possibly in a technical interview. For these topics, I present both the conventional wisdom as well as my reasons to be skeptical.

This book also presents basic aspects of software engineering practice, including version control and unit testing. Each chapter ends with an exercise that allows readers to apply what they have learned. Each exercise includes automated tests that check the solution. And for most exercises, I present my solution at the beginning of the next chapter.

This book is intended for college students in computer science and related fields, as well as professional software engineers, people training in software engineering, and people preparing for technical interviews.

I assume that the reader knows Java at an intermediate level, but I explain some Java features along the way, and provide pointers to supplementary material.

People who have read *Think Java* or *Head First Java* are prepared for this book.

This book is available under a Creative Commons license, which means that you are free to copy, distribute, and modify it, as long as you attribute the source and don’t use it for commercial purposes.

Includes: LaTeX source code

# Think OS

**Author:** Allen B. Downey

**Description:** *Think OS* is an introduction to Operating Systems for programmers.

In many computer science programs, Operating Systems is an advanced topic. By the time students take it, they usually know how to program in C, and they have probably taken a class in Computer Architecture. Usually the goal of the class is to expose students to the design and implementation of operating systems, with the implied assumption that some of them will do research in this area, or write part of an OS.

This book is intended for a different audience, and it has different goals. I developed it for a class at Olin College called Software Systems.

Most students taking this class learned to program in Python, so one of the goals is to help them learn C. For that part of the class, I use Griffiths and Griffiths, *Head First C*, from O'Reilly Media. This book is meant to complement that one.

Few of my students will ever write an operating system, but many of them will write low-level applications in C, and some of them will work on embedded systems. My class includes material from operating systems, networks, databases, and embedded systems, but it emphasizes the topics programmers need to know.

This book does not assume that you have studied Computer Architecture. As we go along, I will explain what we need.

If this book is successful, it should give you a better understanding of what is happening when programs run, and what you can do to make them run better and faster.

The current version of this book is a draft. While I am working on the text, I have not yet included the figures. So there are a few places where, I'm sure, the explanation will be greatly improved when the figures are ready.

*Think OS* is a Free Book. It is available under the Creative Commons Attribution-NonCommercial 3.0 Unported License, which means that you are free to copy, distribute, and modify it, as long as you attribute the work and don't use it for commercial purposes.

**Includes:** Source code

# Think Python 2e

**Author:** Allen B. Downey

**Description:** *Think Python* is an introduction to Python programming for beginners. It starts with basic concepts of programming, and is carefully designed to define all terms when they are first used and to develop each new concept in a logical progression. Larger pieces, like recursion and object-oriented programming are divided into a sequence of smaller steps and introduced over the course of several chapters.

**What's new in the second edition?**

- We've upgraded to Python 3: All examples in the book are now Python 3, and the supporting code has been updated to run in both Python 2 and 3.
- We've removed the roadblocks: Based on reader feedback, we know where people had problems, so we've fixed or removed the pain points.
- Python in the browser: For beginners, one of the challenges of getting started is installing Python. For readers who don't want to install Python right away, we provide instructions for running Python in a browser using PythonAnywhere, a free online programming environment.
- More Python goodies: We've added a chapter to cover some powerful Python features that didn't make it into the first edition, including list comprehensions and additional data structures.

*Think Python 2e* is a Free Book. It is available under the Creative Commons Attribution-NonCommercial 3.0 Unported

License, which means that you are free to copy, distribute, and modify it, as long as you attribute the work and don't use it for commercial purposes.

Includes: LaTeX source code, code examples and exercise solutions.

## Think Raku: How to Think Like a Computer Scientist – 2nd edition

**Authors:** Laurent Rosenfeld and Allen Downey

**Description:** *Think Raku* is an introduction to computer science and programming intended for people with little or no experience.

This aim of this book is not primarily to teach Raku, but instead to teach the art of programming, using the Raku language. After having completed this book, you should hopefully be able to write programs to solve relatively difficult problems in Raku, but my main aim is to teach computer science, software programming, and problem solving rather than solely to teach the Raku language itself.

*Think Raku* is a free book available under a Creative Commons license. Readers are free to copy and distribute the text; they are also free to modify it, which allows them to adapt the book to different needs, and to help develop new material.

**Includes:** LaTeX source code

## Think Stats: Probability and Statistics for Programmers

The book is an introduction to the practical tools of exploratory data analysis, especially for Python programmers.

**Includes:** exercises, experiments, code.

## 42. Electrical and Computer Engineering

### All About Circuits (Design Science License)

This free electrical engineering textbook provides a series of volumes covering electricity and electronics. The information provided is great for students, makers, and professionals who are looking to refresh or expand their knowledge in this field.

### Continuous-Time Signals and Systems

This textbook covers continuous-time signals and systems at an introductory level appropriate for undergraduate students. This textbook has been used by the author at the University of Victoria to teach a number of undergraduate courses on continuous-time signals and systems. This text includes accompanying lecture slides.

### Digital Circuit Projects: An Overview of Digital Circuits Through Implementing Integrated Circuits

Digital circuits, often called Integrated Circuits or ICs, are the central building blocks of a Central Processing Unit (CPU). To understand how a computer works, it is essential to understand the digital circuits which make up the CPU. This text introduces the most important of these digital circuits; adders, decoders, multiplexers, D flip-flops, and simple state machines.

### Electrical Engineering

On online electrical engineering textbook made available by LibreTexts.

### Electromagnetics Volume 1

The textbook is intended as a primary textbook for a one-semester first course in undergraduate engineering electromagnetics. The book employs the “transmission lines first” approach in which transmission lines are introduced using a lumped-element equivalent circuit model for a differential length of transmission line, leading to one-dimensional wave equations for voltage and current.

**Includes:** problems, solutions, LaTeX source files.

*May suit: ELEC 251.*

## Electromagnetics Volume 2

The textbook is intended as the primary textbook for the second semester of a two-semester undergraduate engineering electromagnetics sequence. The book addresses magnetic force and the Biot-Savart law; general and lossy media; parallel plate and rectangular waveguides; parallel wire, microstrip, and coaxial transmission lines; AC current flow and skin depth; reflection and transmission at planar boundaries; fields in parallel plate, parallel wire, and microstrip transmission lines; optical fiber; and radiation and antennas.

**Includes:** problems, solutions, LaTeX source files.

*May suit:* ELEC 251.

## Exploring Microcontrollers

A website looking at microcontrollers.

## Fundamentals of Electrical Engineering I

Don Johnson, Rice University

## Fundamentals of Photonics

This open resource, designed for first and second year students, provides an introduction to photonics. It represents work done through the US National Science Foundation and is made of up ten chapters, or modules, created by various experts in the the field.

**Includes:** instructor and student resources, problem sets.

## Public domain books relating to Instrumentation

Although these textbooks are quite old, and some of the techniques described therein obsolete, these texts hold much practical value to the modern technician and engineer of instrumentation.



## 43. General Engineering

### All Things Flow: Fluid Mechanics for the Natural Sciences

The textbook covers fundamentals of basic flow processes, emphasizing on vortices, waves and hydraulic jumps.

**Includes:** homework exercises.

*May suit:* ENGR 361.

### Basics of Fluid Mechanics

The textbook describes the fundamentals of fluid mechanics phenomena for engineers and others.

**Includes:** examples and questions.

*May suit:* ENGR 361.

### Calculus Volume 1

This OpenStax textbook covers functions, limits, derivatives, and integration.

**Includes:** instructor resources, student resources, exercises, solutions.

*May suit:* ENGR 233.

### Calculus Volume 2

This OpenStax textbook covers integration, differential equations, sequences and series, and parametric equations and polar coordinates.

**Includes:** instructor resources, student resources, exercises, solutions.

*May suit:* ENGR 233

### Calculus Volume 3

This OpenStax textbook covers parametric equations and polar coordinates, vectors, functions of several variables, multiple integration, and second-order differential equations.

**Includes:** instructor resources, student resources, exercises, solutions.

*May suit:* ENGR 233

## Elementary Differential Equations with Boundary Value Problems

This textbook is written for students in science, engineering, and mathematics who have completed calculus through partial differentiation.

**Includes:** exercises, LaTeX source code.

*May suit:* ENGR 311.

## Introduction to Linear, Time-Invariant, Dynamic Systems for Students of Engineering

The textbook covers the dynamic behavior of physical systems, with some emphasis on simple mechanical and electrical systems representative of or analogous to those often encountered in aerospace and mechanical engineering.

**Includes:** homework problems.

*May suit:* ENGR 243.

## Introduction to Probability

The textbook is intended for use in a standard one-term course, in which both discrete and continuous probability is covered.

**Includes:** exercises and solutions.

*May suit:* ENGR 371.

## Introduction to Probability, Statistics and Random Processes

This textbook is intended for undergraduate and first-year graduate-level courses in probability, statistics, and random processes.

**Includes:** exercises, solutions, code.

*May suit:* ENGR 371.

## Mechanics

This is a calculus-based open textbook meant for the first semester of a first year survey course taken by engineering and physical science majors. It has a traditional order of topics whereby force is discussed before energy.

**Includes:** instructor resources (learning evaluation, learning logs), student resources (tutorials, problems and solutions).

*May suit:* ENGR 244.

## Notes on Diffy Qs: Differential Equations for Engineers

This textbook is designed for a one-semester first course on differential equations, aimed at engineering students.

**Includes:** exercises and solutions.

*May suit:* ENGR 213.

## Numerical Methods with Applications

The textbook is written primarily for engineering and science undergraduates taking a course in Numerical Methods. Its treatment of numerical methods is based on a holistic approach and short chapters.

**Includes:** PowerPoint slides, worksheets, applications, questions.

*May suit:* ENGR 391.

## Project Management

This textbook covers the basics of project management, including the process of initiation, planning, execution, control, and closeout.

**Includes:** PowerPoint slides, questions, audio files.

*May suit:* ENGR 301.

## Project Management from Simple to Complex

The textbook is written in collaboration by an expert in Project Management and an expert in writing instructional textbooks. It explores project management in a complex, virtual, and global environment.

**Includes:** essay questions, discussions, exercises.

*May suit:* ENGR 301.

# Responsible Innovation: Ethics, Safety and Technology

Based on a MOOC on responsible innovation, this textbook provides a framework to reflect on the ethics and risks of new technologies.

**Includes:** case studies, questions, web lectures.

*May suit:* ENCS 393.

# Sustainability: A Comprehensive Foundation

This text has been positively-reviewed and is intended for both a broad-based introductory class on sustainability and as a supplement to specialist courses with a dimension on sustainability in their areas of study. As sustainability is a multidisciplinary area of study, the text is the product of multiple authors drawn from the diverse faculty of the University of Illinois: each chapter is written by a recognized expert in the field.

*May suit:* ENGR 202.

## Technical Project Management in Living and Geometric Order

Written by three engineering instructors at the University of Wisconsin-Madison, this textbook emphasizes on the connections between the various stages and practices of technical project management.

**Includes:** practical tips.

*May suit:* ENGR 301.

## Technical Writing

The textbook offers students of technical writing an introduction to the processes and products involved in professional, workplace, and technical writing.

