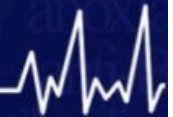
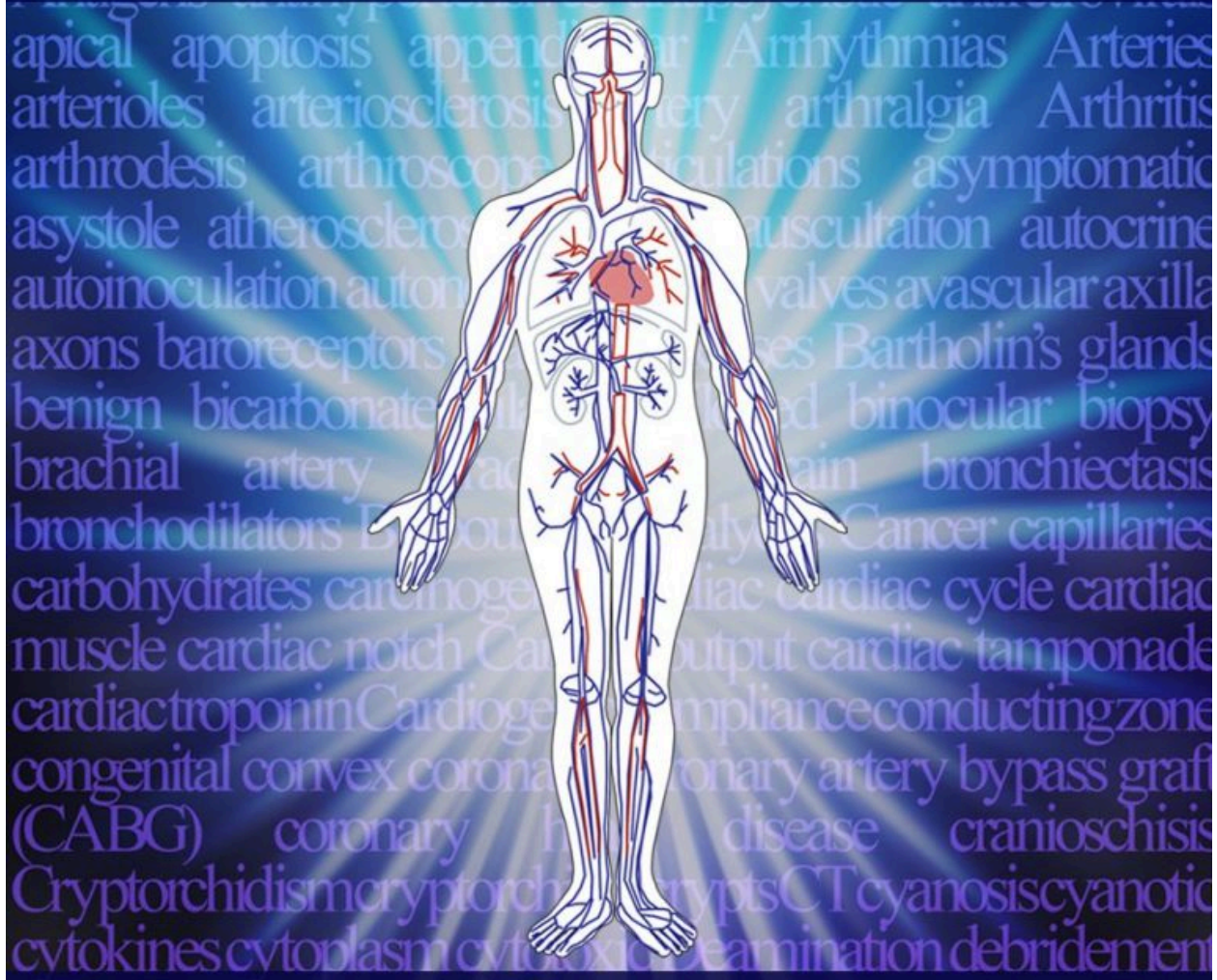


BUILDING A
MEDICAL TERMINOLOGY
FOUNDATION
SECOND EDITION



KIMBERLEE CARTER MARIE RUTHERFORD CONNIE STEVENS



 **Georgian**

 **CONESTOGA**

Sheridan

Building a Medical Terminology Foundation 2e

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GEORGIAN COLLEGE
TORONTO, ONTARIO



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Accessing and Using Building a Medical Terminology Foundation 2e

This resource is an Open Educational Resource (OER). An Open Educational Resource is a learning material intentionally created and licenced to be available to the user with little or no cost involved.

In this resource, you will work through each body system, learning word parts, whole medical terms, and common abbreviations associated with that particular body system. Interactive content is built into each chapter. At the end of each chapter is a vocabulary list of associated terms related to that body system. The interactive reinforcement activities require you to click, drag and drop, listen and repeat, flip, and test yourself.

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Book Formats

Typical OER Textbook Formats, Requirements, Features & Access Options

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Recommendations

- Check for printing costs at your on-campus print shop or a local print shop (Staples, etc.).
- Printing a large document is often significantly less expensive at a print shop than it is to print on your home printer or at the library.
- To reduce printing costs, consider printing in black & white and refer to the webbook or PDF for any diagrams that require colour.
- Ask about binding or 3-hole punching when you order, as this is usually low cost and will make your textbook easier to use.

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If you encounter navigation issues while accessing this text via a link from your within your course learning management system, please try accessing the online web book by using the web address in your browser. The bottom left and right corners of the web book allow you to navigate through the book (previous/next) and the top left hand corner of the web book features a drop-down table of contents.

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Introduction

Welcome to ***Building a Medical Terminology Foundation 2e***. 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 healthcare courses.

Additional Resources Accompanying this Edition

Building a Medical Terminology Foundation 2e – Student Companion Workbook

Building a Medical Terminology Foundation 2e – Anatomical Colouring Book

Please note: this OER provides examples of medical documentation to enhance your learning of medical terms. These reports are not intended to represent or demonstrate Association for Health Documentation Integrity (AHDI) formatting standards.

Our first edition of edition of *Building a Medical Terminology Foundation* laid the groundwork for this second edition. From the outset, this resource resonated with students and educators in healthcare programs, where possessing medical terminology knowledge is an essential skill. The feedback we received from the first edition influenced and inspired us and paved the way forward to the new edition. A special thank you to all who contributed their insights and comments. Now, as we turn the page to our new edition, we are excited to highlight what is new in this edition:

- Layout: chapters are divided into subchapters, making it easier for the reader to navigate and focus on a key segment of the chapter content.
- New chapters: **Chapter 18 Oncology** and **Chapter 19 Mental Health** expand our comprehensive coverage and knowledge areas.
- Updated interactive activities: interactive chapter dialogue cards are expanded to include more terminology and additional audio pronunciation recordings.
- Text versions of interactives: H5P activities now contain textual versions to support and enhance greater accessibility and offline user experience.
- Added: solutions for the H5P activities have been placed in the footnotes section and will appear at the bottom of the page in the webbook or at the end of the page/chapter for the PDF version.

- Updated content weblinks: chapter links are updated to ensure relevancy and current standards, where relevant and applicable.
- Updated colour theme of the textbook for a consistent look and feel.
- New supplementary resources:
 - *Building a Medical Terminology Foundation 2e – Student Companion Workbook* accompanies each chapter of learning for enhanced learner reinforcement. Chapter worksheets and activities in Word files to practice medical terminology development are available within the workbook.
 - *Building a Medical Terminology Foundation 2e – Anatomical Colouring Book* – many diagrams and illustrations found in chapters throughout the main text are now available in colouring book format. Learners are directed to identify and colour anatomical structures for an enhanced learning experience.

Attribution

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Acknowledgements

Land Acknowledgement

We wish to acknowledge and honour indigenous history and in the spirit of reconciliation, we convey our respect to First Nations, Métis, and Inuit people.