*May suit: ENCS 282.*

## Technical Writing Essentials

The textbook is designed to introduce readers to the basics of professional communications in technical fields: audience and task analysis in workplace contexts, clear and concise communications style, effective document design, teamwork and collaboration, and fundamental research skills.

*May suit: ENCS 282.*

## Open Technical Writing: An Open-Access Text for Instruction in Technical and Professional Writing

The textbook presents technical writing as an approach to researching and carrying out writing that centers on technical subject matter.

*May suit: ENCS 282.*

## Vector Calculus

This is a textbook on elementary multivariable calculus, designed for students who have completed courses in single-variable calculus. These topics are covered: basic vector algebra; lines, planes and surfaces; vector-valued functions; functions of 2 or 3 variables; partial derivatives; optimization; multiple integrals; line and surface integrals. The book also includes discussion of numerical methods: Newton's method for optimization, and the Monte Carlo method for evaluating multiple integrals.

**Includes:** exercises, solutions, applications, LaTeX source code.

*May suit: ENGR 233.*

## Writing for Success

This textbook provides instruction in steps, builds writing, reading, and critical thinking, and combines comprehensive grammar review with an introduction to paragraph writing and composition.

**Includes:** exercises, examples of essays.

*May suit: ENCS 272.*



## 44. Mechanical, Industrial and Aerospace Engineering

### Computational Fluid Dynamics: An Open-Source Approach

**Authors:** Brian C. Vermeire, Carlos A. Pereira, Hamidreza Karbasian.

**Description:** An open-source textbook for computational fluid dynamics using entirely open-source tools! The following are available for this resource:

1. Download textbook in PDF format (17.7 MB, 215 pages)
2. Textbook source code from Gitlab.

**Includes:** Videos, embedded links to Jupyter code.

### Engineering Mechanics for Structures

This text explores the mechanics of solids and statics as well as the strength of materials and elasticity theory. In addition to introducing the fundamentals of structural analysis, it combines and applies important concepts in engineering mechanics. Its many design exercises encourage creative student initiative and systems thinking.

### Fundamentals of Aerospace Engineering

**Author:** Manuel Soler Arnedo

**Description:** Fundamentals of Aerospace Engineering covers an undergraduate, introductory course to aeronautical engineering and aims at combining theory and practice to provide a comprehensive, thorough introduction to the fascinating, yet complex discipline of aerospace engineering. This book is the ulterior result of three year of teaching a course called Aerospace Engineering in the first year of a degree in aerospace engineering (with a minor in air navigation) at the Universidad Rey Juan Carlos, in Madrid, Spain.

### Fundamentals of Compressible Flow Mechanics

The textbook is an introduction to the flow of compressible substances (gases).

# Introduction to Aerospace Structures and Materials

An introductory textbook to the discipline of aerospace structures and materials, ranging from materials, manufacturing and processing techniques, to structures, design principles and structural performance, including aspects like durability and safety.



## 45. Petroleum Technologies

**MIT OpenCourseWare: Energy**

**OpenStax (aka Connexions) Petroleum in Science & Technology**

Connexions is one of the most popular open education sites in the world. Its more than 17,000 learning objects or modules in its repository and over 1000 collections (textbooks, journal articles, etc.) are used by over 2 million people per month.



PART IX

PAUL J. HILL SCHOOL OF BUSINESS



# 46. Accounting

## Financial Accounting

This book is intended for an undergraduate or MBA level Financial Accounting course. It covers the standard topics in a standard sequence, utilizing the Socratic method of asking and answering questions.

**Includes:** activities and exercises.

## Intermediate Financial Accounting – Volume 1

This text is intended for a first course in Intermediate Financial Accounting. It presumes that students have already completed one or two Introductory Financial Accounting courses.

**Includes:** case studies, exercises, solutions.

## Intermediate Financial Accounting – Volume 2

This text is intended to be the second of two in Intermediate Financial Accounting courses. It presumes that students have already completed the Introductory Financial Accounting, and the first Intermediate Financing Accounting course.

**Includes:** case studies, exercises, solutions.

## Introduction to Financial Accounting

This text was written by a professor of accounting at Athabasca University and it is based on international accounting standards. This text has been successfully adopted and has been faculty reviewed.

**Includes:** instructor resources, case studies, student resources, practice problems, solutions manual.

*May suit:* COMM 217.

## Managerial Accounting

This textbook focuses on the essential managerial accounting concepts used within organizations for decision-making purposes and covers these concepts in 13 straightforward and concise chapters.

**Includes:** exercises, problems, cases, spreadsheets applications, group projects.

*May suit:* COMM 305.

## Principles of Accounting – Volume 1 Financial Accounting

This OpenStax textbook exposes students to the core concepts of accounting in familiar ways to build a strong foundation that can be applied across business fields. Volume 1 focuses on financial accounting.

**Includes:** instructor resources, student resources, PowerPoint slides, applications, exercises, solutions.

May suit: COMM 217.

## Principles of Accounting – Volume 2 Managerial Accounting

This OpenStax textbook exposes students to the core concepts of accounting in familiar ways to build a strong foundation that can be applied across business fields. Volume 2 focuses on managerial accounting.

**Includes:** instructor resources, student resources, PowerPoint slides, applications, exercises, solutions.

May suit: COMM 305.

## Principles of Financial Accounting

**Author:** Christine Jonick

**Description:** The University of North Georgia Press and Affordable Learning Georgia bring you *Principles of Financial Accounting*. Well-written and straightforward, *Principles of Financial Accounting* is a needed contribution to open source pedagogy in the business education world. Written in order to directly meet the needs of her students, this textbook developed from Dr. Christine Jonick's years of teaching and commitment to effective pedagogy.

Features:

- Peer reviewed by academic professionals and tested by students
- Over 100 charts and graphs
- Instructional exercises appearing both in-text and for Excel
- Resources for student professional development

This textbook is an Open Education Resource. It can be reused, remixed, and reedited freely without seeking permission.

**Includes:** exercises, professional development resources.

May suit: COMM 217.

## Principles of Managerial Accounting

**Author:** Christine Jonick

**Description:** The University of North Georgia Press and Affordable Learning Georgia bring you *Principles of Managerial Accounting*. Well-written and straightforward, *Principles of Managerial Accounting* is a needed contribution

to open source pedagogy in the business education world. Written in order to directly meet the needs of her students, this textbook developed from Dr. Jonick's years of teaching and commitment to effective pedagogy.

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- Over 100 charts and graphs
- Instructional exercises appearing both in-text and for Excel
- Resources for student professional development

This textbook is an Open Education Resource. It can be reused, remixed, and reedited freely without seeking permission.

## 47. Finance

### **International Finance: Theory and Policy**

The textbook is intended for a one-semester course in International Finance. It provides detailed descriptions of major macroeconomic variables, covers the interest rate parity and purchasing power parity theories of exchange rate determination, takes an exhaustive look at the pros and cons of trade imbalances and presents the well-known AA-DD model to explore the effects of fiscal and monetary policy under both fixed and flexible exchange rates.



## 48. General Business (COMM)

### Business Communication for Success

Adopted by many universities, this textbook provides a comprehensive and integrated approach to the study and application of written and oral business communication.

**Includes:** introductory exercises and in-chapter exercises.

*May suit:* COMM 205.

### Business Ethics

This OpenStax textbook covers concepts of introductory business ethics courses and has a particular focus on student learning.

**Includes:** case studies, applications, student resources, instructor resources, exercises, solutions, examples.

*May suit:* COMM 315.

### Business Law I

This OpenStax textbook is designed to meet the scope and sequence requirements of courses on Business Law or the Legal Environment of Business.

**Includes:** instructor resources, student resources, exercises.

*May suit:* COMM 315.

### Communication for Business Professionals

This is an adaptation of Business Communication for Success (2013). It significantly reduced the size and scope of the original publication and added Canadian examples.

**Includes:** PowerPoint slides, essay questions, test bank.

*May suit:* COMM 205.

### Entrepreneurship

This OpenStax textbook is intended for use in introductory Entrepreneurship classes at the undergraduate level.

**Includes:** instructor resources, student resources, exercises, cases, test bank.

*May suit: COMM 320.*

## Entrepreneurship and Innovation Toolkit

Written by a business professor at the University of Saskatchewan, this textbook covers fundamental entrepreneurship concepts.

*May suit: COMM 320.*

## Fundamentals of Business, 3rd edition

**FUNDAMENTALS OF BUSINESS, 3rd edition** is an open education resource intended to serve as a no-cost, instructor-customizable primary text for one-semester undergraduate introductory business courses. It covers the following topics in business: Teamwork; economics; ethics; entrepreneurship; business ownership, management, and leadership; organizational structures and operations management; human resources and motivating employees; managing in labor union contexts; marketing and pricing strategy; hospitality and tourism, accounting and finance, and personal finances. The textbook was adapted for use in Virginia Tech's Pamplin College of Business' introductory level business course, MGT1104 Foundations of Business.

## Fundamentals of Business: Canadian Edition

This textbook was developed by business faculty from Ontario Colleges and from eCampusOntario program managers. It incorporates introductory business topics, from ethics to marketing to entrepreneurship, in a Canadian context. It has received positive faculty reviews.

**Includes:** embedded quizzes with solutions, student resources, examples, summaries, applications.

*May suit: COMM 220, COMM 225, COMM 315, COMM 320.*

## Introduction to Business

This OpenStax textbook was developed by a number of business professors from various American institutions. It covers the contents of a traditional introductory business course.

**Includes:** instructor resources, student resources, applications, ethics activities, exercises, case studies, summaries.

*May suit: COMM 210, COMM 220, COMM 222, COMM 223, COMM 225, COMM 320.*

# Introduction to Entrepreneurship

**Editor:** Katherine Carpenter

**Contributors:** Jonathan Carpenter and Andrea Niosi

**Description:** This course introduces students to entrepreneurship as an approach to life and to create their own careers. Through foundational concepts and frameworks, this course examines entrepreneurship as a process including: entrepreneurial identity, opportunity creation and evaluation, mobilizing resources, and growth. The course is designed around the major stages in this process, and an overview of factors that are key to entrepreneurial success is provided.

# Introduction to Financial Accounting

This text was written by a professor of accounting at Athabasca University and it is based on international accounting standards. This text has been successfully adopted and has been faculty reviewed.

**Includes:** instructor resources, case studies, student resources, practice problems, solutions manual.

*May suit:* COMM 217.

# Introductory Business Statistics

This OpenStax textbook has been positively-reviewed and has been successfully adopted by other faculty. It covers introductory concepts in business statistics, from probability to confidence intervals.

**Includes:** instructor resources, student resources, applications, summaries, exercises, solutions, and group activities.

*May suit:* COMM 215.

# Managerial Accounting

This textbook focuses on the essential managerial accounting concepts used within organizations for decision-making purposes and covers these concepts in 13 straightforward and concise chapters.

**Includes:** exercises, problems, cases, spreadsheets applications, group projects.

*May suit:* COMM 305.

# Mastering Strategic Management – 1st Canadian Edition

This Canadian edition includes Canadian specific content, images, and references. It contains multiple graphic concept pages and real-world company examples in each chapter.

**Includes:** PowerPoint slides.

*May suit:* COMM 401.

## Organizational Behaviour

Published through the University of Minnesota, this text has been successfully adopted and has received positive reviews from other faculty. This text is meant to provide students with the necessary critical thinking skills, vocabulary, and framework to effectively navigate situations that may arise. This version is an adaptation of a former resource provided by a publisher. It includes an “Organizational Behaviour ToolBox” which incorporates an experiential component of understanding the concepts.

**Includes:** exercises, summaries, references, organizational behaviour toolbox.

*May suit:* COMM 222.

## Principles of Accounting – Volume 1 Financial Accounting

This OpenStax textbook exposes students to the core concepts of accounting in familiar ways to build a strong foundation that can be applied across business fields. Volume 1 focuses on financial accounting.

**Includes:** instructor resources, student resources, PowerPoint slides, applications, exercises, solutions.

*May suit:* COMM 217.

## Principles of Accounting – Volume 2 Managerial Accounting

This OpenStax textbook exposes students to the core concepts of accounting in familiar ways to build a strong foundation that can be applied across business fields. Volume 2 focuses on managerial accounting.

**Includes:** instructor resources, student resources, PowerPoint slides, applications, exercises, solutions.

*May suit:* COMM 305.

## Principles of Financial Accounting

This textbook was developed by a professor of accounting at the University of North Georgia to better meet the needs of her students. This text has been successfully adopted and peer reviewed by other accounting faculty.

**Includes:** exercises, professional development resources.

*May suit:* COMM 217.

## Principles of Management

This OpenStax textbook takes a traditional approach to management, which is the leading, planning, organizing, and controlling approach. It covers many management areas such as human resource management and strategic management, as well as behavioral areas such as motivation.

**Includes:** instructor resources, student resources, PowerPoint slides, test bank, exercises, questions.

*May suit:* COMM 205, COMM 210, COMM 222, COMM 226, COMM 320.

# 49. Management

## Entrepreneurship

This OpenStax textbook is intended for use in introductory Entrepreneurship classes at the undergraduate level.

**Includes:** instructor resources, student resources, exercises, cases, test bank.

May suit: COMM 320.

## Entrepreneurship and Innovation Toolkit

Written by a business professor at the University of Saskatchewan, this textbook covers fundamental entrepreneurship concepts.

May suit: COMM 320.

## Good Corporation, Bad Corporation: Corporate Social Responsibility in the Global Economy

This text was developed through the Open SUNY project by the State University of New York, specifically by professors of business. This text has been positively reviewed by faculty and has been successfully adopted.

**Includes:** instructor resources, case studies, external resources, exercises, applications, examples.

## Human Resources Management

The conversational style of this textbook engages students, while the academic rigor of its content provides them with the tools that any manager needs—whether they work in HR or a different department.

**Includes:** cases and team activities.

## Human Resources Management – Canadian Edition

**Author:** Stephane Brutus

**Description:** *Human Resource Management – Canadian Edition* introduces MANA 362 students to the basic aspects of managing human resources in a Canadian context. The strategies and theories outlined in this book will be of use to any manager—not just those in HR—who needs to know about recruiting, selecting, training, and compensating people. This book is currently is the pilot version.

**Includes:** Exercises.

## Mastering Strategic Management – 1st Canadian Edition

This Canadian edition includes Canadian specific content, images, and references. It contains multiple graphic concept pages and real-world company examples in each chapter.

**Includes:** PowerPoint slides.

*May suit:* COMM 401.

## Organizational Behaviour

Published through the University of Minnesota, this text has been successfully adopted and has received positive reviews from other faculty. This text is meant to provide students with the necessary critical thinking skills, vocabulary, and framework to effectively navigate situations that may arise. This version is an adaptation of a former resource provided by a publisher. It includes an “Organizational Behaviour ToolBox” which incorporates an experiential component of understanding the concepts.

**Includes:** exercises, summaries, references, organizational behaviour toolbox.

*May suit:* COMM 222.

## Principles of Management

This OpenStax textbook takes a traditional approach to management, which is the leading, planning, organizing, and controlling approach. It covers many management areas such as human resource management and strategic management, as well as behavioral areas such as motivation.

**Includes:** instructor resources, student resources, PowerPoint slides, test bank, exercises, questions.

*May suit:* COMM 205, COMM 210, COMM 222, COMM 226, COMM 320.

# 50. Marketing

## eMarketing: The Essential Guide to Marketing in a Digital World

Already in its 6th edition, this textbook is written by Rob Stokes, a specialist and lecturer on the subject.

**Includes:** case studies, questions, further reading.

May suit: MARK 452.

## Introducing Marketing

**Author:** John Burnett

**Description:** Through good economic times and bad, marketing remains the pivotal function in any business. Determining and satisfying the needs of customers through products that have value and accessibility and whose features are clearly communicated is the general purpose of any business. It is also a fundamental definition of marketing. This text introduces students to the marketing strategies and tools that practitioners use to market their products.

## Legal Aspects of Marketing and Sales

**Authors:** Don Mayer, Daniel Warner, George J. Siedel, Jethro K. Lieberman,

**Description:** *Legal Aspects of Marketing and Sales* is an up-to-date textbook that covers legal issues that students who will work in marketing or with marketing managers must understand. The text is organized to permit instructors to tailor the materials to their particular approach. The authors take special care to engage students by relating law to everyday events with their clear, concise and readable style.

After introductory chapters covering the legal environment of business, *Legal Aspects of Marketing and Sales* provides students with context and essential legal concepts relating to contracts, sales, intellectual property, antitrust law and unfair trade practices. The text provides the vocabulary and legal savvy they will need to talk in an educated way to customers, suppliers, shareholders, government regulators and other stakeholders — and to their own lawyers.

## The Power of Selling

The textbooks is written by Kimberly K. Richmond, an executive, author, speaker, and professor in the sales and marketing arena. It teaches students how to apply the tenets of selling to how to sell themselves and get the job they want, with the same process professional sales people learn (or brush up) on their own selling skills.

**Includes:** questions, role play, videos.

May suit: MARK 454.



# Principles of Marketing

The textbook covers the experience and process of actually doing marketing – not just the vocabulary. It carries five dominant themes throughout in order to expose students to marketing in today's environment: Service dominant logic, sustainability, ethics and social responsibility, global coverage, and metrics.

**Includes:** discussion questions and activities.

*May suit:* MARK 302, MARK 305.

# 51. Supply Chain and Business Technology Management

## Database Design

An introductory textbook that covers database systems and database design concepts.

**Includes:** end-of-chapter exercises, sample ERD exercises, SQL lab with solution.

## Information Systems for Business and Beyond

This textbook is written as an introductory text, meant for those with little or no experience with computers or information systems. It gives an introduction to the concept of information systems, their use in business, and the larger impact they are having in the world.

**Includes:** study questions and exercises.

## Project Management

This textbook covers the basics of project management, including the process of initiation, planning, execution, control, and closeout.

**Includes:** PowerPoint slides, questions, audio files.

*May suit: BTM 480.*

## Project Management from Simple to Complex

The textbook is written in collaboration by an expert in Project Management and an expert in writing instructional textbooks. It explores project management in a complex, virtual, and global environment.

**Includes:** essay questions, discussions, exercises.

*May suit: BTM 480.*

PART X

# INDIGENOUS STUDIES



## 52. Business Administration

### Advanced Business Law and the Legal Environment

**Authors:** Don Mayer, Daniel Warner, George J. Siedel, Jethro K. Lieberman, Alyssa Rose Martina.

**Description:** Mayer, Warner, Siedel and Lieberman's Advanced Business Law and the Legal Environment is an up-to-date textbook with coverage of legal and regulatory issues that are more technical than the topics in the authors' Foundations of Business Law and the Legal Environment.

Appropriate for students who have already taken an introductory Legal Environment or Business Law course, the text is organized to permit instructors to tailor the materials to their particular approach.

The authors take special care to engage students by relating law to everyday events with which they are already familiar with their clear, concise and readable style.

*Advanced Business Law and the Legal Environment* provides students with context and essential legal concepts relating to the Uniform Commercial Code and various aspects of property law. The text provides the vocabulary and legal savvy necessary for business people to talk in an educated way to their customers, employees, suppliers, and other stakeholders — and to their own lawyers.

### Beyond Lean: Simulation in Practice – Second Edition

**Author:** Charles R. Standridge

**Description:** Lean thinking, as well as associated processes and tools, have involved into a ubiquitous perspective for improving systems particularly in the manufacturing arena. With application experience has come an understanding of the boundaries of lean capabilities and the benefits of getting beyond these boundaries to further improve performance. Discrete event simulation is recognized as one beyond-the-boundaries of lean technique. Thus, the fundamental goal of this text is to show how discrete event simulation can be used in addition to lean thinking to achieve greater benefits in system improvement than with lean alone. Realizing this goal requires learning the problems that simulation solves as well as the methods required to solve them. The problems that simulation solves are captured in a collection of case studies. These studies serve as metaphors for industrial problems that are commonly addressed using lean and simulation.

### Building Strategy and Performance

**Author:** Kim Warren

**Description:** This book uses a balanced blend of frameworks and illustrations to teach you how to tackle the challenge of driving performance into the future.

Kim Warren takes special care with this new textbook, *Building Strategy and Performance*, to ensure that it delivers instruction on how to deliver strategy powerfully over a sustained period of time.

This book helps you to show your students where the levers are that they can control and how to choose what to do, when, and how much to achieve their specific goals.

This book effectively outlines the dynamics of strategy, how one drives performance – past, today and into the future. It shows what causes performance to improve or deteriorate and what your students can do to change this trajectory for the better.

But don't take our word for it, review the book now to see if it can help you to deliver the kind of tactical strategy course you desire for your students.

## Corporate Governance

**Author:** Cornelis A. de Kluyver

**Description:** Corporate Governance by de Kluyver is a primer on corporate governance. It is designed to help students understand corporate governance by looking at the subject from both a macro- and micro-perspective.

Historical data and examples including the recent scandals that have torn the fabric of capitalism pave a pathway to the principal challenges facing today's corporate boards, and how to successfully manage them.

Topics Include:

1. Clear coverage on why proper corporate governance has become a moral imperative and how to corporations achieve it.
2. Discussions on recent governance reforms in the United States.
3. Outlines of the roles that each individual in the corporate governance process must take on and how to effectively execute on those roles.
4. Exploration on the future of corporate governance in the epilogue

Take some time to review Corporate Governance by de Kluyver to see if it is a good fit for your strategy courses.

## Developing New Products and Services

**Author:** G. Lawrence Sanders

**Description:** Developing New Products and Services by Sanders is an outstanding contribution to market research. The book focuses on the upfront activities and ideas for new product and service development.

A central theme of Developing New Products and Services is that there is, or should be, a constant struggle going on in every organization, business, and system between delivering feature-rich versions of products and services using extravagant engineering and delivering low-cost versions of products and services using frugal engineering. Students will come away with this notion and how to manifest it as a contributing employee at any company.