Conestoga College is located on the traditional territory of the Anishnaabe, Haudenosaunee, and Neutral peoples. Georgian College campuses are situated on the traditional land of the Anishnaabeg people. The Anishnaabeg include the Odawa, Ojibwe, and Pottawatomi nations, collectively known as the Three Fires Confederacy. Sheridan campuses reside on traditional land territory of the Mississaugas of the Credit First Nations, Anishinaabe Nation, Huron-Wendat, and the Haudenosaunee Confederacy.

How It Began...

In the Spring of 2018, I (Kimberlee) attended a workshop on building OER (Open Educational Resources) for high impact in first year courses. I was moved by the student speaker's plea over the rising costs of textbooks and motivated to learn more about the ability to customize OER. In health office administration programs, customization is important because we are a combination of health and business. I attended a Pressbooks webinar, signed up for an account, and started plugging away. I will be honest, the task was daunting to do alone.

Marie and I met in the Winter of 2019 as participants in the Ontario Extend eCampus Ontario MOOC and went on to become Empowered Educators. Through this program, we learned about Creative Commons licensing and were inspired to create OER. In the fall of 2019, I shared what I had been working on with Marie and this led to a collaborative partnership that snowballed into this OER. We advocated for support, found collaborators, and ultimately crowdsourced this OER. Please read below to learn about the amazing collaborative support we had for this OER, for which we are truly grateful.

Kimberlee Carter B.Ed., M.A., Conestoga College ITAL

Thank you Kimberlee for inviting me to partake and share this adventure with you. The opportunity to create a resource for learners in this OPEN format has been a wonderful and collaborative endeavour.

Marie Rutherford, Dip., Nursing, LD., BGS., Georgian College CAAT

The Journey Continues...

I have been excited to see this second edition of Building a Medical Terminology Foundation come to fruition. I am so grateful to Marie Rutherford and the team from Georgian for picking up the mantel to lead this second edition, and to Connie Stevens and the faculty subject matter experts from Sheridan, who collaborated with Marie to complete chapters that we were not able to get to in the first edition. Marie and Connie, I am truly grateful for your

passion for Open Education, medical terminology, and learners. I would like to thank the Open Learning team at Conestoga College for providing wrap-around editorial and design support. I have so much gratitude to our student-OER assistants for their contributions and for reminding us of the importance of students' voices in classroom resources.

Kimberlee Carter, OER Consultant, Open Learning, Library and Learning Services at Conestoga College

The healthcare field constantly evolves with new research, changing environments, and advancing technology. The second edition of *Building a Medical Terminology Foundation* is designed to stay in step with these ongoing advancements. I am privileged to contribute to our learning materials' continuous improvement and relevance and Open Educational Resource updates. I am ever grateful for the continuous improvement and collaboration with many knowledge expert colleagues. Thank you to my co-authors, Marie Rutherford and Kimberlee Carter, who are tireless advocates for OERs, and for impacting our students.

Connie Stevens, Faculty, RN, BScN, MA, PhD. Sheridan College ITAL

The second edition of this resource was developed through the efforts and inspiration of many talented and dedicated individuals. In the pages of the second edition, I am humbled by the brilliance and unwavering commitment of those who joined on this journey. To the editors who polished and worked through the book identifying any issues and resolving them: thank you. With boundless admiration, I am thankful for the wraparound support and design insights provided from the OER Design Studio at Georgian College and Open Learning at Conestoga College. No words are enough to convey heartfelt thanks. A special thank-you to my co-authors, Connie Stevens, and Kimberlee Carter, who remain the catalyst and the driver of innovation to bring the first edition and second edition from concept to completion.

Marie Rutherford, Dip., Nursing, LD., BGS., Georgian College CAAT

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For Educators

Faculty and teaching staff: while this OER was curated and created for Health Office Administration and Health Services students in the first year of college, our hope is that you will take this OER and customize it for your program and share again.