A number of powerful concepts and tools are presented so your students can better understand how to facilitate new product development. For example, three templates are featured that facilitate new product and service development. The FAD (features, attributes, and design) template is used to identify the features and attributes that can be used for product and service differentiation. The Ten-Ten planning process contains two templates: an Organizational and Industry Analysis template and the Business Plan Overview template. These two templates coupled with the FAD template can be used to develop a full-blown business plan.

In addition, Developing New Products and Services includes the following topics: entrepreneurship, technology and product life cycles, product and service versioning, product line optimization, creativity, lock-in real options, business valuation, and project management.

## Electronic Commerce: The Strategic Perspective

**Authors:** Richard T. Watson, Pierre Berthon, Leyland F. Pitt, George M. Zinkhan

**Description:** This book is written both for practitioners and business students. Managers wishing to understand how electronic commerce is revolutionizing business will find that our comprehensive coverage of essential business issues (e.g., pricing and distribution) answers many of their questions. Advanced business students (junior, seniors, and graduate students) will find that the blend of academic structure and practical examples provides an engaging formula for learning.

The book's title reflects some key themes that we develop. First, we are primarily concerned with electronic commerce, which we define as using technology (e.g., the Internet) to communicate or transact with stakeholders (e.g., customers). Second, we discuss how organizations must change in order to take advantage of electronic commerce opportunities. In this sense, our book offers the strategic perspective (i.e., the best way to operate a successful business in the 21st century). Third, with the growing importance of the Internet and related technologies, organizations must take electronic commerce into account when they are creating strategic plans. Thus, electronic commerce is a strategic perspective that all firms must adopt, both in the present and in the future. In other words, an organization that does not explicitly consider electronic commerce as a strategic imperative is probably making a crucial error. Here, we focus primarily on the opportunities and tactics that can lead to success in the electronic marketplace.

## Financial Empowerment: Personal Finance for Indigenous and Non-Indigenous People

**Author:** Bettina Schneider

**Description:** Uniquely tailored to Indigenous students' experiences and histories, *Financial Empowerment* covers a wide range of topics in financial planning, personal finance, and financial decision-making. Threaded throughout with Indigenous and Canadian content, videos with Elders are also included, offering students their perspectives to enhance the learning experience.

*Financial Empowerment* is designed for a single-semester introduction to financial planning and decision-making, in order to provide first and second-year business students with the necessary financial literacy and skills needed to make sound financial decisions, assess financial risk, and achieve financial success. This textbook attempts to speak to the varied backgrounds, knowledge systems, and experiences of Indigenous and non-Indigenous Canadians by providing Indigenous and non-Indigenous perspectives on personal finance and financial planning using examples and information from the Canadian financial system, economy, and Elders.

## Focusing on Organizational Change

**Author:** William Q. Judge

**Description:** Never before have strategic leaders been confronted with so much overwhelming change. The traditional approach is to teach the leader or leaders how to direct or control the organizations' reaction on a monthly,

weekly, or even daily basis. This approach is stressful and overwhelming for executive leaders, makes middle managers feel torn between honoring their senior leaders and listening to the demands of front line employees, and is alienating for front line employees.

Focusing on Organizational Change offers an alternative to the traditional approach by focusing on building the change capacity of the entire organization in anticipation of future pressures to change. Based on systematic research of more than 5,000 respondents working within more than 200 organization or organizational units conducted during the previous decade, this book offers a clear and proven method for diagnosing your organizational change capacity. While building organizational change capacity is not fast or easy, it is essential for effective leadership and organizational survival in the 21st century.

## Foundations of Business Law and Legal Environment

**Author:** Don Mayer

**Description:** Mayer, Warner, Siedel and Lieberman's Foundations of Business Law and the Legal Environment is an up-to-date textbook with comprehensive coverage of legal and regulatory issues for your introductory Legal Environment or Business Law course.

The text is organized to permit instructors to tailor the materials to their particular approach.

The authors take special care to engage students by relating law to everyday events with which they are already familiar with their clear, concise and readable style.

Business Law and the Legal Environment provides students with context and essential concepts across a broad range of legal issues with which managers and business executives must grapple. The text provides the vocabulary and legal savvy necessary for business people to talk in an educated way to their customers, employees, suppliers, government officials — and to their own lawyers.

## Fundamentals of Business

**Author:** Stephen J. Skripak, Richard Parsons, Anastasia Cortes, Anita Walz

**Description:** An introductory textbook in business that covers a variety of topics: The Foundations of Business, Economics and Business, Ethics and Social Responsibility, Business in a Global Environment, Forms of Business Ownership, Entrepreneurship: Starting a Business, Management and Leadership, Structuring Organizations, Operations Management, Motivating Employees, Managing Human Resources, Union/Management Issues, Marketing: Providing Value to Customers, Pricing Strategy, Hospitality and Tourism, Accounting and Financial Information, and Personal Finances.

## Fundamentals of Global Strategy

**Author:** Cornelis A. de Kluyver

**Description:** The globalization of the competitive landscape has forced companies to fundamentally rethink their strategies. Whereas once only a few industries such as oil could be labeled truly global, today many—from pharmaceuticals to aircraft to computers—have become global in scale and scope. As a consequence, creating a



global competitive advantage has become a key strategic issue for many companies, and students need to possess an understanding of the impact of global strategies on a business.

Crafting a global strategy requires making decisions about which strategy elements can and should be globalized and to what extent, and de Kluyver's *Fundamentals of Global Strategy* can help you illuminate these facts to your students. *Fundamentals of Global Strategy* poses the following questions for your students to analyze:

- What markets and/or regions should a company compete in and why?
- To what degree can and should products and services be standardized?
- Is it advantageous to adopt a more or less uniform market positioning worldwide?
- What value-added activities should it keep in-house, outsource, or relocate for competitive advantage?
- How can competitive responses be most effectively coordinated on a global basis?

## Human Relations

**Author:** Laura Portolese Dias

**Description:** *Human Relations* by Laura Portolese-Dias addresses all of the critical topics to obtain career success as they relate to professional relationships.

Knowing how to get along with others, resolve workplace conflict, manage relationships, communicate well, and make good decisions are all critical skills all students need to succeed in career and in life.

Human Relations is not an organizational behavior; rather, it provides a good baseline of issues students will deal with in their careers on a day-to-day basis. It is also not a professional communications, business English, or professionalism textbook, as its focus is much broader — on general career success and how to effectively maneuver in the workplace.

From communication challenges to focusing on one's own emotional intelligence, the examples throughout *Human Relations* will help students understand the importance of the human side in their career.

This book's easy-to-understand language and tone is written to convey practical information in an engaging way. Every chapter opens with a realistic example which introduces a concept to be explained in detail later. Each chapter contains relevant examples, YouTube videos, figures, learning objectives, key takeaways, exercises, and a chapter-ending case that offer different ways to promote learning. Many of the end-of-section exercises offer self-assessment quizzes, so students may engage in self-understanding and development.

## Intermediate Financial Accounting (Volume 1): Lyryx

**Author:** Glenn Arnold, Suzanne Kyle, Athabasca University, Lyryx Learning Team

**Description:** This text is intended for a first course in Intermediate Financial Accounting. It presumes that students have already completed one or two Introductory Financial Accounting courses. The book reflects current International Financial Reporting Standards (IFRS), such as IFRS 15 – Revenue from Contracts With Customers. It focuses on more difficult intermediate accounting topics that match prerequisite requirements for students advancing to a second level Intermediate Financial Accounting course. Advanced topics that are covered in Advanced Financial Accounting courses, such as consolidations and foreign exchange, are not included here. The text is written with an approachable style that focuses on key concepts that will be relevant to students' future careers as accountants. The book provides a review of Introductory Accounting concepts and covers all topics essential to a first level Intermediate Accounting course: the conceptual framework and current landscape of financial reporting; statements of financial position, comprehensive income, cash flows and shareholders' equity; cash and receivables; revenue; inventory; property plant

and equipment; intangible assets; and intercorporate investments.

## Intermediate Financial Accounting (Volume 2): Lyryx

**Author:** Glenn Arnold, Suzanne Kyle, Athabasca University, Lyryx Learning Team

**Description:** This text is intended to be the second of two in Intermediate Financial Accounting courses. It presumes that students have already completed the Introductory Financial Accounting, and the first Intermediate Financing Accounting course. The text reflects both current International Financial Reporting Standards (IFRS) and ASPE. This text covers all topics essential to a second level Intermediate Accounting course: current, long-term and complex liabilities, income taxes, pensions, leases, shareholders' equity, earnings per share, statement of cash flows including the direct approach, effects of changes and errors, and disclosures and analysis. Topics that are covered in Advanced Financial Accounting courses, such as consolidations and foreign exchange, are not included here.

## Introduction to Financial Accounting 2nd ed.

**Author:** David Annand, Athabasca University

**Description:** Based on International Financial Reporting Standards, this textbook was written by David Annand, EdD, MBA, CPA, CA, and Professor of Accounting in the Faculty of Business at Athabasca University. Each chapter includes questions and problems for review and feedback. Solutions are provided. The text and ancillary materials are freely-sharable under a Creative Commons CC-BY-SA-NC licence. The e-text version is extensively bookmarked for easy access and onscreen reading. Suggested solutions are linked to the end-of-chapter material in this version. Text and student solutions manual files are also available that are suitable for printing. A student workbook provides formatted outlines for all problems contained in the text. Students can print outlines as they need them, and fill in responses manually. Four randomly-generated Excel-based exercises are available. These provide unlimited review and feedback about a) recording transactions in a worksheet; b) recording journal entries and preparing financial statements; c) preparing adjusting and closing entries, and financial statements; and d) calculating depreciation and preparing journal entries for disposal of equipment. A comprehensive, randomly-generated case is also available. This requires the preparation of 18 different year-end adjusting entries and all four types of financial statements, and calculation and analysis of 16 different financial statement ratios.

## Leading with Cultural Intelligence

**Author:** Mai Moua,

**Description:** Organizations in the 21st century are in need of culturally intelligent managers and leaders. The pressure to build authentic global networks and to cultivate an appreciation and respect for cultural differences and similarities has driven cultural intelligence to the forefront of diversity and inclusion work.

Preparing today's students to be effective leaders in their professional lives requires that they hone their cultural intelligence as it is vital to working inter- and intra-culturally in today's global economy. This unique ability to identify, recognize, and acknowledge the differences and similarities that exist between and among cultural groups and systems

will set their leadership skills apart from the masses. And when applied, cultural intelligence can bridge the gap in cultural misunderstanding by creating awareness, knowledge, and patience of cultural norms and behaviors.

The purpose of *Leading With Cultural Intelligence* by Mia Moua is to outline the important ideas of cultural intelligence and the steps that must be considered and then practiced to become a culturally intelligent leader. The most important aspect covered within this book is that cultural intelligence is both a strategy and a tool towards cultural competency and proficiency. This book outlines the importance of understanding culture and its impact on organizations, the strategic value of cultural intelligence, and the significance of integrating and practicing cultural intelligence in everyday business life. When all these aspects are properly integrated and applied in the leadership and management process, organizations are more innovative and adaptable to respond to cultural changes.

## Project Management

**Author:** Adrienne Watt

**Description:** This book covers the basics of project management. This includes the process of initiation, planning, execution, control and close out that all projects share.

## Small Business Management in the 21st Century

**Authors:** David Cadden, Sandra L. Lueder

**Description:** Small Business Management in the 21st Century offers a unique perspective and set of capabilities for instructors. The authors designed this book with a “less can be more” approach, and by treating small business management as a practical human activity rather than as an abstract theoretical concept.

The text has a format and structure that will be familiar to you if you use other books on small business management. Yet it brings a fresh perspective by incorporating three distinctive and unique themes and an important new feature (Disaster Watch) which is embedded throughout the entire text. These themes assure that students see the material in an integrated context rather than a stream of separate and distinct topics.

First, the authors incorporate the use of technology and e-business as a way to gain competitive advantage over larger rivals. Technology is omnipresent in today’s business world. Small business must use it to its advantage. We provide practical discussions and examples of how a small business can use these technologies without having extensive expertise or expenditures.

Second, they explicitly acknowledge the constant need to examine how decisions affect cash flow by incorporating cash flow impact content in several chapters. As the life blood of all organizations, cash flow implications must be a factor in all business decision-making.

Third, they recognize the need to clearly identify sources of customer value and bring that understanding to every decision. Decisions that do not add to customer value should be seriously reconsidered.

Small Business Management in 21st Century boasts a new feature called Disaster Watch scenarios. Few texts cover, in any detail, some of the major hazards that small business managers face. Disaster Watch scenarios, included in most chapters, cover topics that include financing, bankers, creditors, employees, customers who don’t pay, economic downturns, and marketing mistakes.

# Strategic Management

**Authors:** Reed Kennedy, Eli Jamison, Joseph Simpson, Pankaj Kumar, Ayenda Kemp, Kiran Awate, and Kathleen Manning

**Description:** STRATEGIC MANAGEMENT offers an introduction to the key topics and themes of strategic management. The authors draw on examples of familiar companies and personalities to illustrate the different strategies used by today's firms—and how they go about implementing those strategies. Students will learn how to conduct a case analysis, measure organizational performance, and conduct external and internal analyses. In short, they will understand how organizations operate at the strategic level to be successful.

# Sustainability, Innovation, and Entrepreneurship

**Author:** Andrea Larson

**Description:** This book is suited for the Entrepreneurship or Innovation course with an emphasis on Sustainability or for a course devoted entirely to Sustainability.

What are the trends and forces underlying the changing character of the business-environment relationship? How they are creating significant entrepreneurial opportunities for individuals and companies? Around the world, the movement toward "sustainable development" has caused many firms to adopt policies and practices that reflect what is sometimes called a "sustainable business" or "triple bottom line" approach. "Triple bottom line" refers to the demonstration of strong performance across economic, social, and environmental indicators.

Those measures serve as indicators of fiduciary responsibility to a growing set of concerned investors and therefore can help ensure access to capital. They also enable innovators to lower costs, create strategic differentiation, reduce risk, and position themselves for competitive advantage over rivals less attuned to trends.

The deep roots of sustainability thinking are now evident in widespread and increasingly visible activities worldwide, and Sustainability, Innovation, and Entrepreneurship explores this evolution; its necessity, its implications and its progression.

# The Sustainable Business Case Book

**Authors:** Ross Gittell, Matt Magnusson, Michael Merenda.

**Description:** The issue of sustainability and specifically sustainable business is of increasing interest and importance to students of business and also students in the sciences, government, public policy, planning and other fields. There can be significant benefits from students learning about sustainable business from the rich experiences of business practice.

The Sustainable Business Case Book by Gittell, Magnusson and Merenda is one of the first of its kind. It combines the theory of sustainability with key concepts, analytical information and contextual information with a collection of cases which provide insights, perspective and practical guidance on how sustainable businesses operate from different business functional area perspectives.

The Sustainable Business Case Book can be used as a stand-alone text or as a supplemental textbook for undergraduate courses that have an interest in sustainable business. While the book's primary focus is on the relationship between business and sustainability, the book can also be used in courses offered in fields other than business, including environmental and earth systems sciences, environmental studies, urban planning, economics and public policy.

The first part of The Sustainable Business Case Book, Chapter 1 through Chapter 3, introduces students to the

meaning of sustainability, and the practice of sustainable business. The introductory chapters also describe key concepts, analytical frameworks, and contextual information relevant for the understanding of business sustainability. Chapter 1, defines sustainability and describes how and why businesses choose to engage in sustainable practices and how sustainable business practices relate to corporate profitability and social responsibility. Chapters 2 and 3 provide important background and contextual information affecting sustainable business practice. Chapter 2, The Science of Sustainability, reviews scientific evidence about climate change and the human and business influences on climate change. Chapter 3, Sustainability, Public Policy and Business, describes the significant role of government and public policy in sustainability, including setting the rules, regulations and laws that define the market and market opportunities for sustainable business practice.

After presenting a framework for understanding business engagement in sustainability and helping your students develop a core background of information on sustainable business seven case studies across the business disciplines illustrating business sustainability practices are presented. At the beginning of each case study chapter Learning Objectives are listed with major sustainable business points and principles that the case will illustrate and illuminate. Each case chapter includes listing of Key Takeaways, Key Terms and Exercises for students. In each case chapter, there are four main areas of focus:

1. Context and motivating interest in sustainability for company;
2. Description of the sustainable business practice and how it was implemented;
3. Results in terms of changes in sales/revenues, costs, profits and competitive positioning from the sustainable business practice;
4. Challenges and opportunities, and future considerations as a result of the company implementing the sustainable business practice.

## 53. Cree Language

### Cree: Language of the Plains / nēhiyawēwin: paskwāwi-pīkiskwēwin

**Description:** *Cree: Language of the Plains* is a comprehensive educational resource, offering a broad range of learning materials that is easily accessible to Cree language learners. This collection includes an updated and redesigned Cree language textbook, Cree language audio labs, and a Cree language workbook.

## 54. Health and Science

### **Knowing Home: Braiding Indigenous Science with Western Science, Book 2**

Knowing Home attempts to capture the creative vision of Indigenous scientific knowledge and technology that is derived from an ecology of a home place. The traditional wisdom component of Indigenous Science—the values and ways of decision-making—assists humans in their relationship with each other, the land and water, and all of creation. Indigenous perspectives have the potential to give insight and guidance to the kind of environmental ethics and deep understanding that we must gain as we attempt to solve the increasingly complex problems of the 21st century.

Braiding Indigenous Science and Western Science is a metaphor used to establish a particular relationship. Linked by braiding, there is a certain reciprocity. Each strand remains a separate entity, but all strands come together to form the whole. When we braid Indigenous Science with Western Science we acknowledge that both ways of knowing are legitimate forms of knowledge.

The book provides a window into the vast storehouse of innovations and technologies of the Indigenous peoples who live in Northwestern North America. It is our hope that the Indigenous Science examples, research and curriculum models will inspire deep reflection regarding the under-representation of Aboriginal students in the sciences. It is intended that the rich examples and cases, combined with the resources listed in the appendices, will enable teachers and students to explore Indigenous Science examples in the classroom, and in addition, support the development of curriculum projects in home places.

### **Northern and Indigenous Health and Healthcare**

Description: The provision of northern health care entails many unique challenges and circumstances that are rarely represented in mainstream health sciences education. This OpenEd Resource provides accessible content on health and health care from a northern perspective for the growing number of health professionals being educated in northern communities.

## 55. Indigenous Studies

### Knowing Home: Braiding Indigenous Science with Western Science, Book 1

This book provides a window into the vast storehouse of innovations and technologies of the Indigenous peoples who live in Northwestern North America.

### Knowing Home: Braiding Indigenous Science with Western Science, Book 2

This book provides a window into the vast storehouse of innovations and technologies of the Indigenous peoples who live in Northwestern North America.

### Our Stories: First Peoples in Canada

“Led by a diverse team of Indigenous and non-Indigenous creators, Our Stories: First Peoples in Canada is a unique multi-media resource developed with Indigenous peoples from across Canada. Eliciting an unsettling of Western authority, this free eTextbook encourages recognition that moves beyond a colonial lens.

This dynamic text allows the reader to engage with Indigenous histories, culture, and knowledge in a unique format that includes videos, podcasts, interactive tools, and more. Our Stories: First Peoples in Canada includes:

- Contemporary and historic information and media
- A balance of sources about injustice and resistance
- Reflects both urban and remote Indigenous perspectives in Canada
- Includes oral stories about the lived experiences of Indigenous community members

Answering the Truth and Reconciliation of Canada’s Calls to Action, the team developed Our Stories: First Peoples in Canada through a decolonizing lens. The materials present a balance of historical and contemporary materials that value Indigenous perspectives.”

### Pulling Together: Foundations Guide

Part of an open professional learning series developed for staff across post-secondary institutions in British Columbia, this is a foundational guide to indigenize the institution and professional practice.

**Includes:** knowledge check questions and answers.



# Restoring Indigenous Self-Determination: Theoretical and Practical Approaches

This Indigenous Studies text has been positively-reviewed and has been successfully adopted by other faculty. It covers concepts in Indigenous Self-Determination, from definitions to the UN declaration on Tibet.

**Includes:** instructor resources, student resources, summaries.



PART XI

# FACULTY OF BUSINESS ADMINISTRATION



## 56. Accounting

### **MIT OpenCourseWare: Sloan School of Management**

Free courses and materials available.

### **OER Commons: Accounting**

Free courses, modules, and materials.

### **OpenStax-CNX (aka Connexions) Accounting**

Connexions is one of the most popular open education sites in the world. Its more than 17,000 learning objects or modules in its repository and over 1000 collections (textbooks, journal articles, etc.) are used by over 2 million people per month.

### **Principles of Accounting**

Free online textbook written by Larry Walther, Ph.D., CPA, CMA, is the EY Professor of Accounting and Head of the School of Accountancy at Utah State University.



PART XII

# JOHNSON SHOYAMA GRADUATE SCHOOL OF PUBLIC POLICY





# 57. Administration

## Leadership in Healthcare and Public Health

Editors: Thomas Huber, Lexi Breitenstine, Lena Schreiber, Kate Budzik, Trevor Moffitt, and James Pearsol

Authors: Julia Applegate, Colleen Baumer, Cindy Clouner, Kara Colvell, Paige Erdeljac, Erin Fawley, Emily Feyes, Angela Finnegan, Nicholas Fowler, Seth Frey, Haley Griffin, John Guido, Elizabeth Hustead, Elena Mircoff, Trevor Moffitt, Rana Roberts, Hilary Metelko Rosebrook, Lindsay Schwartz, Fadi Smiley, Chris Westrick, and Lena Schreiber

### Description:

Can leadership be taught? If the answer is yes, then a highly interactive flipped classroom may be an ideal environment. Class time is used for case studies, simulations, interactive content, and working on gaining leadership experience individually and within student groups. The flipped classroom format was utilized for our Spring Course in Healthcare and Public Health Leadership. We asked students and ourselves to answer the following guiding questions: How do I define leadership and why is it important? How do I lead and what is my leadership style? How do I work with others? How do I follow and manage my boss? And how will I improve my leadership? The content utilized to answer these questions comes from six textbooks, case materials, interactive content, research, speakers, and practical experience from all of us as students of leadership and organizational behavior.