Resources Accompanying this Edition

One of the areas we are most proud of with this edition is the inclusion of ancillaries for educators, student activity worksheets, and the Building a Medical Terminology Foundation 2e – Student Companion Workbook. The Student Companion is an additional educational resource designed to accompany our main text and provides access to:

- Interactive H5P activities and text solutions for increased accessibility
- Reinforcement activities in Word file formats
- Worksheets in Word file format

Building a Medical Terminology Foundation 2e – Anatomical Colouring Book

Instructor ancillaries include:

- Assignments in Word file format
- Instructor Planning Manual
- Chapter slide decks [PowerPoint]

How this Open Educational Resource (OER) Works

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- **Reuse the H5P on an H5P site such as eCampus Ontario's H5P studio:** download the .h5p file as above and then add it to your account on your own H5P server, etc
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- If students need to navigate beyond the exact page you've linked to, you may need to adjust the link to open in a new window/tab.

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Accessibility Statement

Accessibility Features of the Web Version of this Resource

The web version of *Building a Medical Terminology Foundation 2e* has been designed with accessibility in mind by incorporating the following features:

- It has been optimized for people who use screen-reader technology.
 - All content can be navigated using a keyboard.
 - Links, headings, and tables are formatted to work with screen readers.
- Images in this OER are described through the use of text around the image, alt-text, captions or in the image description section for complex images.
 - Due to the complex visual nature of anatomy images and diagrams, alt text description may be longer than typically considered best practice. This allows for a more effective description of the information being conveyed by image/size/colour/labels.
 - If there are errors or concerns, please contact OER[at]georgiancollege.ca
- Information is not conveyed by colour alone.
- Pressbooks has built-in features such as the ability to change font size.

Other File Formats Available

In addition to the web version, additional files are available in a number of file formats including PDF (digital and print).

Known Accessibility Issues and Areas for Improvement

This book's adapters have attempted to improve upon existing features from the original sources and improve these materials for all users.

While we strive to ensure that this resource is as accessible and usable as possible, we might not always get it right. Any issues we identify will be listed below. If you encounter issues with this text, please notify your professor.

List of Known Accessibility Issues

Location of Issue	Need for Improvement	Timeline	Work Around
Video captioning	All videos have closed captions & transcripts via YouTube or other provider, but may not have transcripts that fully describe non-speech content	Unknown	Current provisions meet AODA requirements
Interactive activities (H5P)	H5Ps containing images may not be fully accessible	On going	Text version of interactive activities with alt text provided
PDF version of book	PDF version of book generated by the Pressbooks export system may not be fully accessible	On going	Use webook for the most accessible version of the content
Footnotes (used for activity solutions)	Questions/answers may not be optimized in ordered lists due to limitations of the footnote tool	Unknown	Ordered lists have been used when possible; some footnote/answers will read as a sentence with answers
Merged/split tables	Some tables may have some repetitive content as merged cells were split for improved accessibility	Unknown	Work is on going
Downloadable Word worksheets/activities	Worksheets contain lists and tables to be completed by students, and may pose some accessibility issues. Heading structure has been added, but the nature of the tasks associated with identifying and labeling anatomical images is difficult may persist.	On going	Students are encouraged to work with their adaptive technologist if problems persist.
Complex images	Many complex images are used throughout the text to help students better understand anatomy, and identify different systems and how they function. This is a very visual process, and may not translate effectively into descriptive text.	On going	Accessibility features have been added where possible. Work is on going.

Accessibility Standards

The web version of this resource has been designed to meet AODA requirements (<https://www.aoda.ca/the-act/>), along with the Web Content Accessibility Guidelines 2.0 (<https://www.w3.org/TR/WCAG20/>), level AA. In addition, it follows all guidelines in Appendix A: Checklist for Accessibility (<https://opentextbc.ca/accessibilitytoolkit/back-matter/appendix-checklist-for-accessibility-toolkit/>) of the *Accessibility Toolkit – 2nd Edition* (<https://opentextbc.ca/accessibilitytoolkit/>).

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Attribution & References

This information was adapted from “Accessibility statement (<https://opentextbc.ca/pressbooks/front-matter/accessibility-statement/>)” in *Pressbooks Guide* (<https://opentextbc.ca/pressbooks>) by BCcampus, licensed under CC BY 4.0. / Adapted to match the current OER with relevant deficiencies noted.