Leadership is a diverse area of study, and both academic and popular press literature abound with good and bad examples of ideas, knowledge, frameworks, paradigms, etc. about leadership. In order to keep us grounded, I chose the Northouse “Leadership: Theory and Practice” electronic version as a central guiding framework to introduce a comprehensive set of leadership theories. Harvard Business School cases and simulations provided additional content, along with leadership books by Ledlow and Stephens, Rowitz, Manion, Osland and Turner, and Galos. The course syllabus has our references listed, along with a larger group of additional leadership and organizational behavior titles in the reference section. In order to digest a large amount of material, slides were shared with the class ahead of time. Students were asked to write brief reflection papers on chapters within the reading that they would share with each other online and during our class sessions. Both an oral presentation and writing a chapter in our Pressbook were essential elements for learning the material throughout the course.

This Pressbook is a reflection of a diverse group of graduate students from health services, health management, health professions and a diverse group of mid-career professionals engaged in obtaining a Master of Public Health at The Ohio State University College of Public Health, while continuing to work usually more than 40 hours a week. This Pressbook is a gift from the students, TAs, and instructors for all of us. We have captured here (1) our collective learning in the 2018 spring semester, (2) our desire to share our knowledge with the students taking the course next year, and (3) our eagerness to share it with all of you – healthcare and public health friends and colleagues interested in learning about leadership and organizational behavior.

## 58. Public Policy

University of Regina OER projects are currently being created and will be posted when available.

# Index

## All Resources, Alphabetical Order By Title (links go directly to resources)

### A

Abstract Algebra: Theory and Applications

Accountability and Repairing Relationships: Training and Facilitation Guide

Active Bystander Intervention: Training and Facilitation Guide

Active Calculus Multivariable

Active Calculus Single Variable

Addiction: Drugs, Brains, and Behavior – The Science of Addiction

Advanced Business Law and the Legal Environment

Advanced Data Analysis from and Elementary Point of View

Advanced Professional Communication

Agent-Based Evolutionary Game Dynamics

A Gentle Introduction to the Art of Mathematics

Algebra and Trigonometry

Allied Health Microbiology

All About Circuits (Design Science License)

All Things Flow: Fluid Mechanics for the Natural Sciences

A Long Goodbye: Ed and Mary's Journey with Lewy Body Dementia

American Government: OpenStax

An American Playgoer at Home

An American Playgoer in London

A Mixed Course-Based Research Approach to Human Physiology

Analytical Methods in Geosciences

Analyzing Meaning: An Introduction to Semantics and Pragmatics

Anatomical Basis of Injury

Anatomy & Physiology: OpenStax

Anatomy and Physiology (OpenStax)

APEX Calculus

Applied Calculus (Openstax)

Applied Discrete Structures

Applied Statistics with R

Applied Strength of Materials for Engineering Technology [PDF]

The Arab Spring of Discontent

Art and Visual Culture: Prehistory to Renaissance

Art History I

Art History II

The Art of Being Human: A Textbook for Cultural Anthropology

Arts Integration in Elementary Curriculum: 2nd Edition  
Astronomy: OpenStax  
Atoms First / OpenStax

## B

Badass Womxn in the Pacific Northwest  
Basic Analysis: Introduction to Real Analysis  
Bayesian Data Analysis  
Basic Hindi I  
The Basics of American Government (Second Edition)  
Basics of Fluid Mechanics  
The Basics of General, Organic, and Biological Chemistry  
Bate-Papo: Introduction to Portuguese  
Becoming Human  
Be Credible  
Beginning Japanese for Professionals: Book 1  
Beginning Japanese for Professionals: Book 2  
Beyond Lean: Simulation in Practice – Second Edition  
Beyond Race: Cultural Influences on Human Social Life  
Biochemistry 551 (Online Version) Lab Manual  
Biochemistry Free For All  
Biological Anthropology (Libre Texts)  
Biology  
Biology I & Biology II  
Biology 2e  
Biology for Majors I & Biology for Majors II  
Biology Open Educational Resources  
Biomechanics of Human Movement  
The Birth of a Nation: The Cinematic Past in the Present  
Blueprints: Creating, Describing, and Implementing Designs for Larger-Scale Software Projects – version 2.3  
Body Physics: Motion to Metabolism  
Book of Proof  
Brehe's Grammar Anatomy  
A Brief Introduction to Engineering Computation with MATLAB  
A Brief Introduction to Geology and Geomorphology  
British Columbia in a Global Context  
British Literature I Anthology: From the Middle Ages to Neoclassicism and the Eighteenth Century  
British Literature II: Romantic Era to the Twentieth Century and Beyond  
BSc Optics  
Building a Medical Terminology Foundation  
Building Democracy for All  
Building Information – Representation and Management: Fundamentals and Principles  
Building Maintenance & Construction: Tools and Maintenance Tasks  
Building Strategy and Performance

Business Communication for Success  
Business Ethics  
Business Law 1

## C

### Calculus

Calculus: Early Transcendentals  
Calculus for the Life Sciences: A Modelling Approach Volume 1  
Calculus for the Life Sciences: A Modeling Approach Volume 2  
Calculus: OpenStax Volumes 1-3 : Volume 1 Volume 2 Volume 3  
Calculus Two Calculus-based Physics 1  
Canada's Two OER Copyright Video Series  
Canadian History: Post-Confederation  
Canadian History: Pre-Confederation  
The Cause and Consequence of Human Trafficking: Human Rights Violations  
Cell Biology, Genetics, Molecular Biology, Evolution and Ecology  
CFLA – Advocacy on Copyright Issues  
Chemical Biology & Biochemistry Laboratory Using Genetic Code Expansion Manual  
Chemistry 109 Fall 2021  
Chemistry: Atoms First  
Chemistry: The Central Science (Map)  
Chemistry: OpenStax  
Choosing & Using Sources: A Guide to Academic Research  
Clinical Examination of the Musculoskeletal System  
Clinical Procedures for Safer Patient Care – Thompson Rivers University Edition  
CLUE: Chemistry, Life, the Universe and Everything  
Coastal Dynamics  
Collecting and Mapping Data  
Combinatorics  
Communication for Business Professionals  
Communication @ Work  
Communication in the Real World  
Communication Studies  
Communication Theory  
Communication Training and Development  
Community Calculus (Single, Multivariable)  
Compact Anthology of World Literature Parts 1, 2, and 3  
Comprehensive Midwifery: The role of the midwife in health care practice, education, and research  
Computational Fluid Dynamics: An Open-Source Approach  
Computer Networks: A Systems Approach  
Computer Science I – Version 1.3.7  
Computer Science 20 – Saskatoon  
Concepts of Biology – First Canadian Edition  
A Concise Introduction to Logic

Confronting Canadian Migration History  
 Consent & Sexual Violence: Training and Facilitation Guide  
 Contemporary Calculus  
 Contemporary Families: An Equity Lens  
 Contemporary Issues in Human Rights Law  
 Continuous-Time Signals and Systems  
 Conventions 101: A Functional Approach to Teaching (and Assessing!) Grammar and Punctuation  
 Copyright Support for Scholarly Communications  
 CORE: The Economy Creating Online Learning Experiences  
 Corporate Governance  
 Creative Commons Attribution  
 The Creative Process  
 Cree: Language of the Plains / nēhiyawēwin: paskwāwi-pikiskwēwin  
 Creating Online Learning Experiences  
 Critical Epistemologies of Global Politics  
 Critical Perspectives on Migration in the Twenty-First Century  
 The Crystal Ball Instruction Manual – version 1.1 Volume One: Introduction to Data Science  
 Cultural Anthropology (American Anthropological Association)  
 Cultural Resources for Community Nursing

## D

Daily Departures: Speed Reading Passages for English Language Learners  
 Data Analysis with SAS: An Open Textbook  
 The Data Journalism Handbook  
 Database Design  
 Defend Dissent  
 The Delft Sand, Clay & Rock Cutting Model  
 Delftse Foundations of Computation  
 Democracy and Education  
 Democracy in Brief  
 Democratization through the looking glass  
 Design for Learning: Principles, Processes, and Praxis  
 Developing New Products and Services  
 Development Versions, Source Code with Revision Control: git repository  
 Differential Calculus for the Life Sciences  
 Differential Equations  
 Differential Equations  
 Digging into Canadian Soils  
 Digital Circuit Projects: An Overview of Digital Circuits Through Implementing Integrated Circuits  
 Digital Photography for Graphic Communications  
 A Digital Workbook for Beginning ESOL  
 The Discipline of Organizing: 4th Professional Edition  
 Discover Linear Algebra  
 Discover Psychology 2.0 – A Brief Introductory Text

Discrete Mathematics: An Open Introduction  
Discrete Mathematics: An Open Introduction  
Dissident Knowledge in Higher Education  
Download : online version  
Download Annual Edition

- Full Text, 2020 edition (PDF, 2.2 MB, July 30, 2020) [Printable]
- Full Text, 2019 edition (PDF, 2.2 MB, July 10, 2019) [Printable]
- Full Text, 2018 edition (PDF, 1.4 MB, August 1, 2018) [Printable]

IDEAL Distance Education and Blended Learning Handbook, 7th Edition  
Documentation in Nursing: 1st Canadian Edition  
Domestic Violence in Immigrant Communities: Case Studies

## E

Earth Science Economics (Openstax)  
edX Online Anthropology Courses  
Effective Professional Communication: A Rhetorical Approach  
The ELC: An Early Childhood Learning Community at Work  
Electrical Engineering  
Electromagnetics Volume 1  
Electromagnetics Volume 2  
Electronic Commerce: The Strategic Perspective  
Elementary Arabic  
Elementary Differential Equations with Boundary Value Problems  
Elements of Public Speaking  
Eloquent JavaScript: A Modern Introduction to Programming  
English Literature II  
Environmental Biology  
Environmental Issues  
eMarketing: The Essential Guide to Marketing in a Digital World  
The Emergence of Irish Gothic Fiction – Histories, Origins, Theories  
Engineering Mechanics for Structures  
English Composition  
Entrepreneurship  
Entrepreneurship and Innovation Toolkit  
Environment, Climate Change and International Relations  
Environmental Biology  
Environmental Biology  
Environmental Science: A Canadian Perspective  
Environmental Science  
Environmental ScienceBites  
Environmental ScienceBites Volume 2  
360 Essentials: A Beginner's Guide to Immersive Video Storytelling  
Essentials of Linguistics

The Evolving World of Public Relations: Beyond the Press Release  
 The Evolution of Aging 3rd Edition  
 Exploring Communication in the Real World  
 Exploring Microcontrollers  
 Exploring Movie Construction and Production  
 Exploring Movie Construction and Production: What's so Exciting about Movies?  
 Exploring the Physical World: Introductory Chemistry and Physics

## F

Facilitating online learning with the 5R's  
 Financial Accounting  
 Financial Empowerment: Personal Finance for Indigenous and Non-Indigenous People  
 First Year General Chemistry  
 First-Semester Abstract Algebra: A Structural Approach  
 Focusing on Organizational Change  
 Forecasting: Principles and Practice  
 Foundations of Chemical and Biological Engineering I  
 Foundations of Educational Technology  
 A First Course in Linear Algebra  
 A First Course in Linear Algebra: Lyryx  
 A Foundation Course in Reading German  
 Foundations of Addiction Studies  
 Foundations of Business Law and Legal Environment  
 Foundations of Computation  
 Foundations of Learning and Instructional Design Technology  
 Foundations of Neuroscience  
 Foundations of Social Work Research  
 Français Interactif  
 La France Sauvée ou le Tyran Détrôné: A Dramaturgical Casebook  
 Free Architecture Courses from MIT  
 FREE: Federal Resources for Educational Excellence  
 From Growing to Biology: Plants 1e  
 From MSA to CA: A Beginner's Guide for Transitioning into Colloquial Arabic  
 Fundamentals, Function, and Form  
 Fundamentals of Aerospace Engineering  
 Fundamentals of Anatomy and Physiology – Australian Edition  
 Fundamentals of Business  
 Fundamentals of Business, 3rd edition  
 Fundamentals of Business: Canadian Edition  
 Fundamentals of Compressible Flow Mechanics  
 Fundamentals of Electrical Engineering I  
 Fundamentals of Global Strategy  
 Fundamentals of Photonics  
 Future Energy: Opportunities & Challenges



## G

General Chemistry – Lecture & Lab  
General List of Open Access Publishers  
Geographic Information System Basics  
Geological Structures: a Practical Introduction  
Geosciences LibreTexts Library  
German Frame-semantic Online Lexicon  
Getting Started with the Marrakesh Treaty – a Guide for Librarians  
Global History and New Polycentric Approaches  
Global Women's Issues: Women in the World Today  
Global Women's Issues: Women in the World Today, extended version  
Globalization and Labour in the Twenty First Century  
Good Corporation, Bad Corporation: Corporate Social Responsibility in the Global Economy  
Graduate research methods in social work  
Graphic Design and Print Production Fundamentals  
Green Tea Intermediate English Communication OER  
Guidebook for Social Work Literature Reviews and Research Questions  
Guide to Ancient Aegean Art  
Guide to Ancient Egyptian Art  
Guide to Ancient Etruscan Art  
Guide to Ancient Greek Art  
Guide to Ancient Near Eastern Art  
Guide to Ancient Roman Art  
Guide to Cultivating Complex Analysis  
Guide to Teaching with Technology

## H

Handbook of Biological Statistics  
Handbook of Social and Clinical Psychology: The Health Perspective  
HANDS in Autism Art Expo 2020  
Health Case Studies  
Her Şey Bir Merhaba ile Başlar  
HHMI's BioInteractive  
Historical and Contemporary Realities: Movement Towards Reconciliation  
History in the Making: A History of the People of the United States of America to 1877  
The History of Our Tribe: Hominini  
History of Psychology  
Hola a Todos: Elementary Spanish I  
How Language Works (Gasser)  
Human Behavior and the Social Environment I  
Human Behavior and the Social Environment II  
Human Biology

Human Geography  
Human Nutrition  
Human Relations  
Human Resources Management  
Humans R Social Media – Open Textbook Edition  
Human Resources Management – Canadian Edition  
Hybrid-Flexible Course Design

## I

Immigrant and Refugee Families, 2nd Edition  
The Information Literacy User's Guide: An Open, Online Textbook  
Information Strategies for Communicators  
Information Systems for Business and Beyond  
Inorganic Chemistry for Chemical Engineers  
Instructional Methods, Strategies and Technologies to Meet the Needs of All Learners  
Integrated and Open Interpreter Education  
An Interactive Introduction to Organismal and Molecular Biology  
Interactive Learning in the Online Classroom  
Intercultural Learning  
Intermediate Financial Accounting (Volume 1): Lyryx  
Intermediate Financial Accounting (Volume 2): Lyryx  
International Finance: Theory and Policy  
International Relations Theory  
Introduction to Aerospace Structures and Materials  
Introduction to Art Concepts  
Introduction to Art: Design, Context, and Meaning  
Introduction to Biosystems Engineering  
Introduction to Business  
Introduction to College Research  
Introduction to Computer Graphics  
Introduction to Communication  
Introduction to Curriculum for Early Childhood Education  
Introduction to Data Science  
Introduction to Entrepreneurship  
Introduction to Financial Accounting  
CHEM 1114 – Introduction to Chemistry  
Introduction to Chemistry  
Introduction to College Research  
Introduction to Communication in Nursing  
An Introduction to Computer Networks – Second Edition  
Introduction to Curriculum for Early Childhood Education  
Introduction to Financial Accounting  
Introduction to Financial Accounting 2nd ed.  
Introduction to French

Introduction to Geomatics  
 Introduction to Human Geography  
 Introduction to Human Osteology  
 Introduction to Linear, Time-Invariant, Dynamic Systems for Students of Engineering  
 Introduction to Logic and Critical Thinking  
 Introduction to Mathematics Analysis I  
 Introducing Marketing  
 Introduction to Oceanography  
 An Introduction to Philosophy  
 Introduction to Physical Geography  
 Introduction to Petrology  
 Introduction to Philosophy: Aesthetic Theory and Practice  
 Introduction to Philosophy: Ethics  
 Introduction to Philosophy: Epistemology  
 Introduction to Philosophy: Logic  
 Introduction to Philosophy: Philosophy of Mind  
 Introduction to Philosophy: Philosophy of Religion  
 Introductory Physical Geology Laboratory Manual – First Canadian Edition (v.3 – Jan 2020)  
 Introduction to Probability  
 Introduction to Probability, Statistics and Random Processes  
 Introduction to Professional Communications  
 Introduction to Programming Using Java, Eighth Edition  
 Introduction to Psychology – First Canadian Edition  
 Introduction to Sociology  
 Introduction to Sociology – 2nd Canadian Edition  
 Introduction to Social Work at Ferris State University  
 An Introduction to Technical Theatre  
 HUM210 Introduction to Women and Gender Studies  
 Introduction to Women, Gender, Sexuality Studies  
 Introductory Business Statistics (Openstax)  
 Introductory Chemistry – First Canadian Edition  
 Introductory Chemistry – 1st Canadian / NSCC ALP Edition  
 Introductory Chemistry – Lecture & Lab  
 Introductory Organic Chemistry  
 Introductory Physical Geology Laboratory Manual – First Canadian Edition (v.3 – Jan 2020)  
 Introductory Physics Resources  
 Introductory Statistics  
 Introductory Statistics: Saylor  
 It's All Greek to Me!

## J

Java, Java, Java: Object-Oriented Problem Solving  
 JUNTXS: Introductory Spanish

## K

K-12 Blended Teaching: A Guide to Personalized Learning and Online Integration Volume 1  
The K-12 Educational Technology Handbook  
Keys to Understanding the Middle East  
Knowing Home: Braiding Indigenous Science with Western Science, Book 1  
Knowing Home: Braiding Indigenous Science with Western Science, Book 2

## L

Laboratory Manual for Introduction to Physical Geography, First British Columbia Edition  
Laboratory Manual for Introductory Geology  
The Languages of Berkeley: An Online Exhibition  
Leadership and Influencing Change in Nursing  
Leadership in Healthcare and Public Health  
Leading with Cultural Intelligence  
Learner and User Experience Research  
Learning in the Digital Age  
Learning Management Systems  
Learning Statistics with jamovi  
Learning Statistics with R  
Legal Aspects of Marketing and Sales  
Let's Read French Books  
Liberté  
Libro Libre: Beginning Spanish  
Lifespan development: A Psychological perspective 2nd Edition  
Linear Algebra  
Linear Algebra  
Linear Algebra with Applications  
Linear Algebra with Applications: Lyryx  
Literature, the Humanities, and Humanity

## M

Macroeconomics 1-2: Volume 1 Volume 2  
Make Work Use Art  
Managerial Accounting  
Mapping, Society, and Technology  
Mastering Strategic Management – 1st Canadian Edition  
Math Explorer Activity Database  
Mathematical Reasoning: Writing and Proof  
Mathematics for Elementary Teachers

Matrix Algebra with Computational Applications  
 Measure, Integration & Real Analysis  
 Mechanics  
 Media Innovation and Entrepreneurship  
 Media, Society, Culture and You  
 MERLOT: Anthropology  
 MERLOT Physics Portal  
 Microbiology  
 Microeconomics 1-2: Volume 1 Volume 2  
 Migration and the Ukraine Crisis: A Two Country Perspective  
 Miles Gloriosus, or The Braggart Captain  
 Mind, Body, World – Foundations of Cognitive Science  
 The Missing Link: An Introduction to Web Development and Programming  
 MIT OpenCourseWare: Anthropology  
 MIT OpenCourseWare: Biology  
 MIT OpenCourseWare: Chemical Engineering  
 MIT OpenCourseWare: Chemistry  
 MIT OpenCourseWare: Energy  
 MIT OpenCourseWare: History  
 MIT OpenCourseWare: Literature  
 MIT OpenCourseWare: Mathematics  
 MIT OpenCourseWare: Physics  
 MIT OpenCourseWare: Sloan School of Management  
 A Mixed Course-Based Research Approach to Human Physiology  
 Modern Philosophy  
 Moving Pictures: An Introduction to Cinema  
 Music and the Child  
 Music Appreciation  
 Music Appreciation: A Thematic Approach (Complete Course)  
 Music: Its Language, History and Culture  
 Mythology Unbound: An Online Textbook for Classical Mythology

## N

Naming the Unnameable: An Approach to Poetry for New Generations  
 National Science Foundation  
 Nationalism, Self-determination and Secession  
 Nature of Geographic Information  
 Neuroscience: Canadian 1st Edition Open Textbook  
 Neuroscience: Canadian 2nd Edition  
 Northern and Indigenous Health and Healthcare  
 Notes on Diffy Qs: Differential Equations for Engineers  
 Novels for the End of a World  
 Numerical Methods with Applications  
 Nursing Care at the End of Life: What Every Clinician Should Know

Nursing Fundamentals  
Nursing Pharmacology  
Nursing Skills  
NUTR251 Nutrition Through the Life Cycle

## O

### Ocean Portal

OCLUE: Organic Chemistry, Life, the Universe & Everything  
OER Commons: Accounting  
OER Commons: AnthropologyThe University of Regina OER Publishing Program  
OER Commons: Art  
OER Commons: Biology  
OER by Discipline Directory by Bccampus, CC BY  
OER by Discipline Guide: McMaster University  
OER by Discipline Resource Guide: Concordia University  
Online Learning: A Student Perspective  
Online Learning Toolbox  
Online Statistics Education  
Open Access LibGuide (Archer Library)  
Open Anthology of Earlier American Literature  
Open Art Histories  
Open Course Library  
Open Educational Resources LibGuide (Archer Library)  
Open Music Theory  
Open Pedagogy Approaches  
Open Textbooks LibGuide (Archer Library)  
OpenStax-CNX (aka Connexions) Accounting  
OpenStax (aka Connexions) Anthropology  
OpenStax-CNX (aka Connexions) Art History  
OpenStax (aka Connexions) College Physics  
OpenStax (aka Connexions) Mathematics and Statistics  
OpenStax (aka Connexions) Petroleum in Science & Technology  
OpenStax (aka Connexions) Science and Technology  
Open Technical Writing: An Open-Access Text for Instruction in Technical and Professional Writing  
Open Textbooks Library: Biology  
Organic Chemistry I  
Organizational Behaviour  
Organizational Behaviour  
Organizational Communication  
The Originals: Classic Readings in Western Philosophy  
An Outline History of East Asia to 1200, second edition  
Our Stories: First Peoples in Canada

## P

Para vivir con salud

Parenting and Family Diversity Issues

Paris à travers les pages

People, Places, and Cultures

Persistence is Resistance: Celebrating 50 Years of Gender, Women & Sexuality Studies

A Person-Centered Guide to Demystifying Technology

Perspectives: An Open Invitation to Cultural Anthropology

Phaedra: A Tragedy

Phase Relations

PhET: Biology

PhET: Chemistry

PhET: Math

Philosophical Thought

Philosophy of Western Religions

Physical Anthropology

Physical Geography Lab Manual: The Atmosphere and Biosphere

Introductory Physical Geology Laboratory Manual – First Canadian Edition (v.3 – Jan 2020)

Physical Geography and Natural Disasters

Physical Geology

Physical Geology

Physical Geology, First University of Saskatchewan Edition

Physical Geology Laboratory

Physical Geology Workbook

Physical Methods in Chemistry and Nano Science

Physics

Physics 132: What is an Electron? What is Light?

PLOS: Open for Discovery

Political Ideologies and Worldviews: An Introduction

Popular Culture and World Politics: Theories, Methods, Pedagogies

Pour une linguistique du développement

The Power of Selling

A Practical Guide to Introductory Geology

PreTeXt (and LaTeX) source: GitHub.

A Primer for Computational Biology

Principles of Accounting

Principles of Accounting – Volume 1 Financial Accounting

Principles of Accounting – Volume 2 Managerial Accounting

Principles of Economics

Principles of Economics

Principles of Economics: Scarcity and Social Provisioning, 2nd Edition

Principles of Financial Accounting

Principles of Macroeconomics

Principles of Macroeconomics

Principles of Macroeconomic Literacy

Principles of Macroeconomics: Lyryx

- Principles of Management
- Principles of Managerial Accounting
- Principles of Marketing
- Principles of Microeconomics
- Principles of Microeconomics: Lyryx
- Principles of Social Psychology
- Principles of Social Psychology: 1st International Edition
- Principles of Sociological Inquiry: Qualitative and Quantitative Methods
- Probability and Statistics – The Science of Uncertainty, Second Edition
- Processing Multi-spectral Imagery with Agisoft MetaShape Pro
- Processing UAS Photogrammetric Images in Agisoft Photoscan Professional
- Professional Communications
- Programming Fundamentals – A Modular Structured Approach, 2nd Edition
- Programming Fundamentals – A Modular Structured Approach using C++
- Programming Languages: Application and Interpretation
- Project Management
- Project Management from Simple to Complex
- Prose Fiction: An Introduction to the Semiotics of Narrative
- Psychology
- Psychology – H5P Edition
- Psychology: OpenStax
- Public domain books relating to Instrumentation
- Pulling Together: Foundations Guide
- Python for Everybody: Exploring Data Using Python 3

## Q

- Qualitative Inquiry in Daily Life
  - A Quick and Dirty Guide to Art, Music, and Culture
  - A Quick and Dirty Guide to Art, Music, and Culture
  - A Quick Guide to Quantitative Research in the Social Sciences
- Quantitative Ecology: A New Unified Approach

## R

- Rain or Shine
  - The R2P: Challenges and Opportunities in Light of the Libyan Intervention
- Realism in Practice
- Research Methods in Psychology: 2nd Canadian Edition
- Resonances: Engaging Music in Its Cultural Context
- Responsible Innovation: Ethics, Safety and Technology
- Restoring Indigenous Self-Determination: Theoretical and Practical Approaches
- Résumer, synthétiser, argumenter



The Roles and Responsibilities of the Special Educator  
Roman Gods  
Romeo and Juliet  
The Roman Empire

## S

Sage American History – Era of the American Revolution  
Scientific Inquiry in Social Work  
Sharing our Knowledge: Best Practices for Supporting English Language Learners in Schools  
Sight-Reading for Guitar: The Keep Going Method Book and Video Series  
The Simple Math of Writing Well: Writing for the 21st Century  
Slurry Transport: Fundamentals, A Historical Overview & The Delft Head Loss & Limit Deposit Velocity Framework  
2nd Edition  
Small Business Management in the 21st Century  
Social Problems: Continuity and Change  
Sociology: Understanding and Changing the Social World  
Soil and Water Conservation: An Annotated Bibliography  
Soils Laboratory Manual  
Sons & Lettres: A pronunciation method for intermediate-level French  
Source Code Archives

- Current Development Version [.zip]
- Full Text, 2020 Annual Edition [.zip] [.tar.gz]
- Full Text, 2019 Annual Edition [.zip] [.tar.gz]
- Full Text, 2018 Annual Edition [.zip] [.tar.gz]

Species-Habitat Associations: Spatial data, predictive models, and ecological insights  
Spunti: Italiano elementare 1  
Spunti: Italiano elementare 2  
Squeak by Example  
Stand up, Speak out  
The Story of Earth: An Observational Guide  
Strategic Management  
Strength of Materials Supplement for Power Engineering  
Studying the Bible: The Tanakh and Early Christian Writings  
Sustainability: A Comprehensive Foundation  
Sustainability, Innovation, and Entrepreneurship  
The Sustainable Business Case Book  
Supporting Survivors: Training and Facilitation Guide

## T

### A Tale of Two Systems

- Tartuffe or the Hypocrite
- Teaching in a Digital Age
- Teaching and Learning in Adulthood
- Teaching Autoethnography: Personal Writing in the Classroom
- Teaching Math for Emergent Bilinguals: Building on Culture, Language, and Identity
- Teaching with Digital Tools and Apps
- Teaching With Rich Media
- Technical Project Management in Living and Geometric Order
- Technical Writing
- Technical Writing Essentials
- Technical Writing @ SLCC
- Techniques of Calculus 1
- Telling Our Stories
- ensc 181, Terrestrial Environments, Lane Community College
- Textiles and Tapestries
- Theater Appreciation
- Theatrical Worlds
- Theories and Biological Basis of Addiction
- Theories and Biological Basis of Substance Misuse, Part 1
- Think Bayes: Bayesian Statistics Made Simple
- Think Complexity: Exploring Complexity Science with Python
- Think Data Structures
- Think OS
- Think Python 2e
- Think Raku: How to Think Like a Computer Scientist – 2nd edition
- Think Stats: Probability and Statistics for Programmers
- Together: The Science of Social Psychology
- Tout un Monde: An Interdisciplinary Approach to Intermediate French
- Traffic Flow Theory: An introduction with exercises
- Transforming Stories, Driving Change
- Transition to Higher Mathematics: Structure and Proof
- Trends in Digital & Social Media (V14)
- Tutorials of Visual Graphic Communication Programs for Interior Design

## U

### UBC Calculus Textbooks

- Understanding and Supporting Learners with Disabilities
- Understanding Basic Music Theory
- Understanding Linear Algebra
- Understanding Media and Culture

Understanding Media and Culture  
Understanding Music: Past and Present  
The Universal Declaration of Human Rights in the 21st Century: A Living Document in a Changing World  
University Physics Volumes 1-3: Volume 1 Volume 2 Volume 3  
Unleashing the Power of Learner Agency  
U.S. History  
Utah State: Cultural Anthropology

## V

Vaccine Practice for Health Professionals: 1st Canadian Edition  
Vector Calculus  
Visual Arts OERs by Grade Level  
Vital Sign Measurement Across the Lifespan – 2nd Canadian Edition  
Voice Class

## W

Web Design Basics for Educators  
Wellness  
Western Civilization  
Western Civilization: A Concise History – Volume 1  
Western Civilization: A Concise History – Volume 2  
Western Civilization: A Concise History – Volume 3  
The Western World: Daily Readings on Geography  
Wikibooks: Cultural Anthropology  
Wikimedia Commons  
The Word on College Reading and Writing  
World History: Cultures, States, and Societies to 1500  
World Regional Geography  
World Regional Geography: People, Places and Globalization  
World Literature I: Beginnings to 1650  
Writing and Literature: Composition as Inquiry, Learning, Thinking, and Communication  
Writing for Strategic Communication Industries  
Writing for Success  
Writing for Success 1st Canadian Edition  
Writing the Nation: A Concise Introduction to American Literature 1865 to Present  
What is an Open Textbook?

X

Y

Yale Lectures: The Early Middle Ages, 284–1000  
Yale Open Courses

Z

# Repositories

Here are some of the repositories used to discover the OER contained within this guide:

- BCcampus Open Textbook Collection

A growing selection of open textbooks for a variety of subjects and specialties. Many have been reviewed by faculty, meet accessibility requirements, and/or include supplementary materials.

- eCampusOntario Open Textbook Library

Over 300 open textbooks in subjects including arts, business, health, recreation, science and social sciences.

- LibreTexts

Founded in 2008, LibreTexts is a leading, non-commercial open textbook organization for higher education. In Oct. 2018, the U.S. Dept. of Education awarded LibreTexts \$5 million over 3 years to expand its collection of primary source textbooks and supplemental learning resources.

- Lyryx Learning

Open textbooks for math and economics; license fees for accompanying online assessments. Print-on-demand available for purchase.

- Mason OER Metafinder

A meta-search tool that simultaneously searches several large OER repositories of open educational materials.

- MERLOT

Peer-reviewed free learning materials, exercises and webpages, and open textbooks.

- OASIS (Openly Available Sources Integrated Search)

A search tool for discovery of open content from 57 different sources.

- OER Commons

A large OER repository, including textbooks. A product of the Institute for the Study of Knowledge Management in Education.

- OpenStax

Peer-reviewed texts in science, math, social sciences. Supported by additional learning resources. Print copies available via Amazon.

- OpenSUNY

Open textbooks in a variety of disciplines.

- Open Textbook Library

A resource for peer-reviewed academic textbooks that are free, openly licensed, and complete.

- WikiBooks

Open Textbook project with over 2800 titles.

- University of Minnesota Publication Services

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# Versioning History

This page provides a record of edits and changes made to this book since its initial publication. If the change is minor, the version number increases by 0.1. If the edits involve substantial updates, the version number increases to the next full number. Due to the nature of the guide being continuously updated, addition or removal of a resource is not recorded on this page.

For feedback or additional files (e.g., PDF, ePUB), please contact [oer@concordia.ca](mailto:oer@concordia.ca).

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Version	Date	Change	Affected Web Page
1.0	June 16, 2020	Original publication date.	

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